Essential Package of Health Services for Primary Health Care in Punjab

Technical Component

[Final V12–23December 2013]

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Disclaimer

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Contents

List of tables

Acronyms

AJK	Azad Jammu and Kashmir
ANC	Antenatal Care
ARI	Acute Respiratory Infection
AusAID	Australian Aid Agency
BCC	Behaviour Change Communication
BHU	Basic Health Unit
CMWs	Community Midwives
COPD	Chronic Obstructive Pulmonary Disease
CPR	Cardio-Pulmonary Resuscitation
CVD	Cardiovascular disease
DFID	Department for International Development
DHIS	District Health Information System
DHO	District Health Officer
DHQH	District Headquarter Hospital
DOH	Department of Health
EDO	Executive District Officer
EDO (H)	Executive District Officer Health
EmONC	Emergency Obstetric and Neonatal Care
ENC	Essential Neonatal Care
ENT	Ear, Nose and Throat
EPHS	Essential Package of Health Services
EPHS-PHC	Essential Package of Health Services for Primary Health Care
EPI	Expanded Programme on Immunization
GOP	Government of Pakistan
HCWs	Health Care Workers
HMIS	Health Management Information System
HSRU	Health Sector Reform Unit
IDD	Iodine Deficiency Disorder
IMNCI	Integrated Management of Neonatal and Childhood Illnesses
IMR	Infant Mortality Rate
IUCD	Intra Uterine Contraceptive Device
IYCF	Infant and Young Child Feeding
LBW	Low Birthweight
LHV	Lady Health Visitor
LHW	Lady Health Worker
MAM	Moderate Acute Malnutrition
MCH	Maternal and Child Health
MCHC	Maternal and Child Health Centre
MDG	Millennium Development Goal
MMR	Maternal Mortality Ratio
MNCHP	Maternal Neonatal and Child Health Program
NID	National Immunisation Day
NMNCHP	National Maternal Neonatal and Child Health Program
NNS	National Nutritional Survey
NPPHC&FP	National Programme for Primary Health Care and Family Planning

OPD	Outpatient Department
ORS	Oral Rehydration Solution
PC1	Planning Commission Document 1
PDHS	Pakistan Demographic and Household Survey
PHC	Primary Health Care
PIH	Pregnancy Induced Hypertension
PPE	Personal Protective Equipment
PPH	Post-Partum Haemorrhage
RHC	Rural Health Centre
SAM	Severe Acute Malnutrition
SCFN	Secondary Care Facility for Newborns
SHNS	School Health Nutrition Supervisor
SIA	Supplementary Immunization Activity
STI	Sexually Transmitted Infection
THQH	Tehsil Headquarter Hospital
TRF	Technical Resource Facility
UNICEF	United Nation International Children's Education Fund
WHO	World Health Organization

1. BACKGROUND

1.1. Demographics of the province

The Punjab is the most populous province with 55.6 percent of country's total population amounting to 96 Million with an annual growth rate of 2.64, covering an area of 205,345 square kilometres with 36 districts, 127 Tehsils and 3,492 Union Councils.The province's population density stands at a reported 451 persons per square kilometres, the total fertility rate at 4.8 per woman, the contraceptive prevalence rate at 30%, and the crude birth rate at 33.8 per 1,000 live births.[1]

1.2. Moving towards an Integrated Maternal and Newborn Health Programme

The DOH is moving towards integrating primary health care and reproductive health services for maximizing efficiency and effectiveness, avoiding duplication and removing overlaps in management structures. The integrated PC-I developed by the department is a proactive step in this direction, which incorporates interventions under the National Programme for Family Planning and Primary Health Care (NPFP&PHC), the MNCH Programme, and the Nutrition Programme.[2] The main objectives of integration laid down by the DOH are:

- Strengthening the District Health Care System through transforming each basic health unit and its outreach interventions into a "Mini Primary Health Care (PHC) System" for the catchment area population.
- Ensuring effective referral linkages from household to BHU to RHC to THQH to DHQH and other tertiary level health care facilities.
- Ensuring essential reproductive and child health package at all levels starting from communities to district head quarter hospitals.
- Improving child health in programme areas.

1.3. Rationale for the EPHS

The Government of Punjab is committed to providing universal health care for all members of the society for improving the health status of the population.[3]In this connection, the

[1] Pakistan Demographic and Household Survey, PDHS 2007. National Institute of Population Studies, Government of Pakistan,2008.
[2] PC-I: PUNJAB: Integrated Programme for Reproductive Health, Child Health and Nutrition. 2012 – 2016. Department of Health. Government of the Punjab
[3] Punjab Health Sector Strategy 2012–2020. Draft dated April 2012. Government of Punjab.

Department of Health (DOH) Punjab has been actively working towards health sector reform and setting the future direction over the next decade through the recent Punjab Health Sector Strategy 2012-2020 and the PC-I for the Integrated Programme for Reproductive Health, Child Health and Nutrition 2012- 2016 in the post-18th amendment scenario, and the Minimum Service Delivery Standards 2008.[4]

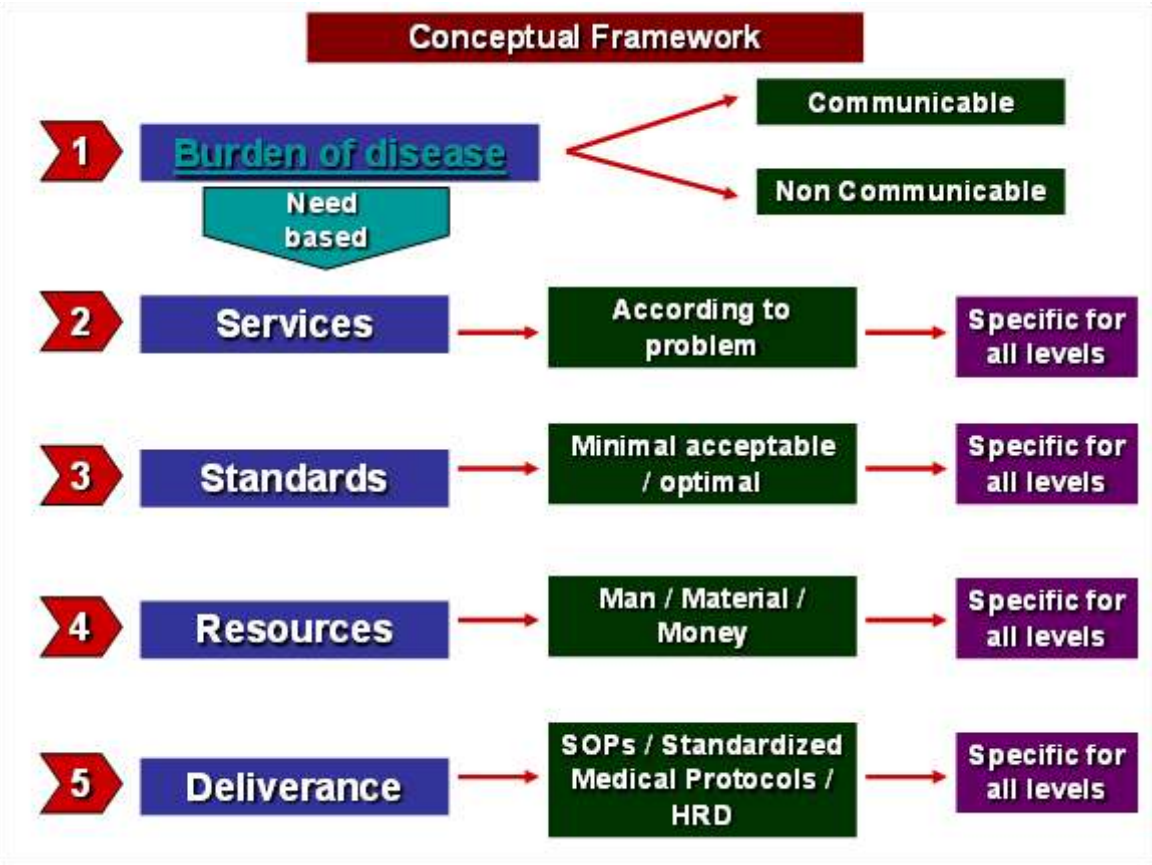
The Punjab Health Sector Strategy was designed through a broad based consultation process with the broad strategy objective being "*provision of affordable, accessible and quality health care to the people of Punjab in an equitable manner (region, gender, income).*"3The strategy prioritizes policy related interventions consistent with available financial resources, and provides a roadmap for action outlining the main themes, targets and strategic directions. Under the theme of improving service delivery, the strategic action recommended is to developthe Essential Package of Health Services (EPHS) for primary health care (PHC), including facility-based and outreach services. Standardizing health services as a package would ensure equitable access.

1.4. Objectives and process of the EPHS-PHC

The main objective for developing the EPHS at primary care level in Punjab is to define minimum health services to be provided as an integrated package, at a given level of health service. The conceptual framework is given in Figure 1, which details the needs based process for developing the service package.

[4] Minimum Service Delivery Standards for Primary and Secondary Health Care in Punjab. Punjab Devolved Social Services Programme (PDSSP). Government of Punjab. January 2008.

Figure 1: Conceptual Framework for the EPHS



The conditions targeted are major contributors to the disease burden of the province, and the country.

For ensuring participation and ownership, the Punjab Health Sector Reform Programme (PHSRP) conducted a consultative workshop in May 2012 with health care providers and managers from all service delivery levels. Various aspects of service components under the EPHS for primary health care (EPHS-PHC) were discussed. The core team facilitating the workshop consisted of technical resource personnel from within the DOH Punjab, technical specialists from the Department for International Development UK (DFID), the World Bank (WB), and the Technical Resource Facility (TRF), and public health specialists from academic and research organizations.[5]

The deliberations from the workshop, and further consultations with relevant personnel from the DOH and associated programmes forms the basis of the document. The EPHS-PHC will serve as an updated guideline for practical, sustainable and acceptable package of services

[5] Consultative Workshop: Essential Package of Health Services for Primary Level. 17th to 19th May, 2012. Lahore, Pakistan.

to be delivered by the DOH. Further, it will also form the basis of the revisions in MSDS, and guide services for planned contracting-in and contracting-out of facilities.

The EPHS-PHC is envisaged to be a "living document," serving as a guideline for the aforementioned purposes, that should be revised every year, or at least once every 2 years, to incorporate evidence based guidelines. Newer medicines, cheaper alternatives, changing trends of illness, and changes in relative capacity of the DOH at various levels will also dictate the future direction. This is of utmost importance in aligning the document with the aim of achieving universal health care that responds to people's needs.

1.4.1. Role of the World Bank and TRF

The World Bank had initiated the development of the EPHS-PHC by arranging and facilitating the consultations. Building on the bank's efforts, the TRF commissioned this technical assistance aimed at helping 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[6] is mandated to support improvements in policy, strategies and systems and help in building the capacity of government functionaries at federal, regional and district levels by providing strategic technical assistance. TRF's team of experts comprised of Dr Jawad Chishtie (Team Leader/Public Health and Environmental Management Specialist) and Mr Afeef Mahmood (Financial and Management Expert) for developing the EPHS-PHC.

1.4.2. Layout of the EPHS-PHC document

The document is divided into sections with major service components (such as nutrition, maternal health, newborn, infant and child health) at the community and facility levels. Each service component enlists the following details:

1. Key points related to the service component
2. Detailed lists of services under the component, according to the different levels (both facility and community levels)in a detailed table

Following the service components, additional details of the support services needed to ensure service delivery are also mentioned in separate sections. These include:

1. Essential equipment and supplies

[6]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.

2. Essential medicines
3. Diagnostic services
4. Pharmacy services
5. Infrastructure
6. Human resource
7. Referral system and linkages
8. Monitoring and reporting system
9. Scopes of work of providers
10. Infection control guidelines: included within the annexes according to the relevant area/provider/facility.
11. Costs of the resources: mentioned in a separate document

Separate annexes in the document provide relevant details on service components, detailed services, infrastructure, human resource, equipment, supplies and medicines for each level.

2. The Primary Health Care (PHC) Concept

2.1. Definition

The conceptual model of PHC encompasses primary care, disease prevention, health promotion, population health, and community development within a holistic framework, with the aim of providing essential community-focused health care. The cornerstones of PHC are access, equity, essentiality, appropriate technology, multi-sectoral collaboration, and community participation and empowerment.

2.2. PHC Services

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

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

The areas of PHC are not only related to health, but also pertain to areas governed by other departments in Punjab. To maintain the holistic approach required for improving the health of targeted population, the DOH will attempt to involve related departments in target areas. The EPHS-PHC is limited to detailing the essential health services to be delivered directly by the DOH.

2.2.1. Service delivery facilities and personnel

PHC services in Punjab are being delivered through community and facility based interventions. Community workers include LHWs and CMWs, while facility based services are offered at BHUs and RHCs. Punjab has also introduced 24 hour services at BHUs and RHCs, and plans to increase the number of these facilities, which primarily offer Basic and/or Comprehensive EmONC services. The outline of services offered at these facilities is given in Table 1.

Table 1: PHC service delivery network in Punjab

S. no.	Type	Availability and major tasks assigned to workers and facilities	Number
	Community based services		
1.	LHW	▪ Availability: limited hours **Main services include:** ▪ Preventive services: health education, counselling, motivation ▪ Promotion of FP methods; emphasizing spacing interventions ▪ Immunization including establishing vaccination post. ▪ Nutrition education, counselling and treatment. ▪ Referral to appropriate providers and facilities for Intra-uterine devices (IUDs)and contraceptive surgery; other conditions and ailments.	48,500
2.	CMW	▪ Availability: 24-hours maternal and new-born care services **Main services include:** ▪ Prenatal services: identify/register pregnant women; provide ANC; assess nutritional status and give appropriate advice/treatment; manage minor discomforts and infections; refer for immunization, danger signs etc; guide/facilitate birth preparation plan, birth spacing. ▪ Intra natal services: identify/monitor labour; ensure clean/safe delivery; physical and emotional support; identify/refer for danger signs. ▪ Post Natal services: immediate PNC and following 6 weeks; breast feeding; identify/referfor danger signs; educate on feeding, weaning, immunization, birth spacing, provide FP supplies ▪ Newborn care: manage immediate care, minor disorders, identify/refer for danger signs; educate mothers on clean cord care, eye care,warmth, immunization, nutrition, breast feeding, clothing and hygiene. ▪ Community Based Midwifery Care: assess community, build linkages; report/interact with Lady Health Supervisor (LHS); LHWs, WMOs; Lady Health Visitor (LHV).	4,200
	Facility based services		
3.	BHU	▪ Availability: 6 hours/day ▪ Planned health education services at the centre and in schools. ▪ General treatment services.	2,456

		▪ Antenatal, intranatal and postnatal services ▪ Limited lab services. ▪ Referral service. **BHUs will perform all 7 signal functions of Basic EmONC that include:** 1. Administer parenteral antibiotics 2. Administer uterotonic drugs (parenteral oxytocin, ergometrine, misoprostol) 3. Administer parenteral anticonvulsants for pre-eclampsia and eclampsia (Magnesium sulphate, diazepam) 4. Perform manual removal of placenta 5. Perform removal of retained products (MVA, Misoprostol, E&C, without general anaesthesia); referral. 6. Perform assisted vaginal delivery (only if WMO is present) 7. Perform neonatal resuscitation (with bag and mask) However, these BHUs will not be labelled as a basic EmONC facility because the services would not be available round the clock.	
4.	BHU-24 hour	▪ Availability: 24 hours/day ▪ 6-hours planned health education services at the centre and in schools ▪ 6-hours general treatment services ▪ 6-hours ANCservices ▪ 24 hour intranatal and 6 hour PNC services ▪ 24 hour limited lab services ▪ 24-hour referral service **BHU-24h will perform all 7 signal functions of Basic EmONC that include:** 1. Administer parenteral antibiotics 2. Administer uterotonic drugs (parenteral oxytocin, ergometrine, misoprostol) 3. Administer parenteral anticonvulsants for pre-eclampsia and eclampsia (Magnesium sulphate, diazepam) 4. Perform manual removal of placenta 5. Perform removal of retained products (MVA, Misoprostol, E&C, without general anaesthesia); referral. 6. Perform assisted vaginal delivery (only if WMO is present) 7. Perform neonatal resuscitation (with bag and mask)	
5.	RHC	▪ Availability: 24 hours ▪ 6-hours planned health education services at the centre ▪ 6-hours general treatment services ▪ 24-hour delivery and new-born care services	293

		▪ 24-hour inpatient service (20 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. **RHCs will perform all 7 signal functions of Basic EmONC that include:** 1. Administer parenteral antibiotics 2. Administer uterotonic drugs (parenteral oxytocin, ergometrine, misoprostol) 3. Administer parenteral anticonvulsants for pre-eclampsia and eclampsia (Magnesium sulphate, diazepam) 4. Perform manual removal of placenta 5. Perform removal of retained products (MVA, Oxytocin/Misoprostol, E&C, without general anaesthesia); referral. 6. Perform assisted vaginal delivery 7. Perform neonatal resuscitation (with bag and mask)	
6.	RHC+	▪ Availability: 24 hours ▪ In addition to the above services at the RHC level, 24 hour Comprehensive EmONC services with the availability of blood transfusion, and C-section services.	

3. Education on health issues and preventive methods

3.1. Key interventions and levels

Given the importance of health education, most related services will be promoted by all providers and levels. Areas of health education and promotion on various areas are given below, while may overlap with specific messages in subsequent sections.

3.1.1. Uniform MNCH and FP messages

On 4th March 2010, a notification was issued by the then National MNCH Programme Pakistan (NMNCHP), after stakeholder consultations. This informs uniform health education messages related to MNCH and FP.[7] These messages are mentioned in table 3, and are to be promoted at all levels by providers and facilities.

[7] Notification from Ministry of Health. Ref: PHC Wing/FPIU No. F.01-10/2009-PHC. Subject: "Notification of consensus health education messages on maternal, newborn and child health; and family planning (MNCH and FP)." Dated 4 March 2012. Islamabad.

Table 2: Uniform health education areas/messages for MNCH and FP notified in March 2010.[8]

Issue	Content of message	Content in Urdu (Local Language)
Antenatal check-up: when to start, how many and when?	1. Four ANC check-ups starting from one in 1st, one in 2nd and two in 3rd trimester	1۔ ہر حمل کے دوران ہنر مند فرد/ماہر زچگی سے چار مرتبہ طبی معائنہ ضرور کراوئیں جس میں پہلا معائنہ ابتدائی تین ماہ کے دوران ہو۔
Tetanus Toxoid (TT) injections: how many and when?	2. Regardless of previous status, two TT injections are useful	2۔ ہر حمل کے دوران تشنج کے ٹیکے ضرور لگوائیں۔
Danger signs during pregnancy	3. Danger signs and actions to be taken (if any one of these appear)	3۔ حمل کے دوران ان خطرناک علامات میں سے کسی ایک کے بھی ظاہر ہونے پر فوراً بڑے ہسپتال سے رجوع کریں۔ a) خون جاری ہونا چاہیے ایک دھبہ ہی ہو b) دورے پڑنا c) شدید سر درد یا نظر کا دھندلانا d) ہاتھ یا چہرے پر سوجن ہونا e) پیٹ میں شدید درد f) قبل از وقت پانی کی تھیلی پھٹنا
Who is a skilled birth attendant?	4. Introduce the cadre that are designated as Skilled Birth Attendants (SBAs)	4۔ صرف ڈاکٹر نرس لیڈی ہیلتھ وزیٹر (LHV) اور لیڈی وائف ہی وہ ہنر مند افراد ہیں جو حمل اور زچگی کے دوران ایک ماں کی مدد کر سکتے ہیں۔
Danger signs during labour	5. 3 danger signs during labour and actions to be taken (if any of these appear)	5۔ پیدائش کے دوران ان علامات میں سے کسی ایک کے ظاہر ہونے پر بھی فوراً بڑے ہسپتال سے رجوع کریں۔ a) خون کا بہنا b) دوروں کا دورانیہ 8 گھنٹے سے زیادہ ہونا c) دورے پڑنا
Consulting for post-partum examination	6. At least one check-up within 6 hours after delivery	6۔ پیدائش کے بعد پہلے چھ گھنٹے کے دوران ماں اور بچے کا معائنہ لازمی ہے۔

[8]Implementing National MNCH Communication Strategy. Phase I Developing Implementation and Monitoring Plans. TRF. Islamabad.

Danger signs after delivery	7. Priority danger signs after delivery and actions to be taken if any of these appear	7۔ بچے کی پیدائش کے بعد ماں میں ان خطرناک علامات میں سے کسی ایک کے بھی ظاہر ہونے پر فوراً بڑے ہسپتال رجوع کریں۔ a) خون کا زیادہ بہنا b) دورے یا جھٹکے c) پیدائش کے نصف گھنٹہ بعد تک بھی آنول کا باہر نہ آنا d) شدید بخار e) بدبودار مواد کا اخراج
Bathing the neonate	8. Delayed bathing is advised to avoid hypothermia and keep the protection of vernix intact	8۔ نوزائیدہ بچے کو کم از کم چھ گھنٹے تک نہ نہلائیں۔
Early wrapping and keeping baby warm	9. Baby's body, including head, should be wrapped properly to prevent hypothermia	9۔ بچے کا سر تمام جسم کپڑے میں لپیٹ کر رکھیں تاکہ اسے ٹھنڈ نہ لگ جائے۔
Initiating breastfeeding	10. Prevents neonatal deaths as it improves resistance to many diseases	10۔ نوزائیدہ بچے کو پیدائش کے فوراً بعد ماں کا دودھ پلائیں۔
Neonatal danger signs	11. Mothers should know and be able to recognize 5 danger signs in the neonate	11۔ دودھ نہ پی سکنا رنگت نیلی ہونا جھٹکے لگنا سانس میں دشواری اور ڈھائی کلوگرام سے کم وزن نوزائیدہ میں خطرناک علامات ہیں۔ ان میں سے کسی ایک کے بھی ظاہر ہونے پر بچے کو فوراً ہسپتال لے جائیں۔
Exclusive breastfeeding	12. Mother should know that even water deprives the child from advantages of breastfeeding	12۔ بچے کو چھ ماہ تک صرف اور صرف ماں کا دودھ پلائیں حتیٰ کہ پانی بھی نہ پلائیں۔
Initiating weaning	13. Breastfeeding should continue until the age of six months, an appropriate time for weaning	13۔ چھ ماہ کی عمر سے ماں کے دودھ کے ساتھ ساتھ بچے کو نیم ٹھوس خوراک بھی شروع کروائیں۔
Optimal period of birth spacing	14. Optimal birth spacing should be known to couples	14۔ صحتمند پیدائشوں میں کم از کم تین سال کا وقفہ ضرور کریں۔
Child immunization	15. Families should know and complete the immunization course for their children.	15۔ بچے کو حفاظتی ٹیکوں کا کورس شیڈول کے مطابق مکمل کروائیں۔

3.1.2. Promoting birth spacing as an important FP intervention

FP is being repositioned as a birth spacing health intervention to promote its benefits on the health of the mother, the child and the whole family. This is also to raise awareness on the risk associated with too early and too late pregnancies; improving knowledge about contraceptives; and increasing service delivery access.The messages are to be propagated at all levels by providers, during community meetings, and during counselling.[9]

Table 3: Health Promotion & Education Services

S. no.	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
1.	**Hygiene Promotion, water and sanitation**						
1.1	Hand washing with soap	Yes	Yes	Yes	Yes	Yes	Yes
1.2	Proper toilet use and hand washing practices	Yes	Yes	Yes	Yes	Yes	Yes
1.3	Problems related to open defecation	Yes	Yes	Yes	Yes	Yes	Yes
1.4	Advice on safe water techniques, storage and consumption	Yes	Yes	Yes	Yes	Yes	Yes
2.	**Maternal & Newborn Health**						
2.1	Birth preparedness & complication readiness	Yes	Yes	Yes	Yes	Yes	Yes
2.2	Mother's nutrition & rest	Yes	Yes	Yes	Yes	Yes	Yes
2.3	Post-partum care	Yes	Yes	Yes	Yes	Yes	Yes
2.4	Newborn care & feeding	Yes	Yes	Yes	Yes	Yes	Yes
2.5	Family planning	Yes	Yes	Yes	Yes	Yes	Yes
2.6	Birth spacing	Yes	Yes	Yes	Yes	Yes	Yes
3.	**Child health & Development**						
3.1	Exclusive BF up to 6 months	Yes	Yes	Yes	Yes	Yes	Yes
3.2	Completing immunization	Yes	Yes	Yes	Yes	Yes	Yes
3.3	Managing diarrhoea at home	Yes	Yes	Yes	Yes	Yes	Yes
3.4	Growth/development monitoring	Yes	Yes	Yes	Yes	Yes	Yes
3.5	Accident prevention	Yes	Yes	Yes	Yes	Yes	Yes
4.	**Nutrition**						
4.1	Infant & young child nutrition	Yes	Yes	Yes	Yes	Yes	Yes
4.2	Nutrition of pregnant lactating women	Yes	Yes	Yes	Yes	Yes	Yes
4.3	Balanced diet for adolescents and adults	Yes	Yes	Yes	Yes	Yes	Yes
4.4	Weaning after 6 months of age under IYCF guidelines	Yes	Yes	Yes	Yes	Yes	Yes
5.	**Communicable Diseases**						
5.1	Respiratory problems	Yes	Yes	Yes	Yes	Yes	Yes
5.2	Diarrhoea	Yes	Yes	Yes	Yes	Yes	Yes
5.3	Tuberculosis	-	Yes	Yes	Yes	Yes	Yes

[9] Communication themes and guidelines for repositioning Family planning as a birth Spacing health intervention. FALAH, USAID and Government of Pakistan. Islamabad.

5.4	Malaria/Dengue	Yes	Yes	Yes	Yes	Yes	Yes
5.5	STIs including HIV/AIDS	-	Yes	Yes	Yes	Yes	Yes
5.6	Common infections (scabies, pediculosis, helminthiasis)	-	Yes	Yes	Yes	Yes	Yes
6.	**Non-Communicable Diseases**						
6.1	Hypertension	Yes	Yes	Yes	Yes	Yes	Yes
6.2	Diabetes Mellitus	Yes	Yes	Yes	Yes	Yes	Yes
6.3	Cancer	-	-	Yes	Yes	Yes	Yes
6.4	Mental illnesses	-	-	Yes	Yes	Yes	Yes
6.5	Tobacco/smoking control and cessation	Yes	Yes	Yes	Yes	Yes	Yes
6.6	Weight control	-	-	Yes	Yes	Yes	Yes
6.7	Physical activity/exercise	Yes	Yes	Yes	Yes	Yes	Yes
7.	**Prevention of injuries and accidents**						
7.1	Accident/injury prevention	Yes	Yes	Yes	Yes	Yes	Yes
8.	**Use of medication**						
8.1	Rational use of drugs	Yes	Yes	Yes	Yes	Yes	Yes
8.2	Rational use of injections	Yes	Yes	Yes	Yes	Yes	Yes

4. Prevention and management of malnutrition

4.1. Key interventions and services

4.1.1. Target groups

The key target groups for prevention and management of malnourishment through community outreach and facility based services are: Severe Acute Malnourished (SAM) and Moderate Acute Malnourished (MAM) children, chronic malnourished children and malnourished Pregnant/Lactating women (PLW).

4.1.2. Community based services

Key services related to community based nutrition interventions are:

- Community level screening of children will be carried out by LHWs and CMWs by measuring mid-upper arm circumference measurement (MUAC). All concerned providers will refer children to the facility level, as per need.
- LHWs will also assess children through symptoms and clinical signs, and measure height and weight.
- LHWs will sensitize community for identifying possible cases of SAM/MAM children and motivate for seeking health care.
- LHWs will counsel PLWs on nutrition behaviours and practices. They will also counsel mothers on SAM/MAM children's condition.
- LHWs will promote quality breast feeding practices including initiation of newborn breastfeeding within half hour of birth; and exclusive breastfeeding for the first 6 months of life.They will also promote optimal complementary feeding practices, including nutritionally adequate and safe complementary foods starting at 6 months, and continuing breastfeeding up to two years.
- LHWs will promote diversity in food consumed every day.

4.1.3. Facility based Management of SAM

Facility based management of SAM will target: i. SAM children less than five years of age; and ii. PLW. The main functions are below.

- Screening will be carried out at both community and facility level at Outdoor Therapeutic Programme (OTP) in selected districts, where reported Global Acute Malnutrition rate is high; and in urban slums.LHWs and CMWs will screen PLW in the community.
- Identified SAM and MAM cases will be referred to OTP.
- SAM children without complications will be referred to OTP, while children with complications and without appetite, who are screened in the community and/or OTP, will be referred to the stabilization centres at THQH/DHQH.
- Children will be referred from OTP, or may present directly for inpatient care. After stabilization, children will be referred back to OTP for continued support.

4.1.3.1. Outpatient Therapeutic Program (OTP)

- In selected districts and in urban slums, OTP at BHU/RHCs will offer Community-Based Management of Acute Malnutrition (CMAM).
- Child will be primarily managed at home with periodic regular visits to the OTP for at least three months.
- The SHNS will screen SAM/MAM children and PLW, and advocate CMAM interventions.
- SAM children with appetite and without complication will be regularly monitored, and their parents will be counselled on management.

4.1.4. Provision of Nutrition Supplements

- Nutrition supplements will be provided to the malnourished children and PLWs identified through screening by community workers (LHWs, CMWs, SHNSs).
- All pregnant women will be given iron and folic acid tablets.
- All married and unmarried women of child bearing age will be provided 1 iron tablet per week, as a blanket cover against iron deficiency anaemia.

4.1.5. Treatment of anaemia

- All health care providers including LHWs, CMWs, LHVs and doctors will identify anemia.

- LHWs and CMWs will educate communities on signs of anemia.
- LHWs and CMWs will provide iron and folic acid tablets to anaemic women, all pregnant mothers and/or lactating women during antenatal and post natal period at the community level; and refer in case of any danger signs.

4.1.6. Deworming of Children

- Worm infestations will be targeted through hygiene related measures, specifically hand washing (before eating and after defecation, etc). LHWs would sensitize mothers and children, and participate in social marketing and distribution of deworming medicines for children. (for pregnant women, see section on maternal health).
- LHWs and CMWs will deworm all children over 2 years, twice every year using standard protocols(Mebendazole) during biannual MCH weeks, ensuring that it is administered orally in their presence.
- Health facilities will provide medicines to the population that is not covered by LHWs.

Table 4: Nutrition services

S. no.	Services	CMW	LHW	SHNS	BHU	BHU-24h	RHC	RHC+
1	**Nutritional Education & Advice**							
1. 1	Initiating newborn breastfeeding within an hour of birth	Yes	Yes	Yes	Yes	Yes	Yes	Yes
1. 2	Exclusive breastfeeding up to 6 months	Yes	Yes	Yes	Yes	Yes	Yes	Yes
1. 3	For infants, nutritionally adequate and safe complementary foods starting at 6 months, while continuing breastfeeding up to two years	Yes	Yes	Yes	Yes	Yes	Yes	Yes
1. 4	Mobilizing community to identify SAM/MAM cases, and seeking health care through LHWs and CMWs	Yes	Yes	Yes	Yes	Yes	Yes	Yes
1. 5	Nutrition behaviours and practices of pregnant women and lactating mothers towards themselves as well as their children	Yes	Yes	Yes	Yes	Yes	Yes	Yes
1. 6	Involve community in IYCF activities	Yes	Yes	Yes	Yes	Yes	Yes	Yes
1. 7	Food diversity	Yes	Yes	Yes	Yes	Yes	Yes	Yes
1. 8	Health promotion on balanced diet for adolescents and adults	Yes	Yes	Yes	Yes	Yes	Yes	Yes
1. 9	Hygiene messages for prevention of transmission of worm infestation	Yes	Yes	Yes	Yes	Yes	Yes	Yes

S. no.	Services	CMW	LHW	SHNS	BHU	BHU-24h	RHC	RHC+
2	**Assessment of Nutritional Status**							
2.1	Community level screening of women and children	Yes	Yes	-	-	-	-	-
2.2	Growth monitoring	-	Yes	-	Yes	Yes	Yes	Yes
2.3	Referral to facility after screening at community level	-	Yes	-	-	-	-	-
3	**Prevention of Malnutrition**							
3.1	Support and promote exclusive breastfeeding	Yes	Yes	-	Yes	Yes	Yes	Yes
3.2	Promotion of appropriate complementary feeding from 6 months	-	Yes	-	Yes	Yes	Yes	Yes
3.3	Screening malnutrition in pregnant and lactating women	Yes	Yes	-	Yes	Yes	Yes	Yes
3.4	Prevent parasitic infections	-	Yes	Yes	Yes	Yes	Yes	Yes
3.5	Promote exposure to sunshine for women and children to avoid vitamin D deficiency	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3.6	Promotion of iodized salt	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3.7	Iron supplementation for children 6 months to 5 years	Yes	Yes	-	Yes	Yes	Yes	Yes
3.8	Iron supplementation for pregnant, lactating women	Yes	Yes	-	Yes	Yes	Yes	Yes
3.9	Folic acid supplementation for pregnant, lactating women	Yes	Yes	-	Yes	Yes	Yes	Yes
3.10	Iron tablets for women of child bearing age	Yes	Yes	-	Yes	Yes	Yes	Yes
3.11	Deworming of children under 5 years	Yes	Yes	-	Yes	Yes	Yes	Yes
4	**Management of Malnutrition**							
4.1	Treatment of SAM/MAM children	-	Yes-screening and followup	-	Yes	Yes	Yes	Yes
4.2	Treatment of SAM children with complications	-	Refer	-	Refer	Refer	Refer	Refer
4.3	Identification and treatment of anaemia in women and children	Yes	Yes	-	Yes	Yes	Yes	Yes

5. Maternal and Child Health Service

5.1. Maternal Health: key interventions and services

The main care provider at the community level for pregnancy related services is the CMW, while the LHW provides preventive and referral services for supporting interventions. The key interventions and services at various levels are below. The services are detailed in Tables 6 to 8.

5.1.1. Antenatal Care

- Early registration of all pregnancies, ideally within first trimester.
- Minimum four antenatal check-ups.
- Assessment of pregnant women.
- Identification of high-risk pregnancies and prompt referral.
- Minimum laboratory investigations: haemoglobin estimation, urine for albumin and sugar, and referral for blood grouping.
- Iron & Folic Acid Supplementation.
- Injection Tetanus Toxoid (TT).
- Advice for calcium supplementation (at doses of 1.5 – 2.0 g elemental calcium/day) as it leads to reduction in the risk of pre-eclampsia and eclampsia.[10] 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.

5.1.1.1. Guidelines for deworming and malaria during pregnancy

- Treat worm infestation ONLY if heavy infestation is suspected. Treat in SECOND and THIRD trimester, NEVER in FIRST trimester, and preferably with MEBENDAZOLE. Studies show that there is no significant improvement in anaemia and birthweight with routine deworming.[11]Also there is no evidence of benefit using Albendazole in pregnant women.[12]

[10] WHO recommendations for prevention and treatment of pre-eclampsia and eclampsia. 2011. ISBN 978 92 4 154833 5.
[11]J. Ndibazza et al.Effects of Deworming during Pregnancy on Maternal and Perinatal Outcomes in Entebbe, Uganda: A Randomized Controlled Trial. Clinical Infectious Diseases; 50:531–40. 2010. DOI: 10.1086/649924.
[12] Gyorkos, W et al. Lack of Risk of Adverse Birth Outcomes After Deworming in Pregnant Women, The Pediatric Infectious Disease Journal. 25:9, Sep 2006.

- **Bed nets would be provided for prophylaxis.**
- **Malaria treatment:**Antimalarials considered safe in the first trimester of pregnancy are chloroquine, proguanil and sulfadoxine–pyrimethamine.
- Artemisinin derivatives should be used to treat uncomplicated falciparum malaria in the second and third trimesters of pregnancy, but should not be used in the first trimester until more safety information becomes available.
- Artemisinin-based combination therapies (ACTs) are considered suitable for second and third trimesters.

5.1.2. Intranatal care

- Promotion of delivery by skilled birth attendants (SBA).
- Appropriate and prompt referral of high risk and complicated cases.

5.1.3. Postnatal care

- At the facility level, a minimum of 5 postnatal visits: first is immediately after birth; second on 3rd day (within 48 hours); third on 7th day; fourth on the 28thday; and fifth on the 42ndday of the birth.
- At the community level, a minimum of 4 postpartum home visits: first on the 1st day/within 24 hours of delivery, secondon the 3rd day; third on 7th day; and fourth on 28th day of birth.
- Initiation of early breast-feeding within half-hour of birth.
- Counselling on diet, rest, hygiene, FP emphasizing spacing, essential new born care and infant feeding.

Basic EmONC Services at BHU

BHUs will perform 7 signal functions of Basic EmONC that include:

1. Administer parenteral antibiotics
2. Administer uterotonic drugs (parenteral oxytocin, ergometrine, misoprostol)
3. Administer parenteral anticonvulsants for pre-eclampsia and eclampsia (Magnesium sulphate, diazepam)
4. Perform manual removal of placenta
5. Perform removal of retained products (MVA, Misoprostol, E&C, without general anaesthesia); referral.
6. Perform assisted vaginal delivery

7. Perform neonatal resuscitation (with bag and mask)

5.1.4. Basic EmONC Services at BHU-24 hours

BHU-24h will perform all the 7 signal functions of Basic EmONC that include:

1. Administer parenteral antibiotics
2. Administer uterotonic drugs (parenteral oxytocin, ergometrine, misoprostol)
3. Administer parenteral anticonvulsants for pre-eclampsia and eclampsia (Magnesium sulphate, diazepam)
4. Perform manual removal of placenta
5. Perform removal of retained products (MVA, Misoprostol, E&C, without general anaesthesia); referral.
6. Perform assisted vaginal delivery
7. Perform neonatal resuscitation (with bag and mask)

5.1.5. Comprehensive EmONC at RHC+

The DOH plans to provide Comprehensive EmONC services at the RHC level. The equipped facilities offering these service will be called RHC+ (plus). The modalities for provision of services is detailed here.

RHCs and RHC+ will perform all the seven signal functions of Basic EmONC that include:

1. Administer parenteral antibiotics
2. Administer uterotonic drugs (parenteral oxytocin, ergometrine, misoprostol)
3. Administer parenteral anticonvulsants for pre-eclampsia and eclampsia (Magnesium sulphate, diazepam)
4. Perform manual removal of placenta
5. Perform removal of retained products (MVA, Oxytocin/Misoprostol, E&C, without general anaesthesia); referral.
6. Perform assisted vaginal delivery
7. Perform neonatal resuscitation (with bag and mask)

In addition, RHC+ will also provide Comprehensive EmONC Services that include:

1. Caesarean section.
2. Availability of blood with storage facility.
3. Ambulance service.

5.1.5.1. Caesarean section

Caesarean section will be preferred under spinal anaesthesia (SA) given its benefits over general anaesthesia. However, options for anaesthesia will vary according to the availability of trained staff.

5.1.5.2. Blood transfusion services

Blood storage and transfusion services will be provided to support C-section services, by equipping the existing lab. This will be more efficient as space, equipment and supplies, such as centrifuge and microscope, will be shared. The lab technician will be trained in safe blood transfusion services.

Table 5: Antenatal services

S. no.	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
1.	Identify pregnant women in the community	Yes	Yes	-	-	-	-
2.	Persuade and register pregnant women in the community to receive ANC	Yes	Yes	-	-	-	-
3.	**Diagnosis of pregnancy**						
3.1.	History	Yes	Yes	Yes	Yes	Yes	Yes
3.2.	Examination	Yes	Yes	Yes	Yes	Yes	Yes
3.3.	Laboratory	Refer	Refer	Yes	Yes	Yes	Yes
4.	**Antenatal Visits**						
4.1.	Fundal Height	Yes	-	Yes	Yes	Yes	Yes
4.2.	Maternal Weight	Yes	-	Yes	Yes	Yes	Yes
4.3.	BP measurement	Yes	Yes	Yes	Yes	Yes	Yes
4.4.	Tetanus immunization	Refer	Refer	Yes	Yes	Yes	Yes
4.5.	Iron/Folic acid supplementation	Yes	Yes	Yes	Yes	Yes	Yes
4.6.	Goitre	Refer	Refer	Refer	Refer	Refer	Refer
4.7.	Oedema	Yes	Yes	Yes	Yes	Yes	Yes
4.8	Urine for albumin/sugar	Yes	Refer	Yes	Yes	Yes	Yes
4.9.	Birth preparedness plan/plan for emergencies:	Yes	Yes	Yes	Yes	Yes	Yes
	· Identifying SBA/referral hospital for delivery	Yes	Yes	Yes	Yes	Yes	Yes
	· Arranging money	Yes	Yes	Yes	Yes	Yes	Yes
	· Identifying transport	Yes	Yes	Yes	Yes	Yes	Yes
	· Identifying blood	Yes	Yes	Yes	Yes	Yes	Yes

S. no.	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
	donor						
	· Clean delivery kit for home delivery	Yes	Yes	Yes	Yes	Yes	Yes
4.10.	Vaginal bleeding, including post abortion care in early and late pregnancy as per protocol	Yes	Yes	Yes	Yes	Yes	Yes
4.11	Treatment of vaginal infections (Bacterial vaginosis, Trichomoniasis, Moniliasis)	Yes	-	Yes	Yes	Yes	Yes
5.	**Management of anaemia**						
5.1.	History and examination	Yes	Yes	Yes	Yes	Yes	Yes
5.2.	Haemoglobin estimation	Yes	Refer	Yes	Yes	Yes	Yes
5.3.	Treatment	Yes	Yes	Yes	Yes	Yes	Yes
6.	Management of inter-current illness*	Refer	Refer	Yes	Yes	Yes	Yes
7.	Worm infestation identification and deworming	Yes	Yes	Yes	Yes	Yes	Yes
8.	Prevention of malaria by promoting use of bed nets	Yes	Yes	Yes	Yes	Yes	Yes
9.	Treatment of malaria	Refer	-	Yes	Yes	Yes	Yes
10.	Treatment of Urinary Tract Infections	-	-	Yes	Yes	Yes	Yes
11.	Hypertension of Pregnancy	Identify and Refer	Identify and Refer	Yes	Yes	Yes	Yes
12.	Management of complication pre-eclampsia/eclampsia	Stabilize and refer	-	Stabilize and Refer	Stabilize and Refer	Stabilize and Refer	Stabilize and Refer
13.	Incomplete miscarriage/abortion	Identify and Refer	-	-	Yes	Yes	Yes
14.	Diabetes Mellitus	Identify and Refer	-	Yes	Yes	Yes	Yes
15.	Ectopic pregnancy	Refer to hospital	Refer to hospital	Refer to hospital	Refer to hospital	Stabilize and refer to hospital	Stabilize and refer to hospital
16.	Syndromic management of sexually transmitted	-	-	Yes	Yes	Yes	Yes

S. no.	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
	infections						
17.	Treatment of Vitamin A deficiency (in the last trimester, if night blindness appears)	Refer to hospital	Refer to hospital	Refer to hospital	Refer to hospital	Refer to hospital	Refer to hospital
18.	Management of shock	Refer to hospital	Refer to hospital	Refer to hospital	Refer to hospital	Refer to hospital	Refer to hospital
19.	Ultrasound	-	-	Refer	Yes	Yes	Yes
*Intercurrent illness refers to illness occuring with other condition/s that could cause complications.							

Table 6: Intranatal care services

S. no.	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
1	Identify true labour and monitor progression of labour – Partograph	Yes	-	Yes	Yes	Yes	Yes
2	Danger signs in the first, second and third stages of labour	Identify and Refer	-	Refer	Refer	Refer	Refer if needed
3	Prepare environment and materials following infection control protocols	Yes	-	Yes	Yes	Yes	Yes
4	Identify foetal malposition	Refer	Refer	Yes	Yes	Yes	Yes
5	External cephalic version	-	-	Refer to hospital	Refer to hospital	Refer to hospital	Refer to hospital
6	Identify and refer high risk pregnancy	Yes	-	Yes	Yes	Yes	Yes
7	Conduct normal delivery	Yes	-	Yes	Yes	Yes	Yes
8	Conduct Assisted Vaginal Delivery (AVD) - MVA, Forceps	Refer	-	-	-	Yes	Yes
9	Provide safe delivery kit	Yes	-	Yes	Yes	Yes	Yes
10	Administer intravenous (IV) fluids	Yes	-	Yes	Yes	Yes	Yes
11	Administer parenteral Oxytocin	Yes	-	Yes	Yes	Yes	Yes
12	Administer parenteral anticonvulsants	Refer	-	Yes	Yes	Yes	Yes
13	Administer parenteral antibiotics	Yes	-	Yes	Yes	Yes	Yes
14	Transfuse safe blood	Refer	-	-	Refer	Refer	Yes
15	Prevention of PPH Bimanual compression of uterus	Yes	-	Yes	Yes	Yes	Yes
16	Recognition and Repair/Suturing of 1st and 2nd degree vaginal tears	Yes	-	Yes	Yes	Yes	Yes
17	Recognition and referral to hospital for 3rd degree vaginal & cervical tears	Yes	-	Yes	Yes	Yes	Yes
18	Suturing of 3rd degree vaginal & cervical tears	Refer to hospital	-	Refer to hospital	Refer to hospital	Refer to hospital	Refer to hospital
19	Follow all steps of active management of third stage of labour	Yes	-	Yes	Yes	Yes	Yes
20	Manual removal of placenta	-	-	Yes, without GA[1]	Yes, without GA[1]	Yes, without GA[1]	Yes, without GA[1]
21	Removal of retained products (Manual Vacuum Extraction/Evacuation and Curettage)	Refer	-	Yes, without GA[1]	Yes, without GA[1]	Yes, without GA[1]	Yes, without GA[1]
22	Management of prolapsed cord	Refer	-	Refer	Refer	Yes	Yes
23	Management of shoulder dystocia	Refer	-	Refer	Refer	Yes	Yes

S. no.	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
24	Manage prolonged and obstructed labor	Recognize and refer	-	Yes/ Refer	Yes/ Refer	Yes/ Refer	Yes/ Refer
25	Administer Ergometrine	Yes		Yes	Yes	Yes	Yes
26	Caesarean section	Refer	-	Refer	Refer	Refer	Yes
27	Neonatal resuscitation	Yes	-	Yes	Yes	Yes	Yes
28	Appropriate disposal of placenta and other wastes	Yes	-	Yes	Yes	Yes	Yes
[1] = when dilated and general anaesthesia is not needed.							

Table 7: Postnatal care

S. no.	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
1.	Breast examination for breastfeeding management	Yes	Yes	Yes	Yes	Yes	Yes
2.	Iron and folic acid supplementation	Yes	Yes	Yes	Yes	Yes	Yes
3.	**Management of PPH; shock**						
3.1.	Diagnosis on history and examination	Yes	-	Yes	Yes	Yes	Yes
3.2.	First aid, supportive management and referral	Yes	-	Yes	Yes	Yes	-
3.3.	Treatment	-	-	Stabilize and refer	Stabilize and refer	Stabilize and refer	Yes/ Refer if needed
3.4.	I/V Fluids	Yes	-	Yes	Yes	Yes	Yes
4.	Blood Transfusion	Refer	-	Refer	Refer	Refer	Yes
5.	**Management of Puerperal Sepsis**						
5.1.	Identification/diagnosis on history and examination	Yes	Refer	Yes	Yes	Yes	Yes
5.2.	Supportive management & referral	Yes	-	Yes	Yes	Yes	Yes/ Refer if needed
5.3.	Laboratory	-	-	-	-	Yes	Yes
5.4.	Parenteral Antibiotics	-	-	Yes	Yes	Yes	Yes
5.5.	Oral Antibiotics	Yes	Yes	Yes	Yes	Yes	Yes
6	Oral Antibiotics	Yes	-	Yes	Yes	Yes	Yes
7	Counselling on family planning specially spacing for at least 2 years	Yes	Yes	Yes	Yes	Yes	Yes
8	Provide contraceptives: condoms and pills	Yes	Yes	Yes	Yes	Yes	Yes
9	Provide contraceptives: injectables and IUDs	Yes	-	Yes	Yes	Yes	Yes
10	Female sterilization (tubal ligation)	Refer	Refer	Refer	Refer	Refer	Yes
11	Register births and deaths	Yes	Yes	Yes	Yes	Yes	Yes

5.2. Newborn Care

The major focus of newborn care would be to provide Essential Newborn Care (ENC) services and Basic EmONC for prevention of neonatal complications. ENCservices will be offered both at community and facility levels.

The services under ENC would focus at:

- Immediate and critical life support to a new born by resuscitation.
- Prevention from hypothermia by keeping baby warm through Kangaroo mother care and delayed bathing.
- Early initiation of breast feeding and ensuring cord care with 4% chlorhexidine solution.

5.2.1. Community level ENC Services through CMWs and LHWs

- Educate pregnant women and their family on ENC during antenatal care.
- CMW will offer immediate care of the newborn up to the level of performingmouth to mouth resuscitation, following standard protocols.
- At the community level, a minimum of 4 postpartum home visits: first on the 1st day/within 24 hours of delivery, second on the 3rd day; third on 7th day; and fourth on 28th day of birth.
- LHWs and CMWs will identify signs of illness and to provide immediate pre-referral care to the newborn, and refer to health facility.

5.2.2. Facility-based ENC Services at BHUs and RHCs

All providers at BHUs & RHCs working at labour rooms will offer ENC services. Key interventions are below.

- Common illnesses among neonates, especially infections, complications of preterm birth and of birth asphyxia, and prevention from hypothermia; Identifying serious neonatal conditions.
- Provide pre-referral care including first dose of intravenous antibiotic.
- Neonatal resuscitation using ambu bag and mask.
- Management of neonatal cases referred from the community.
- Further referrals to THQH/DHQH or RHC+ as applicable.

5.2.3. Secondary care for newborns at RHC+

The secondary care facility for newborns (SCFN) would essentially be a special care nursery, with oxygen, and good ENC support. The RHC+ would offer Level 2 care, (with some modifications) that includes:[13]

- Evaluation, screening and postnatal care of healthy newborn infants.
- Phototherapy.
- Care for infants with corrected gestational age greater than 28 weeks or weight greater than 1800 g who have mild illness expected to resolve quickly or who are convalescing after intensive care.
- Nasal oxygen with oxygen saturation monitoring (e.g., for infants with chronic lung disease needing long-term oxygen and monitoring).
- Peripheral intravenous infusions and possibly parenteral nutrition for a limited duration.
- Resuscitation and stabilization of ill infants before transfer to an appropriate care facility.
- Safe and appropriate transport, and backup and referral linkage with an NICU facility.

Existing personnel would be trained in relevant areas of care to provide round the clock support, while specialists such as neonatologists will be recruited on a fee for service basis.
Staff will be trained for NG insertion and feeding, IV access, and the use of the equipment. A neonatal intensive care unit (NICU) at the DHQH will provide backup and referral support to the unit.

The unit will include 2 infant cots. Each trained neonatal nurse will look after a maximum of 2 babies at one time.

If the RHC+ has a lot of traffic (at least 10 babies which need intensive care at any given time), then an NICU can be envisioned after 3 years once enough manpower is available (neonatologist, respiratory therapist, neonatal nurses). Specific services are detailed in table 8.

[13] There is a lack of a standard definition of neonatal care levels. The Canada classification is used here. From: http://en.wikipedia.org/wiki/Neonatal_intensive_care_unit. Accessed: Dec 2012.

Table 8: Newborn care services

S. no.	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
1.	**Immediate care/Early Newborn Care**						
1.1.	**Health Education/Promotion on:** ▪ Hand Washing ▪ Cord Care ▪ Keeping the baby warm ▪ Early initiation of BF ▪ Exclusive BF ▪Recognizing danger signs/intensity and taking action ▪Completing Immunization	Yes	Yes	Yes	Yes	Yes	Yes
1.2.	Dry and stimulate the baby	Yes	Yes	Yes	Yes	Yes	Yes
1.3.	Clean airway, assesses the baby's breathing and colour, decide if the baby needs resuscitation, and resuscitate if required.	Yes	Yes	Yes	Yes	Yes	Yes
1.4.	Tie/clamp and cut the cord	Yes	-	Yes	Yes	Yes	Yes
	Management of asphyxia	Yes	-	Yes	Yes	Yes	Yes
1.5.	Avoid hypothermia: ▪Keeping baby close to mother ▪Cover both mother and baby with a sheet/blanket ▪Cover the baby's head with a cloth	Yes	-	Yes	Yes	Yes	Yes
1.6.	Recognize danger signs	Yes	Yes	Yes	Yes	Yes	Yes
1.7.	Eye care including prevention of Ophthalmia neonatorum within an hour of birth	Yes	-	Yes	Yes	Yes	Yes
1.8.	Identification of the baby	-	-	Yes	Yes	Yes	Yes
1.9.	Counselling of mother before transfer to post-partum area/before discharge/before provider leaves: ▪ On all infant care health education/promotion areas mentioned above ▪ On post-partum maternal care (see section on post-partum care)	Yes	-	Yes	Yes	Yes	Yes
1.10.	Cord care using 4% CHX (Chlorhexidine)	Yes	Yes	Yes	Yes	Yes	Yes
2.	**Neonatal Sepsis**						
2.1.	History and examination	Identify and refer	-	Yes	Yes	Yes	Yes
2.2.	Laboratory	-	-	-	-	Yes	Yes
2.3.	Treatment	Refer	-	Refer	Refer	Refer	Yes
3.	**Neonatal Tetanus**						
3.1.	Preventive education on: · Clean Cord cutting · Cord Care · Tetanus Toxoid	Yes	Yes	Yes	Yes	Yes	Yes
3.2.	Diagnosis on history and examination	-	-	Yes	Yes	Yes	Yes
3.3.	Treatment	-	-	Refer	Refer	Refer	Yes
4.	**Neonatal Jaundice**						

S. no.	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
4.1.	Preventive education: ▪ Continued feeding ▪ No extra fluids ▪ No medication ▪ Recognizing intensity ▪ Taking action	Yes	Yes	Yes	Yes	Yes	Yes
4.2.	History and examination	Yes	-	Yes	Yes	Yes	Yes
4.3.	Laboratory	Refer	-	Refer	Refer	Refer	Yes
4.4.	Management at home	Yes	Yes	Yes	Yes	Yes	Yes
4.5.	Treatment of severe case	Refer	-	Refer	Refer	Refer	Yes
5.	**Care within the first 6 hours of birth**						
5.1.	Conduct comprehensive examination of the mother and new born: ▪ Respiration, Colour and temperature ▪ Checking/reties cord ▪ Checking danger signs, referral if needed after giving first dose of anti-biotic ▪ Checking/advising BF ▪ Observing BF including attachment at the breast for atleast 5 mins ▪ Advising mother to inform if she notes any problem ▪ Check posture and tone, heart rate, activity, skin, head, eyes, mouth, chest, abdomen, back and spine, anus, and genital organs	Yes	-	Yes	Yes	Yes	Yes
5.2.	Newborn immunization	Refer	Refer	Yes	Yes	Yes	Yes
5.3.	Give vitamin K 1 mg IM	-	-	Yes	Yes	Yes	Yes
5.4.	Managing LBW baby	Yes	Yes	Yes	Yes	Yes	Yes
5.5.	Monitoring the baby during first 6 hours of delivery (every 15m for first 3 hours, every 30m in the third hour and every hour in the next three hours)	Yes	-	-	Yes	Yes	Yes
6.	**Care up to 28 days**						
6.1.	Teach and Counsel mother/family about: ▪Recognising danger signs and taking appropriate actions if they occur ▪ Hand washing ▪ Keep cord clean and dry ▪Cord care including not applying anything ▪Exclusive breastfeeding for 6 months, including colostrum ▪ Keeping the baby warm ▪ Completing immunisation	Yes	Yes	Yes	Yes	Yes	Yes
6.2.	Breastfeeding of LBW baby every 2 to 2½ hours	Yes	Yes	Yes	Yes	Yes	Yes
7.	**Secondary level care for newborns**						
7. 1	Assessment and screening of newborns	-	-	-	-	-	Yes
7. 2	Warmth by keeping baby close to mother	-	-	-	-	-	Yes
7. 3	Breastfeeding support	-	-	-	-	-	Yes
7. 4	Newborn feeding	-	-	-	-	-	Yes

S. no.	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
7. 5	Support for premature babies at 28 weeks	-	-	-	-	-	Yes
7. 6	Support for small for gestational age babies (SGA)	-	-	-	-	-	Yes
7. 7	Support for low birth weight babies (LBW)	-	-	-	-	-	Yes
7. 8	Cardiac and blood pressure monitoring of newborns	-	-	-	-	-	Yes
7. 9	Monitoring of newborns after resuscitation, administration of medicines	-	-	-	-	-	Yes
7. 10	Monitoring for respiratory distress including apnea, grunting, rapid breathing.	-	-	-	-	-	Yes
7. 11	Screening and management for Infections/sepsis	-	-	-	-	-	Yes
7. 12	Management of macrosomia (>4500 g) and hypoglycemia	-	-	-	-	-	Yes
7. 13	Phototherapy for Jaundice	-	-	-	-	-	Yes
7. 14	IV care and support	-	-	-	-	-	Yes
7. 15	Oxygen administration; and oxygenation monitoring	-	-	-	-	-	Yes
7. 16	Referral and transport (in incubator) for complications, congenital malformations, etc.	-	-	-	-	-	Yes

5.3. Infant and child health

The Integrated Management of Neonatal & Childhood Illness (IMNCI) approach will be employed and promoted at the primary level for case management, at both community and facility levels.

5.3.1. Community IMNCI services

The key interventions and role of providers for providing Community IMNCI services is below.

- For promoting community IMNCI services, LHWs, CMWs and Dispensers will raise awareness and educate parents on exclusive breastfeeding, proper weaning, immunization, improving personal hygiene and health seeking behaviours, care at home, and other aspects.
- LHWs will treat simple pneumonia and Acute Respiratory Infection with Amoxicillin.
- In cases of severe pneumonia, LHWs will referthe case to BHU, after administering the first dose of antibiotic.
- LHW will treat diarrhoea without dehydration or some dehydration. Children with moderate to severe dehydrationwill be referred to the BHU.

5.3.2. Facility-based IMNCI services

- All providers (including paediatricians, MOs/WMOs, LHVsand Medical Technicians), involved in care of infants and children at out patient departments (OPDs) at facilities, will manage cases based on the IMNCI approach.

Table 9: Infant and child care services

S. no.	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
1.	Perform growth monitoring	Yes	Yes	Yes	Yes	Yes	Yes
2.	**EPI Services**						
2.1.	Health promotion/education on: ▪ Importance of immunization ▪ Repeated Polio days	Yes	Yes	Yes	Yes	Yes	Yes
2.2.	Storage of vaccines	-	-	Yes	Yes	Yes	Yes
2.3.	Routine immunization	-	Yes*	Yes	Yes	Yes	Yes
2.4.	Campaigns/National Immunization Days (NIDs)	-	Yes*	Yes	Yes	Yes	Yes
2.5.	Disease surveillance & case reporting	Yes	Yes	Yes	Yes	Yes	Yes
** The department of health is piloting the administration of vaccines through the LHWs. Currently, the LHWs have been trained in selected districts where this intervention will be piloted. It will be scaled up only if the results of the pilot are successful. The LHW is not supposed to store vaccines. In this model, the LHWs will provide vaccines that will be supplied to her through the vaccinator.*							
3.	**ARI**						
3.1.	Health education for ARI ▪ Increasing fluids ▪ Continue feeding ▪ Cleanliness	Yes	Yes	Yes	Yes	Yes	Yes
3.2.	Child with cough/cold (no signs of pneumonia)	Yes	Yes	Yes	Yes	Yes	Yes
3.3.	Child with fast breathing (pneumonia)	Yes. Oral antibiotic and refer if needed	Yes. Oral antibiotic and refer if needed	Yes	Yes	Yes	Yes
3.4.	Child with severe pneumonia	Yes. Oral antibiotic and refer	Yes. Oral antibiotic and refer	Yes. Oral antibiotic and refer	Yes. Oral antibiotic and refer	Yes. Parenteral antibiotic and refer	Yes
3.5.	Child with very severe disease	Refer	Refer	Refer	Refer	Refer	Refer
3.6.	Child with wheeze	Refer	Refer	Yes	Yes	Yes	Yes

S. no.	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
3.7.	Child with ear infection	Refer	Refer	Yes	Yes	Yes	Yes
4.	**Management of Diarrhoea**						
4.1.	Health education on Diarrhoea/ORT ▪ How to mix ORS ▪ Increasing fluids ▪ Continue feeding ▪ Handwashing ▪ Identifying danger signs & taking timely actions	Yes	Yes	Yes	Yes	Yes	Yes
4.2.	With no dehydration	Yes	Yes	Yes	Yes	Yes	Yes
4.3.	Some dehydration	Refer	Yes	Yes	Yes	Yes	Yes
4.4.	Severe dehydration	Refer	Refer	Stabilize and refer	Stabilize and refer	Stabilize and refer	Yes
4.5.	Administer Zinc Sulphate	-	Yes	Yes	Yes	Yes	Yes
4.6.	With additional problems: ▪ Diarrhoea>14 days ▪ With severe malnutrition ▪ Fever >38 C	Refer	Refer	Refer	Refer	Refer	Refer
5.	Management of dysentery	Refer	Refer	Yes	Yes	Yes	Yes
6.	**Management of Fever**						
6.1.	History and examination	Yes	Yes	Yes	Yes	Yes	Yes
6.2.	Laboratory	-	Refer	Refer	Refer	Yes	Yes
6.3.	Treatment	Yes / Refer persistent fever > 24h &>102F	Yes / Refer persistent fever > 24h &>102F	Yes	Yes	Yes	Yes
6.4.	Refer persistent fever of more than 24 hours; fever >102F	Yes	Yes	Yes	Yes	Yes	Yes
7.	Management of severely ill child	Stabilize and refer to hospital	Stabilize and refer to hospital	Stabilize and refer to hospital	Stabilize and refer to hospital	Stabilize and refer to hospital	Yes/ Refer if needed

5.4. Immunization

5.5. Key interventions and providers

Immunisation services will be offered at both levels, with the LHWs to augment the role of vaccinators in the community. The services are outlined below, and details are given in table 10.

5.5.1. Community level services

- LHWs will administer vaccines and will be supported by the vaccinator in provision of vaccines and supplies.
- LHW's health house will also be a "vaccination post" for that community.
- LHWs will maintain updated records for missed dose/s and facility level immunizations.
- CMWs will refer for immunization services especially BCG and polio zero dose.

5.5.2. Facility based services

- LHWs and CMWs will refer cases with any side effects and complications of vaccinations to BHUs and RHCs.
- Vaccination status of all children less than five years of age and women of reproductive age visiting any BHU and RHC will be assessed.
- Missed out dose/swill be administered at the facility, and an immunization card will be issued with the instructions to share the card with the LHW.
- In areas not covered by LHWs, instructions will be given to share the card with the vaccinator, who will update records accordingly.

Table 10: Immunisation services

S. no.	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC +
1	**Motivating parents and families**						
1.1.	Regular and timely immunisation	Yes	Yes	Yes	Yes	Yes	Yes
1.2.	Giving polio drops on all NIDs	Yes	Yes	Yes	Yes	Yes	Yes
2	Vaccinating out-of schedule child	-	-	Yes	Yes	Yes	Yes

S. no.	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC +
3	Assess immunization status and refer in case of complications	-	Yes	Yes	Yes	Yes	Yes
4	Routine Immunisation	Refer	-	Yes	Yes	Yes	Yes
5	Storage of vaccines	-	-	Yes	Yes	Yes	Yes
6	Participate in campaigns (NIDs)	-	-	Yes	Yes	Yes	Yes
7	Record keeping/updating immunization cards	Yes	-	Yes	Yes	Yes	Yes
8	Disease surveillance & case reporting	-	Yes	Yes	Yes	Yes	Yes

5.5.3. Current immunization schedule for children

- All children to pay 5 visits to a vaccination center during their 1st year of life, and one visit during their 2nd year of life to complete the schedule.
- The 1st visit would be immediately after birth to get a dose of BCG and one dose of OPV.
- Subsequent visits to the centre are at 6, 10 and 14 weeks age to get one dose of OPV, and one dose of Pentavalent vaccine, during each visit.
- After introduction, three doses of Pneumococcal vaccine will also be given during these same visits.
- Upon completion of 09 months of age, the child would visit for the 1stdose of measles vaccine, and again at 15 months, or anytime during the 2nd year the child to receive the 2nd dose of measles vaccine.
- Beside these, every child should receive all doses of any other vaccine offered during a supplementary immunization activity (SIA), irrespective of the status.
- Vaccines offered during SIAs are considered as additional doses and are not counted as routine dose.

Table 11: Current routine immunization schedule for children

Age	Antigen	Dose	Site of Administration
At Birth	BCG	0.05ml	Intradermaly on right upper arm
	OPV0	2 drops	Oral
	Hepatitis-B	0.5 ml	Intramuscular injection on antero-lateral side of left thigh
6 weeks	*Pentavalent–I	0.5 ml	Intramuscular injection on antero-lateral side of right thigh
	OPV-I	2 drops	Oral

Age	Antigen	Dose	Site of Administration
10 weeks	Pentavalent–II	0.5 ml	Intramuscular injection on antero-lateral side of right thigh
	OPV-II	2 drops	Oral
14 weeks	Pentavalent–III	0.5 ml	Intramuscular injection on antero-lateral side of right thigh
	OPV-III	2 drops	Oral
6 weeks	Pneumococcal	0.5 ml	Intramuscular injectiononantero-lateral side of left thigh
10 weeks	Pneumococcal	0.5 ml	Intramuscular injection on antero-lateral side of left thigh
14 weeks	Pneumococcal	0.5 ml	Intramuscular injection on antero-lateral side of left thigh
9 months	Measles-I	0.5 ml	Subcutaneous injection on left upper arm
15 months	**Measles-II	0.5 ml	

*Pentavalent includes DPT+HepB+Hib
* * If the child is seen b/w 12-15 months of age, second dose of measles can be given.

5.5.4. Tetanus Toxoid for pregnant women

- First two doses of Tetanus Toxoid (TT) vaccine during their 1stpregnancy preferably during the second trimester, one month apart.
- Another three doses according to schedule, irrespective of pregnancy to complete the 5 dose schedule which will protect them throughout their child bearing age (15 – 49 years of age).

Table 12: Routine immunization schedule for pregnant women for prevention of neonatal tetanus

Vaccine	When to give	Dose & site	Expected duration of protection
TT 1	First contact during first pregnancy	0.5 ml intramuscular injection on buttock (preferred); or on upper arm	None
TT 2	At least 4 weeks after TT 1		1-3 years
TT 3	At least 6 months after TT 2		5 years
TT 4	At least 1 year after TT 3 or subsequent pregnancy		10 years
TT 5	At least 1 year after TT 4 or subsequent pregnancy		all child bearing years

6. Family Planning

6.1. Key services and providers

LHWs and CMWs will promote child spacing services by educating communities on importance of Healthy Time Spacing (HTSP). They will help women in selecting a method of their choice and provide them with that method, and/or refer them to BHU. They will also counsel women facing any side effects, and refer them to BHUfor appropriate treatment and guidance.

The details of services are given in Table 13.

Table 13: Family planning services

S. no.	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
1.	**Counselling on family planning methods to enhance CPR**						
1.1	Educate & motivate for FP	Yes	Yes	Yes	Yes	Yes	Yes
1.2	Help make informed choice	Yes	Yes	Yes	Yes	Yes	Yes
1.3	Suggest alternative in case of side effects	Yes	Yes	Yes	Yes	Yes	Yes
1.4	Correct misconceptions	Yes	Yes	Yes	Yes	Yes	Yes
2.	Clinical examination	Yes	-	Yes	Yes	Yes	Yes
3.	**Education about modern methods**	Yes	Yes	Yes	Yes	Yes	Yes
	▪ Condoms						
	▪ Pills						
	▪ Injections						
	▪ IUDs						
	▪ Implants						
	▪ Tubal ligation						
	▪ Vasectomy						
4.	**Provision of contraceptives**						
4.1.	Oral pills	Yes	Yes	Yes	Yes	Yes	Yes
4.2.	Emergency contraceptive pill	Yes	Yes	Yes	Yes	Yes	Yes
4.3.	Injections	Yes	Yes	Yes	Yes	Yes	Yes
4.4.	Insert IUDs	Yes	Refer	Yes	Yes	Yes	Yes
5.	Manage side effects and problems with use of family planning methods	Yes	-	Yes	Yes	Yes	Yes
6.	Refer infertile couples to hospital	Yes	Yes	Yes	Yes	Yes	Yes
7.	Female sterilization (tubal ligation)	Refer	Refer	Refer	Refer	Refer	Yes
8.	Male Sterilisation (vasectomy)	-	-	Refer to Hospital	Refer to Hospital	Refer to Hospital	Yes

7. Emergency preparedness and disaster management

For accidents and emergencies, all health providers at all levels and facilities will play an active role in alleviating suffering during any calamity. Table 15 provides the details of the services. The main focus for this service component will be on:

- Educating communities on prevention of accidents and injuries.
- First aid at community level, and referral for tetanus immunization and further management.
- Disaster preparedness measures at community and facility level, including community education, BLS, provision of relief, etc.
- Management of day to day emergencies by providers in the community and facilities according to their capacity; and appropriate referral.

Table 14: Emergency preparedness & management services

S. no.	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
1.	Health education on Accident/injury	Yes	Yes	Yes	Yes	Yes	Yes
2.	**Disaster Preparedness e.g. Earthquake, Flood**						
2.1.	Saving lives through BLS/CPR	Yes	-	Yes	Yes	Yes	Yes
2.2.	Educating people on coping with emergencies	Yes	Yes	Yes	Yes	Yes	Yes
3.	**Day to Day Emergency**						
3.1.	Maintain airway, circulation and breathing	Yes	Yes	Yes	Yes	Yes	Yes
3.2.	Diagnosis and management of common medical emergencies, e.g. bleeding, , choking and loss of consciousness	Yes	-	Yes	Yes	Yes	Yes
3.3.	Minor cuts/injuries	Yes	Yes	Yes	Yes	Yes	Yes
3.4.	Fractures/dislocations	-	Refer to hospital	Apply splint & refer to hospital	Apply splint & refer to hospital	Apply splint & refer to hospital	Apply splint & refer to hospital
3.5.	Sprains/strains	Refer	Refer	Refer	Treat or refer to RHC	Treat or refer to hospital	Treat or refer to hospital

S. no.	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
3.6.	Accidents	-	Refer to hospital	Stabilize & refer to hospital	Stabilize & refer to hospital	Stabilize & refer to hospital	Stabilize & refer to hospital
3.7.	Wound dressing	Yes	Yes	Yes	Yes	Yes	Yes
3.8.	Management of Shock	Stabilize and refer to hospital	-	Stabilize and refer to hospital	Stabilize and refer to hospital	Stabilize and refer to hospital	Stabilize and refer to hospital
3.9.	Snake bites	-	First aid & refer to hospital	First aid & refer to hospital	First aid & refer to hospital	First aid & refer to hospital	First aid & refer to hospital
3.10.	Dog bites	-	First aid & refer to hospital	First aid & refer to hospital	First aid & refer to hospital	First aid & refer to hospital	First aid & refer to hospital

8. Prevention and management of endemic communicable diseases

8.1. Key interventions and providers

- Preventive services at the community level will be mostly targeted by LHWs, in addition to the CMWs, SHNSs, CDC supervisors and sanitary inspectors.
- CMWs and LHWs will help in identification and referral of cases.
- CMWs would refer and facilitate linkages with LHWs, and to BHUs, when any suspected case of communicable disease is encountered.
- For TB, LHWs will support in implementation of the DOTS strategy, and screening of case contacts .
- Malaria prevention through the use of bed nets will be promoted at the community and facility level. CMWs will advise pregnant women about the dangers of malaria.
- Unsafe practices and behaviours such as irrational use of injections that can cause transmission of HIV, Hepatitis B/C will be discouraged at all levels.
- Community perceptions and misperceptions regarding transmission of HIV will be targeted at all levels.

Table 15: Services for management and control of endemic communicable diseases

S. no.	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
1.	**Respiratory problems**						
1.1.	Common cold and cough	-	Yes	Yes	Yes	Yes	Yes
1.2.	Acute Bronchitis	-	Refer	Yes	Yes	Yes	Yes
1.3.	COPD	-	-	Refer	Refer	Yes	Yes
1.4.	Pneumonia	-	Refer	Yes	Yes	Yes	Yes
2.	**GI problems**						
2.1.	Acute diarrhoea	-	Yes	Yes	Yes	Yes	Yes
2.2.	Chronic diarrhoea	-	Refer	Yes. Refer if needed	Yes. Refer if needed	Yes. Refer if needed	Yes. Refer if needed

S. no.	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
2.3.	Dysentery	-	Refer	Yes	Yes	Yes	Yes
3.	**Tuberculosis**						
3.1.	Health education:	Yes	Yes	Yes	Yes	Yes	Yes
	▪ Identify suspects	Yes	Yes	Yes	Yes	Yes	Yes
	▪ Get sputum test done	Yes	Yes	Yes	Yes	Yes	Yes
	▪ TB is curable	Yes	Yes	Yes	Yes	Yes	Yes
	▪ Where TB services are available	Yes	Yes	Yes	Yes	Yes	Yes
3.2.	Sputum smear examination	-	-	Yes	Yes	Yes	Yes
3.3.	X-Ray for smear negative cases	-	-	Refer	Refer	Yes	Yes
3.4.	Treatment of registered/diagnosed cases	-	-	-	-	Yes	Yes
3.5.	Participate in TB-DOTS, including recording & reporting	-	Yes	Yes	Yes	Yes	Yes
3.6.	Screening/referral of contacts	-	Yes	Yes	Yes	Yes	Yes
4.	**Malaria**						
4.1.	Health education:	Yes	Yes	Yes	Yes	Yes	Yes
	▪Cleanliness of the surroundings	Yes	Yes	Yes	Yes	Yes	Yes
	▪ Netting windows and doors	Yes	Yes	Yes	Yes	Yes	Yes
	▪Use bed nets	Yes	Yes	Yes	Yes	Yes	Yes
4.2.	Clinical diagnosis	Yes	Yes	Yes	Yes	Yes	Yes
4.3.	Laboratory diagnosis	-	-	Yes	Yes	Yes	Yes
4.4.	Treatment of uncomplicated case	Yes	Yes	Yes	Yes	Yes	Yes
4.5.	Treatment of complicated case	Stabilize & refer	Stabilize & refer	Stabilize & refer	Stabilize & refer	Stabilize & refer	Stabilize & refer
5.	**Dengue Fever**						
5.1.	Health education	Yes	Yes	Yes	Yes	Yes	Yes
5.2.	Diagnosis on history and examination	-	Yes	Yes	Yes	Yes	Yes
5.3.	Laboratory	-	-	Refer	Refer	Yes	Yes
5.4.	Treatment	-	-	Refer	Refer	Refer	Refer
6.	**Typhoid**						
6.1.	Diagnosis on history and examination	-	Yes	Yes	Yes	Yes	Yes
6.2.	Laboratory	-	-	Refer to RHC	Refer to RHC	Yes	Yes
6.3.	Treatment	-	-	Yes	Yes	Yes	Yes

S. no.	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
7.	**Common infections (scabies, pediculosis, helminthiasis)**						
7.1.	Health Education on: ▪ Hand washing/cleanliness ▪Washing infected cloths separately ▪ How infections are transmitted	Yes	Yes	Yes	Yes	Yes	Yes
7.2.	Management of common infections and wounds	Yes	Yes	Yes	Yes	Yes	Yes
8.	**Hepatitis A and E**						
8.1.	Health education on transmission	-	Yes	Yes	Yes	Yes	Yes
8.2.	History	-	Refer	Yes	Yes	Yes	Yes
8.3.	Examination	-	Refer	Yes	Yes	Yes	Yes
8.4.	Laboratory	-	-	Refer	Refer	Yes	Yes
8.5.	Treatment	-	-	Yes	Yes	Yes	Yes
9.	**Hepatitis B and C**						
9.1.	Health education on transmission	Yes	Yes	Yes	Yes	Yes	Yes
9.2.	History	-	Refer	Refer	Yes	Yes	Yes
9.3.	Examination	-	Refer	Refer	Yes	Yes	Yes
9.4.	Laboratory	-	-	-	Refer	Yes	Yes
9.5.	Treatment	-	-	-	Refer to hospital	Refer to hospital	Refer to hospital
10.	**Sexually Transmitted Infections**						
10.1.	History	Yes	Yes	Yes	Yes	Yes	Yes
10.2.	Examination	Yes	Refer	Yes	Yes	Yes	Yes
10.3.	Laboratory	-	-	Refer	Refer	Refer	Refer
10.4.	Syndromic management of STIs	-	Refer	Yes	Yes	Yes	Yes
11.	**HIV/AIDS**						
11.1.	Health education on: ▪ Using safe syringes/blood ▪ Having safe sex ▪ How AIDS is transmitted and how it is not transmitted	Yes	Yes	Yes	Yes	Yes	Yes
11.2.	Suspicion/identification and referral	Yes	-	Yes	Yes	Yes	Yes

9. Prevention and management of endemic non-communicable diseases

9.1. Key interventions and providers

- Health education to discourage smoking and tobacco use will be promoted at all levels.
- Preventive services at the community level will be targeted by LHWs and CMWs.
- CMWs and LHWs will help in identification and referral of cases of pregnancy induced hypertension (PIH).
- CMWs would refer and facilitate linkages with LHWs, and to BHUs for suspected cases of diabetes, PIH and coronary artery disease amongst pregnant women.

Table 16: Services for control and management of endemic non-communicable diseases

S. no.	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
1.	**Hypertension**						
1.1.	Health education for control of BP and prevention of heart attack and strokes:	Yes	Yes	Yes	Yes	Yes	Yes
	▪ Tobacco cessation						
	▪ Avoiding fats in diet						
	▪ Regular physical activity 30 minutes a day						
	▪ Reduced salt intake <5 gm per day						
	▪Regular use of antihypertensive						
	▪ Weight control						
1.2.	History and examination	Yes	-	Yes	Yes	Yes	Yes
1.3.	Treatment	Refer	Refer	Yes	Yes	Yes	Yes
2	**Diabetes Mellitus**						
2.1.	Health education on:	Yes	Yes	Yes	Yes	Yes	Yes
	▪ Diet and avoiding sugar						
	▪ Weight control						
	▪ Regular physical activity 30 minutes a day						
	▪ Regular use of oral hypoglycaemic agents/insulin						
2.2.	History and examination	-	-	Yes	Yes	Yes	Yes

S. no.	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
2.3.	Laboratory	-	-	Yes	Yes	Yes	Yes
2.4.	Treatment	-	-	Yes	Yes	Yes	Yes
2.5.	Prevention/early detection of diabetic complications	-	-	Identify and refer	Identify and refer	Identify and refer	Identify and refer
3.	**Coronary Artery Disease & Stroke**						
3.1.	Provide Education on:	Yes	-	Yes	Yes	Yes	Yes
	▪Treating Hypertension						
	▪Avoiding Use of tobacco						
	▪ Avoiding Fats & Salts						
	▪ Weight Control						
	▪Physical activity						
3.2.	History	-	-	Refer	Refer	Yes	Yes
3.3.	Examination	-	-	Refer	Refer	Yes	Yes
3.4.	Treatment	-	-	Refer	Refer	Yes	Yes
3.5.	Referral for advanced care	-	-	Yes	Yes	Yes	Yes
4.	**Asthma**						
4.1.	History and examination	-	-	Yes	Yes	Yes	Yes
4.2.	Treatment	-	-	Yes	Yes	Yes	Yes
4.3.	Referral for severe cases	-	-	Yes	Yes	Yes	Yes
5.	**Acid Peptic Disease**						
5.1.	History and examination	-	-	Yes	Yes	Yes	Yes
5.2.	Treatment	-	-	Yes	Yes	Yes	Yes
6.	**Cancer**						
6.1.	History and examination	-	-	Yes	Yes	Yes	Yes
6.2.	Laboratory	-	-	Refer	Refer	Refer	Refer
6.3.	Treatment	-	-	Refer	Refer	Refer	Refer
6.4.	Self examination for breast cancer	Yes	Yes	Yes	Yes	Yes	Yes

10. Disability prevention and rehabilitation services

10.1. Key interventions

Service providers and facilities will primarily focus on early detection and seeking rehabilitation in case of any impairment. Any potential limitation in function that could be aggravate in the future will be targeted by CMWs and LHWs at the community level, while facilities will focus on prompt and appropriate referral. Table 17 enlists the specific services.

Table 17: Disability prevention and rehabilitationservices

S. no.	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
1	Health education on early examination of newborns						
2	Refer for seeking advice on Rehabilitation Services including physical and occupational therapy	Yes	Yes	Yes	Yes	Yes	Yes
3	Refer for making life of disabled productive/vocational therapy	-	-	Refer	Refer	Refer	Refer
4	Identification/referral for:	Yes -	Yes -	Yes	Yes	Yes	Yes
4.1	▪ Physical disability						
4.2	▪ Visual impairment						
4.3	▪ Hearing disability						
5	**Control of iodine deficiency**						
5.1	Health education about illnesses due to iodine deficiency	Yes	Yes	Yes	Yes	Yes	Yes
5.2	Identification of goitre and referral to DHQH	Yes	Yes	Yes	Yes	Yes	Yes

11. Eye and ENT care services

Eye care and ear, nose and throat (ENT) services will focus on prevention and early detection of any impairment such as reduced sight or hearing ability at the community level. Suspected cases will be referred to the BHU by CMWs and LHWs, and from there onwards as per need. Table 18 details the services under this component.

Table 18: Eye and ENT care services

S. no.	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
1	**Primary eye care**						
1.1	Diagnosis and treatment of common eye diseases	-	-	Yes	Yes	Yes	Yes
1.2	Visual acuity using Snellen chart	-	-	-	-	Yes	Yes
1.3	Detection of cataract cases and referral for surgery	-	Yes	Yes	Yes	Yes	Yes
1.4	Referral for suspected glaucoma	-	-	-	-	Yes	Yes
1.5	Treatment of trachoma	-	-	Yes	Yes	Yes	Yes
2	**Ear conditions**	-	-				
2.1	Treatment of otitis media	-	-	Yes	Yes	Yes	Yes
2.1	Referral for complicated cases	-	-	Yes	Yes	Yes	Yes

12. Neurologic and psychological well being

12.1. Key interventions

- At the community level, LHWs will refer any suspected or reported case of neurologic or psychological issue[14]to the DHQH.
- BHUs will offer health education and referral services. Specific and severe psychological illness will be managed at the DHQH level, and at specialised centres as per need.
- Mild to moderate anxiety and depression, and its maintenance therapy will be offered at RHC level.
- CMWs and LHWs will offer support to mothers to prevent ante-partum and post-partum depression.

Table 19: Services for neurological and psychological well being

S. no.	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
1.	Health education on:	-	Refer	Yes	Yes	Yes	Yes
1.1	▪ Acknowledging a mental problem						
1.2	▪ Actions to be taken						
2.	Attention deficit disorder	-	-	Refer to DHQH	Refer to DHQH	Refer to DHQH	Refer to DHQH
3.	Generalized anxiety disorder	-	-	Identify and refer to DHQH	Identify and refer to DHQH	Identify and refer to DHQH	Identify and refer to DHQH
4.	**Depression/Post Partum Depression**						
4.1	Support and counseling for ante-partum and post-partum depression	Yes	Yes	Yes	Yes	Yes	Yes
4.2	Referral for post-partum depression	Yes	Yes	Yes	Yes	Yes	Yes
5.	Drug abuse	-	-	Identify and refer to DHQH	Identify and refer to DHQH	Identify and refer to DHQH	Identify and refer to DHQH
6.	Treatment of epilepsy; referral for advanced management	-	-	Yes	Yes	Yes	Yes

[14] The term mental health is being replaced by psychological well being, to remove the stigma that the term carries.

13. Oral Health

13.1. Key interventions

- At the community level, oral hygiene will be promoted by the LHWs and SHNSs.
- Health education regarding oral hygiene will be promoted as part of the overall hygiene practices.
- Dental treatments will be offered at RHCs.

Table 20: Oral health services

S. no.	Services	CMW	LHW	SHNS	BHU	BHU-24h	RHC	RHC+
1.	Health education on dental care:	-	Yes	Yes	Yes	Yes	Yes	Yes
	▪ Dental cleaning twice a day							
	▪ Using floss							
	▪ Healthy diet							
	▪ Seeking advice early							
	▪ Dental related diseases: Hepatitis, CV disorders, Diabetes							
2.	**Dental Pain/Caries/other problems**							
2.1.	History	-	-	-	Yes	Yes	Yes	Yes
2.2.	Examination	-	-	-	Refer	Refer	Yes	Yes
2.3.	Treatment	-	-	-	Refer	Refer	Yes	Yes
3.	Tooth extraction	-	-	-	Refer	Refer	Yes	Yes
4.	Scaling	-	-	-	Refer	Refer	Yes	Yes
5.	Filling	-	-	-	Refer	Refer	Yes	Yes
6.	Management of gingivitis and oral ailments	-	-	-	Refer	Refer	Yes	Yes

14. Infection Control

14.1. Key interventions

Standard precautions to be observed by all providers at all levels, which are relevant for all procedures including maternal, neonatal and infant care are given in this section.[15]Detailed guidelines for infection control for CMWs, BHUs and RHCs are annexed.[16]The main focus of infection control activities, which are cross cutting across all services are:

- Hand hygiene between routine examination of clients, and before, during and after any procedure.
- Personal protective equipment (PPE) for protecting personnel against infections.
- Environmental management including cleaning and disinfection of surfaces, equipment and supplies.
- Waste handling, management and disposal, including for infectious and non-infectious waste.

Table 21: Standard precautions for infection control

S #	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
1	**Wash hands**						
1.1	Wash hands with soap and water: ▪ Before ANY treatment procedure; before and after caring for a woman or newborn ▪ Whenever the hands (or any other skin area) are contaminated with blood or other body fluids ▪ After removing the gloves, because they may have holes ▪ After changing soiled bed sheets or clothing.	Yes	-	Yes	Yes	Yes	Yes
1.2	Keep nails short.	Yes	Yes	Yes	Yes	Yes	Yes
2	**Wear Gloves**						

[15]Standard Precautions and Cleanliness. P 19. Integrated Management of Pregnancy and Childbirth. Pregnancy, Childbirth, Postpartum and Newborn Care: A guide for essential practice. World Health Organization. Geneva. 2006

[16] Infection Control and Environmental Management Guidelines (Volumes 1 to 13). TRF. Islamabad. 2011.

S #	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
2.1	Wear sterile or highly disinfected gloves when performing any procedure (vaginal examination, delivery, cord cutting, repair of episiotomy or tear, blood drawing).	Yes	-	Yes	Yes	Yes	Yes
2.2	Wear long sterile or highly disinfected gloves for manual removal of placenta; or use a cut glove to cover forearm and elbow, then wear handglove making sure hands are covered till elbow height.	Yes	-	Yes	Yes	Yes	Yes
2.3	Wear clean gloves when: ▪ Handling and cleaning instruments ▪ Handling contaminated waste ▪ Cleaning blood and body fluid spills	Yes	-	Yes	Yes	Yes	Yes
2.4	Drawing blood.	Yes	-	Yes	Yes	Yes	Yes
3	**Protect yourself from Blood and other Body Fluids during Deliveries**						
	▪ Wear a long apron made from plastic or other fluid resistant material, and shoes. ▪ If possible, protect your eyes from splashes of blood.	Yes	-	Yes	Yes	Yes	Yes
4	**Practice Safe Sharps Disposal**						
4.1	Keep a puncture resistant container nearby.	Yes	-	Yes	Yes	Yes	Yes
4.2	Use each needle and syringe only once.	Yes	-	Yes	Yes	Yes	Yes
4.3	Do not recap, bend or break needles after giving an injection.	Yes	-	Yes	Yes	Yes	Yes
4.4	Drop all used (disposable) needles, plastic syringes and blades directly into this container, without recapping, and without passing to another person.	Yes	-	Yes	Yes	Yes	Yes
4.5	Empty or send for incineration when the container is three-quarters full.	Yes	-	Yes	Yes	Yes	Yes
5	**Practice Safe Waste Disposal**						
5.1	Dispose off placenta or blood, or body fluid contaminated items, in leak-proof containers.	Yes	-	Yes	Yes	Yes	Yes
5.2	Burn or bury contaminated solid waste.	Yes	-	Yes	Yes	Yes	Yes
5.3	Wash hands, gloves and containers after disposal of infectious waste.	Yes	-	Yes	Yes	Yes	Yes
5.4	Pour liquid waste down a drain or flushable toilet.	Yes	-	Yes	Yes	Yes	Yes
5.5	Wash hands after disposal of infectious waste.	Yes	-	Yes	Yes	Yes	Yes
6	**Deal with Contaminated Laundry**						
6.1	Collect clothing or sheets stained with blood or body fluids and keep them separately from other laundry, wearing gloves or use a plastic bag. DO NOT touch them directly.	Yes	-	Yes	Yes	Yes	Yes
6.2	Rinse off blood or other body fluids before washing with soap.	Yes	-	Yes	Yes	Yes	Yes

S #	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
7	**Sterilize and Clean Contaminated Equipment**						
7.1	Make sure that instruments which penetrate the skin (such as needles) are adequately sterilized, or that single-use instruments are disposed of after one use.	Yes	-	Yes	Yes	Yes	Yes
7.2	Thoroughly clean or disinfect any equipment which comes into contact with intact skin (according to instructions).	Yes	-	Yes	Yes	Yes	Yes
7.3	Use bleach for cleaning bowls and buckets, and for blood or body fluid spills.	Yes	-	Yes	Yes	Yes	Yes
8	**Clean and Disinfect Gloves (Note: This produces disinfected gloves. They are not sterile. Good quality latex gloves can be disinfected 5 or more times.)**						
8.1	Wash the gloves in soap and water.	Yes	-	Yes	Yes	Yes	Yes
8.2	Check for damage: Blow gloves full of air, twist the cuff closed, then hold under clean water and look for air leaks. Discard if damaged.	Yes	-	Yes	Yes	Yes	Yes
8.3	Soak overnight in bleach solution with 0.5% available chlorine (made by adding 90 ml water to 10 ml bleach containing 5% available chlorine).	Yes	-	Yes	Yes	Yes	Yes
8.4	Dry away from direct sunlight.	Yes	-	Yes	Yes	Yes	Yes
8.5	Dust inside with talcum powder or starch.	Yes	-	Yes	Yes	Yes	Yes
9	**Sterilize Gloves**						
9.1	Sterilize by autoclaving or highly disinfect by steaming or boiling.	Yes	-	Yes	Yes	Yes	Yes

15. Referral Services

Figure 3 illustrates the referral mechanism, while salient points of the system are given in this section. The referral system will have four functional levels, which are detailed below.

15.1. First level: Household to LHW/CMW and BHU

The LHW, CMW and the BHU i.e., the primary functionaries of PHC system constitute the first level of the referral system.At the household level, community based staff members (LHW, CMW and LHS) will refer cases to the BHU and/or other levels as needed.

- Each household will be registered with the respective LHW, as well as with the BHU.
- Each LHW will be linked to CMW and the BHU in the area.
- Each CMW will be linked with LHS and the BHU in the area.
- Each LHW will have details of services being provided by the CMW and the BHU, displayed in a chart at the health house. Any change in services will be updated, even if that occurs for a short duration. Changes will be conveyed to LHS for communicating with LHWs and CMWs.
- LHWs will refer antenatal, natal and post natal cases to CMWs.
- LHWs will help CMWs establish their practices in the target areas.
- The LHW will refer cases to CMW or BHU that are beyond her capacity on the prescribed “LHW Referral Form.”
- On receiving a referral from the LHW, the CMW providing services will give feedback to LHW on the same referral form.
- Similarly the health care provider at BHU, on receiving referrals from LHWs or CMWs, will provide feedback to respective LHW or CMW.
- This communication between referring and referral facilities will be part of records at corresponding levels of the referral system.

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15.2. Second Level: BHU to RHC & THQH

The health care providers at BHU level, i.e., health officer, LHV, medical technicians/dispenser and health care providers at RHC and THQ constitute the second level of referral system. The patients presenting at/or referred at the BHU will be managed at the facility, and/or will be referred to RHC or THQH, depending upon the nature of the illness.

- The health care providers at BHUs will have detailed chart displaying services being provided at the RHC and THQH. This chart will be modified with any change in services, even if that is for a short duration. Such changes will be communicated to all relevant health facilities.
- BHU will refer patients to RHC or THQH on prescribed "BHU Referral Form." Providers at referral facility, after providing services will give feedback to the BHU on the same referral form.
- This communication between referring and referral facilities will be part of records at the corresponding levels of the referral system.

15.3. Third Level: RHC to THQH/DHQH

Providers at RHC that include the health officer, WMO, LHV, nurse, medical technician and dispenser; and providers at THQH and DHQH constitute the third level of the referral system.

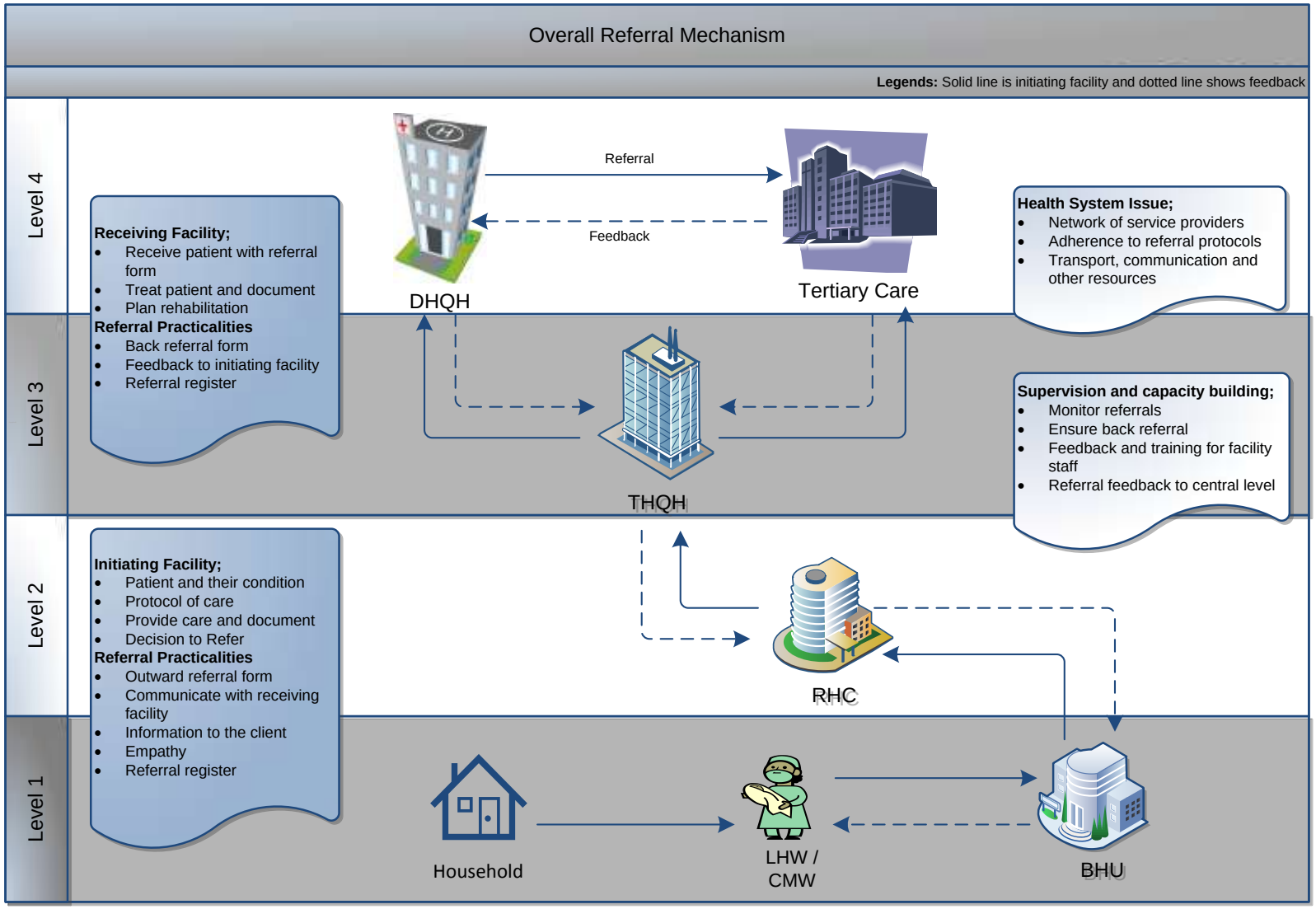
- Patients presenting directly and/or referred at RHCs will be managed at the facility, and/or will be referred to THQH or DHQH, depending on the nature of the illness.
- RHCs will have detailed chart of services provided by THQH and DHQH, which will be modified with any change in service, even if that occurs for a short duration. Such changes will be communicated at all concerned levels.
- RHCs will refer patients to THQH and DHQH on the "RHC Referral Form." If the patient is already referred on a BHU Referral Form, that will be attached to the RHC form. Providers at THQH and DHQH will provide feedback to RHC on the same form, which will be part of records at corresponding levels of the system.

15.4. Fourth Level: THQHto DHQHand Tertiary Care Hospital/s

Providers at THQH and at DHQ and Tertiary Care Hospital constitute the fourth level of referral system.

- Patients presenting at or referred to THQH will be managed at the facility, and/or will be referred to DHQH or Tertiary Care Hospital/s, depending on the nature of illness.
- THQHs will have detailed chart of services being provided by the facility and DHQH and Tertiary Care Hospital/s,displayed at a minimum of 2 sites. The chart will be modified with any change in services that takes place at DHQ or Tertiary Care Hospital, even if that occurs for short duration, and changes will be communicated to all concerned levels of health facilities.
- Patients will be referred to DHQH or Tertiary Care Hospital/s on prescribed "THQ Referral Form." If the patient is referred from BHU and/or RHC on Referral Form/s, those will be attached to the THQH referral form.
- Similarly, DHQH will refer patients to Tertiary Care Hospital on prescribed "DHQ Referral Form," and in case of a referred patient from any other facility,the pertinent documentation will be attached.
- DHQH and Tertiary Care Hospital will provide feedback to referring facility on the same referral form.This communication between the referring and referral facilities will be part of records at the corresponding levels of the system.

Figure 2: Referral Mechanism



16. Monitoring and reporting systems

16.1. Role of LHS to monitor CMW and LHW activities

The CMW monitoring and supervisory mechanism is illustrated in Figure 4. The main focus of the LHSs' work is below.

- Within the catchment area of a BHU, there will be a maximum of 1 LHSs to supervise a maximum of 24 LHWs and 3 CMWs.
- Each LHS will ensure support to each LHW and CMW at least once every month for the entire day.
- The LHS will provide follow-up training support and supportive supervision; evaluate knowledge and skills and identify training needs; Validate LHWs' and CMWs' records, progress, and the last month's report in the field.

16.2. Field Monitoring by Health Officers

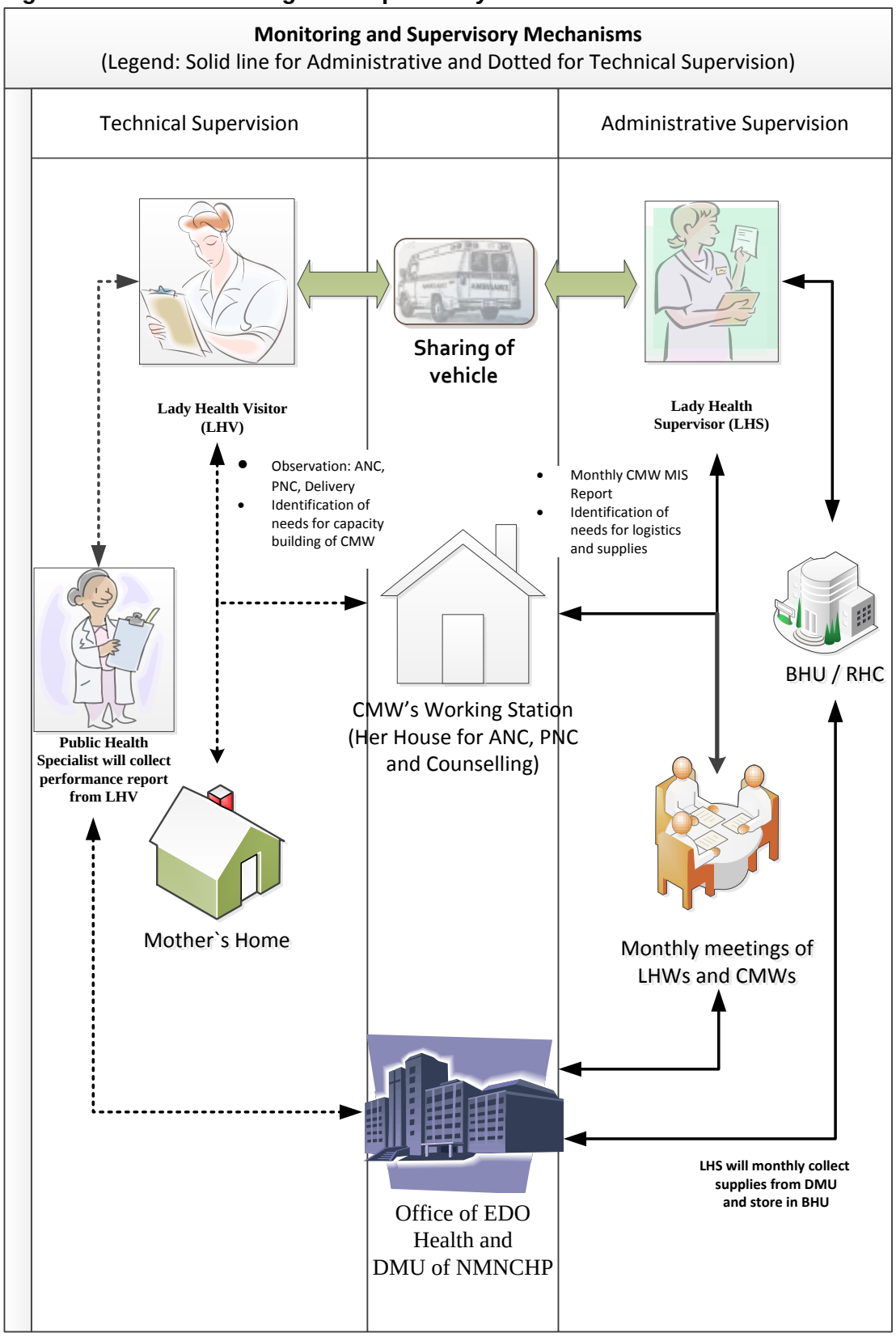
Each health officer will conduct a monitoring and supervisory visit in the field every week to provide support to field staff by:

- Validating progress reports of LHWs, LHS, CMW, vaccinator, health and nutrition supervisor, and male mobilizers.
- Provide follow-up training support and supportive supervision.

16.3.Monthly Meeting of BHU Health Team

Each member of the BHU health team will meet once every month to prepare monthly progress reports; discuss issues faced; and receive refresher training/Continuing Medical Education (as and when required), on the basis of findings of the field monitoring.

Figure 3: CMW Monitoring and Supervisory Mechanism



16.4. DHIS Reporting and Notifiable Diseases

All levels of workers are required to report conditions according to the District Health Information System (DHIS). Further, notifiable diseases should be reported as per protocol to the appropriate level of the system. List of these diseases is provided in Table 22, which will need to be updated as per need, and developments in the health sector such as emerging epidemics, and legislation. Tuberculosis is envisaged to be added to the list, as legislation is pending in the national assembly of Pakistan.

Table 22: DHIS reporting and notifiable diseases

S. no.	Items	CMW	LHW	BHU	BHU 24h	RHC	RHC+
1	Reporting on DHIS formats	Yes	Yes	Yes	Yes	Yes	Yes
2	Reporting on notifiable diseases (as per protocols)	Yes	Yes	Yes	Yes	Yes	Yes

16.5.Monitoring Indicators

Broad indicators for monitoring progress of implementation and effectiveness of service delivery, and main conditions are provided in table 23. These basic indicators will need to be made more precise according to the different levels of implementation. Indicators will also be updated in light of findings thereon.

Table 23: M&E Indicators and sources of verification[17]

Indicators	Source of verification
Fully Immunized (Measles 1) (By 12-23 months)	CES surveys DHIS
Drop-out rates by facility (Penta-3 and BCG)	
Two Doses of Tetanus Toxoid (TT2)	CES surveys DHIS
ANC attendance rates	DHIS/ LHW-MIS
Province: Skilled Birth Attendance	
CPR (modern methods); Number of FP Users	DHS, LHW-MIS
Stock outs of contraceptives	
% of SAM treated out of estimated	
Anaemia in pregnancy	

[17]Consultative Workshop Report, Essential Package of Health Services for Primary Level, TRF, 2012.

Institutional Delivery in Primary Care Institution	DHIS (yet to be added)
Referral (Delivery, Child)	DHIS
Essential Drugs; Stock outs of drugs in Index	DHIS
Health Facility Utilization Rate (Primary Care)	DHIS
%age of mothers with knowledge danger signs for the common child illnesses	DHIS

17. Diagnostic Services

Basic diagnostic services that will be offered at the community and facility level is given in the Table 24 below.

Table 24: Diagnostic services by type of facility

S. no.	Services	CMW	BHU	BHU-24h	RHC	RHC+
1.	**Laboratory Services**					
a.	**Haematology**					
i.	Haemoglobin	-	Yes	Yes	Yes	Yes
ii.	Red and white blood cell count	-	-	Yes	Yes	Yes
iii.	Differential cell count	-	-	Yes	Yes	Yes
iv.	ESR	-	Yes	Yes	Yes	Yes
v.	Haematocrit	-	-	Yes	Yes	Yes
vi.	Malaria parasite smear (MPS)	-	Yes	Yes	Yes	Yes
vii.	Bleeding time and coagulation time	-	-	-	Yes	Yes
viii.	Blood grouping	-	-	-	Yes	Yes
ix.	Hepatitis B and C	-	-	Yes	Yes	Yes
x.	HIV test	-	-	-	Yes	Yes
b.	**Bacteriology**					
i.	Ziehl-Nielsen staining for acid fast bacilli (AFB)	-	-	-	Yes	Yes
ii.	Direct smear for AFB	-	-	-	Yes	Yes
iii	Typhi dot	-	-	-	Yes	Yes
d.	**Clinical Pathology**					
i.	Urine analysis: physical exam	-	Yes	Yes	Yes	Yes
ii.	Chemical exam: Albumin (qualitative)	Yes	Yes	Yes	Yes	Yes
iii.	Chemical exam: Albumin (quantitative)	-	-	-	Yes	Yes
iv.	Chemical exam: Glucose (qualitative)	Yes	Yes	Yes	Yes	Yes
v.	Chemical exam: Glucose (quantitative)	-	Yes	Yes	Yes	Yes

S. no.	Services	CMW	BHU	BHU-24h	RHC	RHC+
vi.	Microscopic (stool test)	-	-	-	Yes	Yes
viii.	Pregnancy test kit	Yes	Yes	Yes	Yes	Yes
e.	**Biochemistry**					
i.	Blood-sugar	-	Yes	Yes	Yes	Yes
ii.	Urea	-	-	-	Yes	Yes
iii.	Total protein	-	-	-	Yes	Yes
2.	**Imaging Services**					
i.	X-rays	-	-	-	Yes	Yes
ii.	Ultrasound	-	-	Yes	Yes	Yes

18. Pharmacy Services

Basic pharmacy services that will be offered at the community and facility level is given in the table below.

Table 25: Pharmacy Services

S. no.	Services	CMW	LHW	BHU	BHU-24h	RHC	RHC+
1.	Dispensing	-	-	Yes	Yes	Yes	Yes
2.	Storage	-	-	Yes	Yes	Yes	Yes
3.	Record keeping	Yes	Yes	Yes	Yes	Yes	Yes

19. Infrastructure

This section outlines the infrastructure needs for effective service delivery of the components in the EPHS-PHC at different levels. Table 27 enlists the essential requirements for facilities.

19.1. LHW Health House

The LHW house is designated as a Health House. She will 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 will be safely stored in a separate cupboard.

In addition, LHW health house will also serve as a vaccination post.

19.2. CMW Work Station

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, examination and delivery. The MNCH Programme promotes safe delivery either at the CMW Work Station or at the woman's home. The delivery venue will depend upon the woman's preference. The CMW should, ideally, offer both options i.e. to deliver either at the woman's home or at the CMW work station. The programme intends to gradually replace TBAs with trained CMWs, and it is very important that they compete with TBAs for socially acceptable practices for the place of birth without compromising quality of care.

A CMW needs a small place of not more than 5x6 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 and delivery table for ANC and

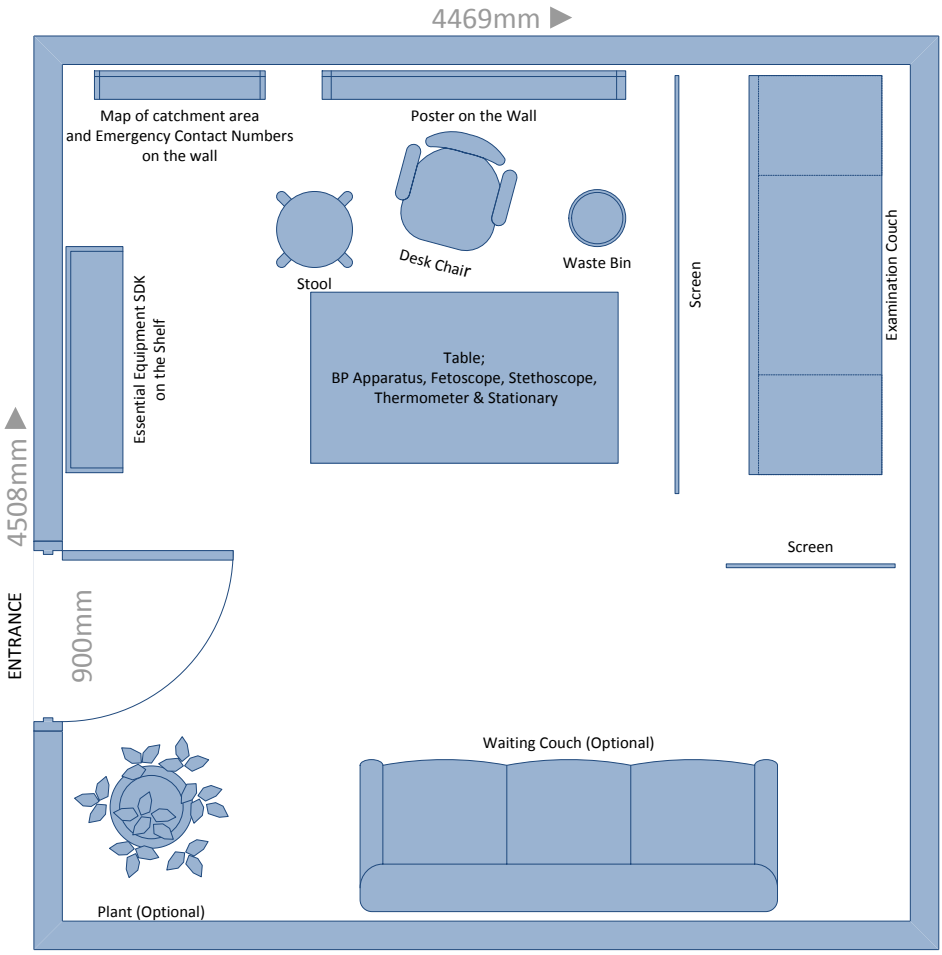
PNC check-ups and delivery. CMW will keep her equipment, medicines and supplies in a secure corner. A suggested layout of a typical Work Station is presented in Figure 5.

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, 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. This pink board provided by the MNCH Programme is made up of tin, and displays her name, qualifications, affiliation with government, list of services; and if possible her telephone number.

Figure 4: Suggested layout of a typical Work Station of a CMW.[18]

[18]MNCH. 2010. CMW Deployment Guidelines



19.3. BHU and RHC

Although the infrastructure of BHUs and RHCs already exists, some improvements are proposed for future construction and renovation.

19.3.1. 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.

19.3.2. Compound

The facility compound should have a 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.

19.3.3. 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 and stretchers.

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

19.3.4. Waiting area

This should have adequate space and seating arrangements for waiting clients. It should protect clients/patients from the sun, rain and extremes of temperature. There should be designated separate male and female waiting areas with chairs or other seating arrangements. The walls and ceilings should be intact with no broken masonry,being 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.

A list with all fees and possible exemptions should be displayed in a prominent area where the clients can view it. The text should be in an understandable format, in local and 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 addressed.

19.3.5. Toilets

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

19.3.6. Safe water supply

Safe drinking water should be available in the facility.Running water (pipe) should be available within the facility, or there should be a storage tank within the facility; or a protected water source within 200 metres of the facility (borehole, water tank, protected spring) with temporary storage containers e.g. jerry cans or drums.

19.3.7. Examination rooms

Separate examination rooms for men and women should be available and consultations and examinations should be performed behind curtains/screens to ensure privacy of clients.

19.3.8. Wards

In RHCs, there should be separate male and female wards. 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.

19.3.9. Operation Theatre

For surgical procedures at RHCs, there should be a changing room, sterilization area operating area and washing area. Separate storage area for storage of sterile and unsterile equipment/instruments should be available within the OT.

19.3.10. Labour Room

The LR should be well-lit and ventilated with an attached toilet and drinking water facilities, with a designated space for newborn care. There should be partitions for privacy.

19.3.11. Dressing Room/Injection Room

This should be well equipped with all the emergency drugs and instruments.

19.3.12. Laboratory

Sufficient space with workbenches and separate area for collection and screening should be available. The lab should have marble/stone table top for platform and wash basins.

19.3.13. General Store

Separate area for storage of sterile and common linen and other materials/ drugs/ consumables. The area should be well-lit and ventilated and should be rodent/pest free.

Besides the above, the health facility should have

1. Dispensing cum store area
2. Vaccine storage and immunisation area
3. BCC and family planning counsel area
4. Office room
5. 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 back-up generator with POL.
- Adequate water supply
- Telephone: at least one direct line
- Wherever possible, a garden should be developed

19.4. Newborn Care Corner in the Labour Room at all levels

Labour rooms in every facility at every level are required to have appropriate facility for providing essential care to newborns and for resuscitating those who might require it.

Services at the corner

Newborn care corner provides an acceptable environment for all infants at birth. Services provided in the Newborn care corner include:

- Essential Care at birth.
- Resuscitation.
- Provision of warmth.
- Early initiation of breastfeeding.
- Weighing the neonate.
- Referral of sick newborns.

Configuration of the corner

- Clear floor area in the labour room, 20-30 sq ft in size, where a mobile radiant warmer is kept.
- Resuscitation kit should be placed in the radiant warmer. Availability of oxygen source is desirable, but not essential.
- The area should be away from draughts of air and should have appropriate power connection for plugging in the radiant warmer.

Mothers should be encouraged to be involved in care of their sick newborns at every level.

19.5. Infrastructure requirements at RHC+

The main requirements in include a functional labour room, an operating theatre and an inpatient ward. Minor repairs may be required at some sites. Most of the RHCs have provision for 20 beds for treatment of indoor patients, an operation theater, laboratory and an X-ray facility already.Beds will be allocated for Comprehensive EmONC services in the existing inpatient wards.

Table 26: Essential infrastructure at facilities

S. no.	Items	BHU	BHU 24h	RHC	RHC+
1	Warm and clean rooms	Yes	Yes	Yes	Yes
2	Delivery bed(s)	Yes	Yes	Yes	Yes
3	Clean bed linen	Yes	Yes	Yes	Yes
4	Curtains if more than one bed	Yes	Yes	Yes	Yes
5	Clean surface (for alternative delivery position)	Yes	Yes	Yes	Yes
6	Work surface for resuscitation of newborn near delivery bed(s)	Yes	Yes	Yes	Yes
7	Light source	Yes	Yes	Yes	Yes
8	Heat source	Yes	Yes	Yes	Yes
9	Room thermometer	Yes	Yes	Yes	Yes
10	Running water	Yes	Yes	Yes	Yes
11	Electricity with backup (generator)	Yes	Yes	Yes	Yes
12	Sewage system	Yes	Yes	Yes	Yes
13	Waste disposal (placenta pit)	Yes	Yes	Yes	Yes
14	Secure staff quarters	Yes	Yes	Yes	Yes
15	Toilets for patients/attendants	Yes	Yes	Yes	Yes
16	Toilets for staff	Yes	Yes	Yes	Yes
17	Designation of a Newborn Care Corner in the Labour Ward	Yes	Yes	Yes	Yes
18	SBA with EmONC skills present or on call 24 hours	-	Yes	Yes	Yes
19	Emergency team present or on call 24 hours	-	Yes	Yes	Yes
20	Outpatient area	Yes	Yes	Yes	Yes
21	Ante- and post-natal ward/area	Yes	Yes	Yes	Yes
22	Delivery room with visual and auditary privacy	Yes	Yes	Yes	Yes
23	Basic laboratory and pharmacy	Yes	Yes	Yes	Yes
24	Laboratory, including blood screening and cross-matching	-	-	-	Yes
25	Blood storage and transfusion arrangements	-	-	-	Yes
26	Medical store	-	-	-	Yes
	Infection Control				
27	Safe water, soap	Yes	Yes	Yes	Yes
28	Hand washing stations at appropriate sites	Yes	Yes	Yes	Yes
29	Disinfectants	Yes	Yes	Yes	Yes
30	Boiler/autoclave	Yes	Yes	Yes	Yes
31	Universal precautions to prevent the spread of HIV and other infections	Yes	Yes	Yes	Yes
32	Puncture resistant container for sharps disposal	Yes	Yes	Yes	Yes
33	Receptacle for soiled linen	Yes	Yes	Yes	Yes
34	Bucket for soiled pads and swabs	Yes	Yes	Yes	Yes
35	Bowl and plastic bag for placenta	Yes	Yes	Yes	Yes
	Sterilization				
36	Instrument sterilizer	Yes	Yes	Yes	Yes
37	Jar for forceps	Yes	Yes	Yes	Yes
	Referral				
38	Reliable referral system 24 hours a day, 7 days a week	Yes	Yes	Yes	Yes

S. no.	Items	BHU	BHU 24h	RHC	RHC+
39	Communication facilities: telephone/mobile phone	Yes	Yes	Yes	Yes
	Register and records				
40	ANC register	Yes	Yes	Yes	Yes
41	Delivery/maternity (including information on major obstetric complications)	Yes	Yes	Yes	Yes
42	OT register (for comprehensive EmONC facility)	Yes	Yes	Yes	Yes
43	Blood bank register (for comprehensive EmONC facility)	Yes	Yes	Yes	Yes
44	Referral register	Yes	Yes	Yes	Yes
45	ANC card	Yes	Yes	Yes	Yes
46	Individual patient record	Yes	Yes	Yes	Yes
47	Partograph	Yes	Yes	Yes	Yes
48	Others	Yes	Yes	Yes	Yes
	Others				
49	Staff quarters for core staff	Yes	Yes	Yes	Yes

20. Human resource requirements

The human resource requirements envisaged for effective service delivery at facility level is detailed in Table 27.

Table 27: Human resource for different levels

Sr. no.	Staff / Categories	BHU	BHU 24h	RHC	RHC+
A	**Manager**				
	Senior Medical Officer I/c	-	-	1	1
B	**Medical staff**				
1	MO/WMO	1	1	3	3
2	WMO	-	-	2	2
3	Dental surgeon	-	-	1	1
C	**Paramedics**				
1	School Health and Nutrition Supervisor	1	1	-	-
2	Medical Assistant / Health Technician	1	1	-	-
3	LHV	1	3	3	3
4	Dispenser	1	1	6	6
5	Midwife	2	2	4	4
6	Dental Technician	-	-	1	1
7	Laboratory Technician	-	-	2	2
8	Dresser	-	-	1	1
D	**Nursing staff**				
1	Charge Nurse (indoor)	-	-	6	6
E	**Support staff**				
1	Sanitary Inspector	1	1	-	-
2	Naib Qasid	1	1	2	2
3	Chowkidar	1	3	3	3
4	Aya	1	2	2	2
5	Sanitary Worker (M/F)	1	2	3	3
6	Store Keeper	-	-	1	1
7	Senior Clerk	-	-	1	1
8	Driver	-	2	2	2
9	Ward Servant (M/F)	-	-	4	4
10	Mali	-	-	2	2
11	Accountant/computer operator	-	-	1	1
12	Operation Theater Assistant	-	-	1	1
13	X-ray Attendant	-	-	2	2
14	Laboratory Assistant	-	-	2	2

20.1. Specific human resource requirement at BHU-24h

Some additional staff will be hired at the BHU-24h for provision of EmONC services, while the already appointed staff i.e., health officer, LHV, midwife and dispenser will be offered financial incentives to ensure 24/7 preventive and basic EmONC services. Detailed staffing is reflected in the table above. Each health facility will have at least 4 SBAs, one for each 8 hour shift, and an additional as a reliever.

20.2. Specific human resource requirement at RHC+

No additional staff will be hired for the Comprehensive EmONC services to be offered at RHC+ facilities. The lab technician will be trained in blood transfusion services, while the technicians will be trained in an anaesthesia short course. Medical officers will be trained in C-section surgery, and timely referral for complications.

For the SCFN, existing personnel would be trained in relevant areas of care to provide round the clock support, while specialists such as neonatologists will be recruited on a fee for service basis. Staff will be trained for NG insertion and feeding, IV access, the use of the equipment, the main focus being infection control and neonatal nursing. A neonatal intensive care unit (NICU) at the DHQH level will provide backup and referral support to the unit.

21. Equipment and supplies

21.1. Equipment and supplies for LHWs

Table 28: Items required for LHW Health House

S. no.	Items	Life of items
1	Salter Scale	1 for three years
2	Six Type Charts	1 set for 2 years
3	LHW kit bag	1 kit for 3 years
4	Health House Board	1 board for 3 years
5	Identity Card	One year/subject to conditions
6	MUAC Tape	1 for three years
7	Pencil torch with batteries	1 for 2 years
8	Thermometer	2 for 1 year
9	Scissors	1 for 2 years
10	Dressing tray	1 for 2 years
11	BP Apparatus	

Table 29: Items in LHW Kit per LHW per month

S. no.	Items	No.
1	Paracetamol Tablets (500mg blister strip)	100 tablets
2	Paracetamol Syrup (125mg/5ml Bottle of 60ml)	5 bottles
3	Tab Ferrous Fumarate + Folic Acid (150mg + .5 mg blister strip)	540 tablets
4	Amoxycillin Suspension 125 mg	5 bottles
5	Polyfax ointment	10 tubes
6	4% CHX (Chlorhexidine solution for cord care)	2 bottles
7	Mebendazole Tablets	100 tablets
8	Cotton Roll	1 roll
9	Cotton Bandage	1 roll
10	Low Osmolality ORS (20.5 g Sachet)	20 sachets
11	Zinc Sulphate Suspension (20mg, bottle of 60 ml)	8 bottles
12	Condoms	100 pcs per month
13	Oral Pills	10 cycles/month
14	Depo Injection with syringe	3 injections/month
15	Health education material	
16	Data recording and reporting instruments	

21.2. Equipment and supplies for CMWs

Table 30: Equipment for CMWs

S. no.	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	Baby ambubag	1
8	Baby masks	
9	Baby bulb sucker	
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	Delivery items (Forceps, Sponge Forceps, Kidney Tray, Steel Bowl, Speculum, Infusion with set, I/V Cannulae)	1
18	Kit box steel	1
19	Signboard	1
20	Plastic apron	2
21	Examination lamp	1
22	Nail brush	1
23	Episiotomy scissors	1

Table 31: Medicines and supplies, with estimated 20 clients per month per CMW

S. no.	Items	No.
1	Disposable delivery kit	50
2	Lignocaine Gel for catheterization	1
3	Inj. Lignocaine	
4	Suture materials	
5	Needle holder	
6	Artery forceps (small)	
7	Urine Dipsticks	Container of 50/100
8	Plastic sheet	1
9	Partograph chart	3
10	Urinary catheters 12G 1x use	3
11	Amoxicillin tablets (250 & 500 mg)	80
12	Cefaclor,if allergic to penicillin	20
13	Metronidazole tablets (200mg)	200
14	Metronidazole tablets (400 mg)	200
15	Metronidazole cream (vaginal)	
16	IV fluid Normal Saline or Ringers lactate IL	40

S. no.	Items	No.
17	Injection Magnesium Sulphate	4
18	Tablet Misoprostol 200 mcg	20
19	Tablet Paracetamol/Mefenamic acid	100
20	Pyodine Antiseptic solution	2
21	Injection Oxytocin	20
22	Disposable syringes 5cc	100
23	Iron, Folic acid (tablets)	3600
24	Tab Nifedipine	200
25	Vitamin A (capsule)	20
26	Contraceptives (Condoms, Pills, IUCD)	
27	IUCD Insertion Kit	
28	Mebendazole 100 mg	20
29	Cannula (18 and 20 size)	10
30	Cotton roll (400g)	1
31	Surgical gauze	Yes
32	Antiseptic cream (Polyfax)	Yes
33	Surgical tape	Yes
34	Antifungal vaginal tablets with applicator	20
35	Gloves	Yes
36	Eye wear/face visor	Yes
37	Mask	Yes
38	Caps	Yes
49	Soap	Yes
40	Glycerin and alcohol for hand rub	Yes
41	Chlorine powder/liquid for disinfection (HLD)	Yes
42	4% CHX (Chlorhexidine)	Yes
43	Inj. Methyl ergometrine maleate	25
44	Red plastic bags for pathogenic/anatomic wastes	25
45	Needle cutter	1 per year
46	Sharps box	2
47	Health education materials	Yes
48	Data recording and reporting instruments	Yes

21.3. Equipment and supplies for facilities

Essential equipment and supplies are specified in Table 32. Additional requirements for RHC+ are outlined below.

21.4. Specific equipment and supplies required at RHC+

The equipment and supplies required to ensure comprehensive EmONC package at RHCs include laboratory support, blood transfusion services, and equipment for operation theatre and a functioning ambulance/vehicle. The supplies include contraceptives, medicines, IMNCI package of medicines, newborn care kit, clean delivery kits, and other basic equipment.Services such as 1122 Emergency Services will be used for referral of patients.

Table 32: Equipment and supplies by facility level

S. no.	Items	BHU	BHU 24h	RHC	RHC+
1	**For Infection Control and Environmental Management**				
1. 1	Soaps	1	1	1	1
1. 2	Spirit and glycerine for hand rub	Yes	Yes	Yes	Yes
1. 3	Limestone for spills	Yes	Yes	Yes	Yes
1. 4	Detergent	Yes	Yes	Yes	Yes
1. 5	Disinfectant (5% hypochlorite solution – common bleach)	Yes	Yes	Yes	Yes
1. 6	Latex gloves	Yes	Yes	Yes	Yes
1. 7	Utility gloves	Yes	Yes	Yes	Yes
1. 8	Masks surgical	Yes	Yes	Yes	Yes
1. 9	Masks N95	Yes	Yes	Yes	Yes
1. 10	Eye wear	Yes	Yes	Yes	Yes
1. 11	Head cover/ cap	Yes	Yes	Yes	Yes
1. 12	Footwear (closed shoes)	Yes	Yes	Yes	Yes
1. 13	Aprons/ Macintosh	Yes	Yes	Yes	Yes
1. 14	Gowns (non-sterile)	Yes	Yes	Yes	Yes
1. 15	Gowns (sterile)	-	-	Yes	Yes
1. 16	Mops and cloths for cleaning	Yes	Yes	Yes	Yes
1. 17	Green/white/blue buckets (non-infectious waste)	Yes	Yes	Yes	Yes
1. 18	Red buckets (infectious waste)	Yes	Yes	Yes	Yes
1. 19	Plastic bags – green/white/blue	Yes	Yes	Yes	Yes
1. 20	Plastic bags – red	Yes	Yes	Yes	Yes
1. 21	Leak proof laundry bags	Yes	Yes	Yes	Yes
1. 22	Pedal suction machine - manual	Yes	Yes	Yes	Yes

S. no.	Items	BHU	BHU 24h	RHC	RHC+
1. 23	Suction machine - electrical	Yes	Yes	Yes	Yes
1. 24	Relevant posters	Yes	Yes	Yes	Yes
1. 25	Container for 0.5% chlorine solution for decontamination	Yes	Yes	Yes	Yes
1. 26	Container for rinsing instruments	Yes	Yes	Yes	Yes
1. 27	Containers with tight-fitting lids or plastic bags for trash	Yes	Yes	Yes	Yes
1. 28	Containers with tight-fitting lids or plastic bags for used linen collection	Yes	Yes	Yes	Yes
1. 29	Leakproof containers with tight-fitting lids or plastic bags for disposing of contaminated items	Yes	Yes	Yes	Yes
1. 30	Puncture-proof container for sharps disposal	Yes	Yes	Yes	Yes
1. 31	Betadine/Savlon	Yes	Yes	Yes	Yes
1. 32	Chlorine for making decontamination solution	Yes	Yes	Yes	Yes
1. 33	Pans / trays / lids	Yes	Yes	Yes	Yes
1. 34	Plastic aprons/cover gowns	Yes	Yes	Yes	Yes
1. 35	Protective eyewear (face shields, goggles)	Yes	Yes	Yes	Yes
1. 36	Protective footwear (boots/shoe covers)	Yes	Yes	Yes	Yes
1. 37	Needle cutter/syringe destroyer	Yes	Yes	Yes	Yes
2	**OPD (including IMNCI related Eqt and supplies)**				
2. 1	Examination couch	2	2	3	3
2. 2	Chair for health worker	1	1	1	1
2. 3	Stethoscope	2	2	7	7
2. 4	Timing device/watch with second hand	1	1	1	1
2. 5	BP apparatus (mercury)	2	2	4	4
2. 6	Thermometer	12	12	48	48
2. 7	Examination torch	2	2	4	4
2. 8	Tongue depressor disposable	Yes	Yes	Yes	Yes
2. 9	ENT diagnostic set	1	1	2	2
2. 10	Linen sheets for couch/beds	10	10	40	40
2. 11	Revolving stool	2	2	3	3
2. 12	Tape measure for nutrition assessment	2	2	3	3
2. 13	Baby weighing scale	1	1	2	2
2. 14	Adult weighing scale	1	1	2	2
2. 15	Tuning fork	-	-	1	1
2. 16	Patella hammer	2	2	3	3
2. 17	Scissors	2	2	4	4
2. 18	Dressing trays	1	1	4	4
2. 19	Dressing scissors	1	1	4	4
2. 20	Kidney tray- large size	2	2	4	4
2. 21	Bowl large size	2	2	4	4
2. 22	Dressing drum	1	1	4	4
2. 23	Sterilizer	1	1	2	2

S. no.	Items	BHU	BHU 24h	RHC	RHC+
2. 24	IV stand	2	2	18	22
2. 25	Needle holder forceps	2	2	12	12
2. 26	Artery forceps straight	2	2	12	12
2. 27	Artery forceps curved	2	2	12	12
2. 28	Screen four fold	2	2	4	4
2. 29	Tissue forceps – plain	2	2	4	4
2. 30	Tissue forceps – toothed	2	2	4	4
2. 31	Cold box refrigerator for EPI	1	1	1	1
2. 32	Vaccine carrier and ice pack	2 + 6	2 + 6	2+6	2+6
2. 33	Breast pumps	1	1	2	2
2. 34	Stretcher	1	1	2	2
2. 35	Wheel chair	0	0	2	3
2. 36	Scalpel handle and blades	2	2	2	3
2. 37	Suture materials	Yes	Yes	Yes	Yes
2. 38	Nebulizer	2	2	3	4
2. 39	Ambubag for child and adult	2	2	2	2
2. 40	Oxygen Gas Cylinders	Yes	Yes	Yes	Yes
2. 41	Oxygen Tubing and Masks	Yes	Yes	Yes	Yes
2. 42	Pillows	4	4	6	6
2. 43	Blankets	4	4	6	6
2. 44	4% CHX (Chlorhexidine solution)	Yes	Yes	Yes	Yes
2. 45	IMNCI chart booklet	2	2	2	2
2. 46	Mothers cards	Yes	Yes	Yes	Yes
2. 47	Patient record cards	Yes	Yes	Yes	Yes
2. 48	Clean delivery kits	Yes	Yes	Yes	Yes
	Immunization area				
2. 49	Disposable syringes	Yes	Yes	Yes	Yes
2. 50	Ice packs and cold boxes	Yes	Yes	Yes	Yes
2. 51	Table for vaccine supplies	Yes	Yes	Yes	Yes
2. 52	Refrigerator thermometer	Yes	Yes	Yes	Yes
2. 53	Vaccines	Yes	Yes	Yes	Yes
2. 54	TT vaccine	Yes	Yes	Yes	Yes
2. 55	Puncture-proof container for sharps disposal	Yes	Yes	Yes	Yes
2. 56	Vaccination cards	Yes	Yes	Yes	Yes
3	**Ward**				
3. 1	Bed with side table/locker	2	2	20	20
3. 2	Foot steps	-	-	10	10
3. 3	Baby cots	1	1	4	4
3. 4	Patient trolley	-	-	1	1
3. 5	Oxygen gas cylinder	-	-	2	2
3. 6	Nebulizer + Masks	-	-	1	1

S. no.	Items	BHU	BHU 24h	RHC	RHC+
3. 7	Spacers for inhalers	-	-	2	2
3. 8	Bedding clothing	-	-	20	20
3. 9	Foam pillows	-	-	20	20
3. 10	Bed sheets	-	-	40	40
3. 11	Vinyl sheets (rexin)	-	-	12	12
3. 12	Foam mattress	-	-	20	20
3. 13	Adult blankets	-	-	20	20
3. 14	Baby blankets	-	-	8	8
3. 15	Plastic chairs (for in-patient attendants)	-	-	10	10
3. 16	Benches for patient attendants	-	-	10	10
3. 17	Radiant warmer/heater for newborn	-	-	1	1
4	**MNCH Related Diagnostic Equipment**				
4. 1	Portable Ultrasound	-	1	-	**-**
4. 2	Static Ultrasound	-	-	1	1
5	**Labour Room**				
5. 1	Labour /Delivery Table with washable plastic cover	1	1	1	1
5. 2	Watch or clock with second hand that can be easily seen	1	1	1	1
5. 3	Macintosh/plastic apron	4	4	8	8
5. 4	Shadow less Lamps	1	1	1	1
5. 5	Normal delivery set	2	2	4	4
5. 7	Standard surgical set (for minor procedures like episiotomy stitching)	2	2	4	4
5. 8	CTG (cardiac tocography)	-	-	1	1
5. 9	Bulb Sucker	1	1	3	3
5. 10	Fetal Stethoscope	2	2	2	2
5. 11	Cord Clamp	Yes	Yes	Yes	Yes
5. 12	Outlet forceps	2	2	3	3
5. 13	Kocher`s forceps	-	-	1	1
5. 14	Vulsellum forceps	-	-	2	2
5. 15	Lane's tissue holding forceps	-	-	6	6
5. 16	Sponge Holder	4	4	6	6
5. 17	Uterine elevator	-	-	-	4
5. 18	Couscous specula (Small, Medium, Large for each category)	2	3	3	3
5. 19	Examination light	2	2	2	2
5. 20	Suction and Evacuation set (SNE)	1	1	3	3
5. 21	Sim’s vaginal speculum – single & double ended - (each of small, medium and large size)	2	2	8	8
5. 22	Anterior Vaginal wall retractor	-	-	2	2
5. 23	Cheatle forceps	1	2	2	2
5. 24	Ayre’s spatula	-	-	2	2

S. no.	Items	BHU	BHU 24h	RHC	RHC+
5. 25	IUD insertion kit	1	1	1	1
5. 26	Adult stethoscope	2	2	4	4
5. 27	Bedpans	1	1	4	4
5. 28	Blood pressure apparatus	2	2	4	4
5. 29	Pinard fetoscope	2	2	3	3
5. 30	Adult ambu bag and mask	2	2	2	2
5. 31	Thermometer	10	10	10	10
5. 32	Oxygen source (portable cylinder or central wall supply), with Mask or nasal cannula; Tubing; Flow meter	Yes	Yes	Yes	Yes
5. 33	Baby weighing scale	1	1	1	1
5. 34	Step stool	2	2	4	4
5. 35	Suture needles	2	2	4	4
5. 36	Vacuum extractor with different cup sizes, tubing, suction bottle.	-	-	2	2
5. 37	Partograph forms	Yes	Yes	Yes	Yes
	Adult weighing scale	1	1	1	1
	Manual Vacuum Aspirator (MVA)	Yes	Yes	Yes	Yes
5. 38	**Delivery Sets**				
5.38.1	Alcohol swab	Yes	Yes	Yes	Yes
5.38.2	Blanket for wrapping the newborn	Yes	Yes	Yes	Yes
5.38.3	Blankets and/or towels for drying the newborn	Yes	Yes	Yes	Yes
5.38.4	Cloths or drapes	Yes	Yes	Yes	Yes
5.38.5	Gauze/cotton wool	Yes	Yes	Yes	Yes
5.38.6	High-level disinfected or sterile surgical gloves	Yes	Yes	Yes	Yes
5.38.7	Episiotomy Scissors	2	2	5	5
5.38.8	Straight Scissors	2	2	5	5
5.38.9	Needle Holder	2	2	5	5
5.38.10	Non toothed tissue forceps 8 inches	2	2	5	5
5.38.11	Toothed tissue forceps 8 inches	2	2	5	5
5.38.12	Sims Speculum Single Blade	2	2	5	5
5.38.13	Sims Speculum Double Blade	2	2	5	5
5.38.14	Sponge holding forceps	2	2	5	5
5.38.15	Artery forceps	2	2	5	5
5.38.16	Straight Clamps (Cord)	4	4	8	8
5.38.17	Cord Clamp	2	2	5	5
5.38.18	Needle & Sutures	2	2	5	5
5.38.19	Towel Clip	2	2	5	5
5.38.20	Suction bulb/De Lee (single use/sterile re-usable)	-	-	5	5
5.4	**Maternal Resuscitation Trolley**				
5.39.1	Inj. Adrenaline	Yes	Yes	Yes	Yes

S. no.	Items	BHU	BHU 24h	RHC	RHC+
5. 39.2	Inj. Aminophylline	Yes	Yes	Yes	Yes
5. 39.3	Inj. Atropine sulfate	Yes	Yes	Yes	Yes
5. 39.4	Inj. Calcium gluconate	Yes	Yes	Yes	Yes
5. 39.5	Inj. Diphenhydramine	Yes	Yes	Yes	Yes
5. 39.6	Inj. Ephedrine	Yes	Yes	Yes	Yes
5. 39.7	Inj. Magnesium sulfate	Yes	Yes	Yes	Yes
5. 39.8	Inj. Naloxone	Yes	Yes	Yes	Yes
5. 39.9	Inj. Prednisolone	Yes	Yes	Yes	Yes
5. 39.10	Inj. Promethazine	Yes	Yes	Yes	Yes
5. 39.11	Inj. Oxytocin	Yes	Yes	Yes	Yes
5. 39.12	Inj. Diazepam	Yes	Yes	Yes	Yes
5. 39.13	Tab. Nifedipine	Yes	Yes	Yes	Yes
5. 39.14	Inj. Lignocaine hydrochloride	Yes	Yes	Yes	Yes
5. 39.15	Inj. Methyl ergometrine maleate	Yes	Yes	Yes	Yes
5. 39.16	Blood administration sets	-	-	Yes	Yes
5. 39.17	IV administration sets	Yes	Yes	Yes	Yes
5. 39.18	IV solutions: Ringer's lactate, normal saline, glucose	Yes	Yes	Yes	Yes
5. 39.19	IV Cannulae	Yes	Yes	Yes	Yes
5. 39.20	Needles, syringes	Yes	Yes	Yes	Yes
5. 39.21	Scissors	Yes	Yes	Yes	Yes
5. 39.22	Tape	Yes	Yes	Yes	Yes
5. 39.23	Tab Misoprostol	Yes	Yes	Yes	Yes
5. 39.24	Sterilised cotton and gauze	Yes	Yes	Yes	Yes
5. 39.25	Laryngoscope	-	-	2	2
5. 39.26	Endotracheal Tube	-	-	Yes	Yes
5. 39.27	BP ApparatusAnaeroid	1	1	2	2
5. 39.28	Chargeable Light	Yes	Yes	Yes	Yes
5.40	**ENC Corner with Neonatal resuscitation trolley**				
5. 40.1	Radiant warmer /Heater for newborn baby	1	1	2	4
5. 40.2	Weighing Scale, spring	1	1	2	2
5. 40.3	Room Thermometer	1	1	1	1
5. 40.4	Light examination, mobile, 220-12 V	1	1	2	2
5. 40.5	I/V Cannula 24 G, 26 G	Yes	Yes	Yes	Yes
5. 40.6	I/V sets (infant)	Yes	Yes	Yes	Yes
5. 40.7	Extractor, mucus, 20ml, ster, disp Dee Lee	2	2	2	2
5. 40.8	Towels for drying and wrapping the baby	4	4	8	8
5. 40.9	Sterile equipment for cutting and tying the cord	Yes	Yes	Yes	Yes
5. 40.10	Tube, feeding, CH07, L40cm, ster, disp	4	4	8	8

S. no.	Items	BHU	BHU 24h	RHC	RHC+
5. 40.11	Oxygen cylinder 8 F	-	-	Yes	Yes
5. 40.12	Sterile Gloves	Yes	Yes	Yes	Yes
5. 40.13	Baby Laryngoscope	-	-	-	4
5. 40.14	Endotracheal Tube	-	-	-	Yes
5. 40.15	Infant BP Apparatus	-	-	2	4
5. 40.16	Chargeable Light	Yes	Yes	Yes	Yes
5. 40.17	Ambubag for infant	2	2	3	4
5. 40.18	Masks - different sizes	Yes	Yes	Yes	Yes
6	**Secondary Care Facility for Newborns (SCFN) at RHC+**				
6. 1	Over Heat Radiant Warmer	-	-	-	1
6. 2	Baby cots	-	-	-	2
6. 3	Phototherapy Lights	-	-	-	2
6. 4	Infant Length Measuring Scale	-	-	-	2
6. 5	Infant Weighing Machine	-	-	-	1
6. 6	Nebulizer	-	-	-	2
6. 7	Nasal Probe Paed Size	-	-	-	2
6. 8	Suction machine/neonatal	-	-	-	2
6. 9	Suction tubing/disposable	-	-	-	Yes
6. 10	Cardiac monitor/blood pressure	-	-	-	2
6. 11	Pulse oximeter				2
6. 12	IV pump-neonatal	-	-	-	2
6. 13	Neonatal NG/feeding tubes	-	-	-	Yes
6. 14	Neonatal IV Cannulae, IV sets, IV fluids				Yes
6. 15	Neonatal resuscitation trolley	-	-	-	1
6. 16	Oxygen cylinders with flow meters; nasal cannulae	-	-	-	4
7	**Operating Theatre**				
7. 1	Operation table	-	-	1	1
7. 2	Shadow less Lamps	-	-	1	1
7. 3	Macintosh	-	-	4	4
7. 4	Patients Trolley	-	-	1	1
7. 5	Oxygen Cylinder (large size with regulator)	-	-	2	2
7. 6	Instruments Trolley	-	-	1	1
7. 7	Dressing Drum(large size)	-	-	2	2
7. 8	Stand for Dressing	-	-	2	2
7. 9	Scissors	-	-	4	4
7. 10	Dressing trays	-	-	2	2
7. 11	Dressing scissors	-	-	2	2
7. 12	Kidney tray- large size	-	-	4	4

S. no.	Items	BHU	BHU 24h	RHC	RHC+
7. 13	Bowl large size	-	-	4	4
7. 14	Sterilizer	-	-	1	1
7. 15	Needle holder forceps	-	-	4	4
7. 16	Artery forceps straight	-	-	8	12
7. 17	Artery forceps curved	-	-	8	12
7. 18	Tissue forceps – plain	-	-	4	12
7. 19	Tissue forceps – toothed	-	-	4	12
7. 20	Scalpel handle and blades	-	-	4	8
7. 21	Tourniquet	-	-	4	6
7. 22	Suture materials	-	-	Yes	Yes
7. 23	McGill Forceps	-	-	2	3
7. 24	Basin	-	-	2	2
7. 25	Basin Stands	-	-	2	2
7. 26	Towel Clips	-	-	12	12
7. 27	BP Handle	-	-	2	2
7. 28	BP Blades	-	-	3	3
7. 29	Dissecting Forceps (plain)	-	-	4	6
7. 30	Needle Holder(large size)	-	-	4	6
7. 31	Sponge Holding Forceps(large size)	-	-	2	6
7. 32	Metallic Catheter (1-12)	-	-	2	6
7. 33	Nose Speculum	-	-	2	2
7. 34	Proctoscope	-	-	2	2
7. 35	Arm Splint Different sizes	-	-	6	6
7. 36	Instruments Cabinet Large size	-	-	1	2
7. 37	Spot Light	-	-	1	2
7. 38	Nail Brush	-	-	2	2
7. 39	Thermometer	-	-	4	4
7. 40	Container for thermometer	-	-	2	2
7. 41	Stand for Drip	-	-	4	4
7. 42	Aircushion Rubber	-	-	2	2
7. 43	Hot Water Bottles	-	-	10	12
7. 44	Stomach Tube	-	-	2	2
7. 45	Urine Collecting Bags	-	-	Yes	Yes
7. 46	Instrument trolley	-	-	1	1
7. 47	Nebulizer	-	-	-	2
7. 48	Pulse Oximeter	-	-	-	2
7. 49	Defibrillator	-	-	-	1
7. 50	Air Way Oral and Nasal	-	-	-	2
7. 51	Tracheostomy tube (adults & Paeds)	-	-	-	2
7. 52	Ambu Bag Adult	-	-	2	4
7. 53	Ambu Bag Paeds	-	-	2	2
7. 54	Red Rubber nasal tubes (all sizes without cuff)	-	-	4	4

S. no.	Items	BHU	BHU 24h	RHC	RHC+
7. 55	Face masks of all sizes	-	-	-	Yes
8	**Caesarean Section**				
8. 1	Scalpel	-	-	-	2
8. 2	Artery forceps Straight 6 Inches	-	-	-	4
8. 3	Artery forceps Curved 6 Inches	-	-	-	4
8. 4	Artery forceps 8 inches	-	-	-	4
8. 5	Myoma Scissors Straight 7 inches	-	-	-	2
8. 6	Dissecting Scissors (curved) 7 inches	-	-	-	2
8. 7	Green Armtage forceps 8 inches	-	-	-	2
8. 8	Obstetric outlet forceps (pair)	-	-	-	1
8. 9	Doyene`s Retractors	-	-	-	2
8. 10	Small Retractors	-	-	-	3
8. 11	Towel Clippers	-	-	-	6
8. 12	Sponge & Towels	-	-	-	6
8. 13	Cord Clamp	-	-	-	4
8. 14	Suction Nozzle	-	-	-	2
8. 15	Needle holders	-	-	-	3
8. 16	Sponge holding forceps	-	-	-	4
9	**Laboratory**				
9. 1	Sputum and blood specimen bottles	Yes	Yes	Yes	Yes
9. 2	Centrifuge machine	-	-	1	1
9. 3	Stop watch	1	1	2	2
9. 4	Refrigerator	1	1	1	1
9. 5	Compound microscope (with illuminator)	-	-	1	1
9. 6	Urine meter.	1	1	1	1
9. 7	Haemoglobinometer	1	1	1	1
9. 8	Haemocytometer	1	1	2	2
9. 9	ESR Racks.	-	-	2	2
9. 10	ESR Pipettes	-	-	2	2
9. 11	Glass rods	2	2	4	4
9. 12	Glass slides	Yes	Yes	Yes	Yes
9. 13	Cover slips	Yes	Yes	Yes	Yes
9. 14	Centrifuge Tubes (Glass)	-	-	12	12
9. 15	Glass Pipettes various sizes corrected	-	-	12	12
9. 16	Jester Pipettes Fixed -various sizes	-	-	2	2
9. 17	Jester pipettes adjustable- various sizes	-	-	2	2
9. 18	Test tubes	10	10	20	20
9. 19	Pipette stands	1	1	2	2
9. 20	Table lamp.	1	1	1	1
9. 21	Lancets (pack)	2	2	6	6
9. 22	Surgical Blades	Yes	Yes	Yes	Yes

S. no.	Items	BHU	BHU 24h	RHC	RHC+
9. 23	Test Tube Holder	2	2	4	4
9. 24	Reagent Bottles	4	4	4	4
9. 25	Gas Burner	1	1	1	1
9. 26	Stainless Steel Test Tube Racks	1	1	1	1
9. 27	Glucometer	1	1	1	1
9. 28	Haematology Analyzer	-	-	1	1
9. 29	Biochemistry Analyzer	-	-	1	1
9.30	**Blood Transfusion Facility (within the Laboratory)**				
9. 30.1	Blood Storage Cabinet (upto 50 bag capacity)	-	-	-	1
9. 30.2.	Blood Bag Shaker	-	-	-	1
9. 30.3.	Micro Pipette	-	-	-	1
9. 30.4.	Blood Thawing Bath	-	-	-	1
9.30.5.	Cross matching kit	-	-	-	Yes
9.30.6.	8.5 g/l Sodium Chloride solution	-	-	-	Yes
9.30.7.	Pipettes Volumetric (1, 2, 3, 4, 5, 10 & 20ml)	-	-	-	Yes
9.30.8.	0.9% sodium Chloride solution	-	-	-	Yes
9.30.9.	20% Bovine albumin	-	-	-	Yes
9.30.10	37C Water bath (or incubator)	-	-	-	1
9.30.11	Plastic/glass tubes	-	-	-	Yes
	Blood collection and screening	-	-	-	1
9. 30.12	Sphygmomanometer cuff	-	-	-	1
9. 30.13	Airway needle for collecting blood	-	-	-	Yes
9. 30.14	Ball (for donor to squeeze)	-	-	-	1
9. 30.15	Artery forceps	-	-	-	1
9. 30.16	Scissors	-	-	-	1
9. 30.17	Pilot bottles (containing 1ml ACD solution)	-	-	-	Yes
9. 30.18	Blood bags - JMS - single cell	-	-	-	Yes
9. 30.19	Malaria screening test kit	-	-	-	Yes
9. 30.20	Syphilis screening TPHA kit	-	-	-	Yes
9. 30.21	Hepatitis B-HBSAg screening kit	-	-	-	Yes
9. 30.22	Hepatitis C-Anti-HCV Ab screening kit	-	-	-	Yes
9. 30.23	HIV screening-Rapid and ELISA kit	-	-	-	Yes
9. 30.24	Copper sulphate solution for donor Hb				
9. 30.25	Medical history forms				
	Donor reaction response kit				
9. 30.26	Inj. N/S 1000 ml	-	-	-	1
9. 30.27	Inj. Dextrose 1000 ml	-	-	-	1
9. 30.28	Tab Calcium	-	-	-	1
9. 30.29	Tab Metoclopramide (antiemetic)	-	-	-	1
9. 30.30	Inj. Diclofenac Sodium	-	-	-	1
10	**Vaccine storage**				
10. 1	ILR/Deep Freezer	1	1	1	1
10. 2	Ice box	1	1	1	1
10. 3	Ice packs	10	10	10	10

S. no.	Items	BHU	BHU 24h	RHC	RHC+
11	**Equipment for eye care and vision testing**				
11. 1	Illuminated vision testing drum	-	-	1	1
11. 2	Snellen and near vision charts	-	-	1	1
11. 3	Battery operated torch	-	-	1	1
12	**Dental unit**				
12. 1	Dental unit (complete with chair, light, hand piece unit with hand pieces, suction and compressor	-	-	1	1
12. 2	Dental hand instruments (set)	-	-	2	2
12. 3	Aseptic Trolley	-	-	1	1
12. 4	Dental Autoclave	-	-	1	1
12. 5	Amalgamator	-	-	1	1
12. 6	Dental X-ray unit	-	-	1	1
12. 7	Intraoral X-ray film processor	-	-	1	1
12. 8	X-ray view box	-	-	1	1
12. 9	Lead apron	-	-	1	1
12. 10	Ultrasonic scaler	-	-	1	1
12. 11	Dental operating stool	-	-	1	1
13	**Furniture**				
13. 1	Office Table with 3 Drawers	4	4	7	7
13. 2	Office Chairs	4	4	7	7
13. 3	Office Rack Wooden	4	4	7	7
13. 4	Patient's stool	3	3	5	5
13. 5	Bench fibre glass	2	2	4	4
13. 6	Steel Almirah	6	6	8	8
14	**Others**				
14. 1	Pressure cooker autoclaves	1	1	-	-
14. 2	Autoclaves	-	-	1	1
14. 3	Generator with POL	-	-	1	1
14.4	UPS for uninterrupted electricity supply	1	1	1	1
14. 5	Computer with accessories, including internet access	1	1	1	1
14. 6	Gas stove/ cylinder	1	1	1	1
14. 7	Ambulance	-	1	1	1
15	**X-ray room**				
15. 1	X-ray unit	-	-	1	1

S. no.	Items	BHU	BHU 24h	RHC	RHC+
16	**Health education material**				
16. 1	FP/Spacing related education materials	Yes	Yes	Yes	Yes
16. 2	ENC health education material	Yes	Yes	Yes	Yes
16. 3	IMNCI Health education material	Yes	Yes	Yes	Yes
16. 4	Maternal health education material	Yes	Yes	Yes	Yes
16. 5	Nutrition related health education material	Yes	Yes	Yes	Yes
16. 6	STI/HIV related health education material	Yes	Yes	Yes	Yes
16. 7	Hygiene/common infections related material	Yes	Yes	Yes	Yes
16. 8	Infection control measures including standard precautions and waste management materials	Yes	Yes	Yes	Yes
	Clinical Management Protocols (SMPs/SOPs)				
17	**Registers and forms**				
17. 1	Data recording and reporting instruments	Yes	Yes	Yes	Yes

21.5. Essential Medicines

Table 33: Essential Medicines by facility and provider levels

S. No.	Class/Name	CMW	LHW	BHU	BHU 24/7	RHC	RHC+
A	**Analgesics, antipyretics, non-steroidal anti-inflammatory drugs**						
1	Tab. Aspirin (Soluble) 300mg.	-	-	Yes	Yes	Yes	Yes
2	Tab. Ibuprofen 400mg.	-	-	Yes	Yes	Yes	Yes
3	Susp. Ibuprofen 100mg/5ml.	-	-	Yes	Yes	Yes	Yes
4	Syp/Susp/Elixir. Paracetamol 120mg/5ml.	-	Yes	Yes	Yes	Yes	Yes
5	Tab. Paracetamol 500mg	Yes	Yes	Yes	Yes	Yes	Yes
6	Inj. Diclofenac Sodium 75mg/3ml.	-	-	Yes	Yes	Yes	Yes
7	Tab. Diclofenac Sodium 50mg	-	-	Yes	Yes	Yes	Yes
B	**Antibacterial drugs/ Antiprotozoal**						
8	Inj. Ampicillin 250mg	-	-	Yes	Yes	Yes	Yes
9	Inj. Gentamycin 10 mg	-	-	Yes	Yes	Yes	Yes
10	Inj Chloramphenicol IM 1g sodium succinate in vial	-	-	Yes	Yes	Yes	Yes
11	Cap. Amoxicillin 250mg.	Yes	-	Yes	Yes	Yes	Yes
12	Cap. Amoxicillin 500mg.	Yes	-	Yes	Yes	Yes	Yes
13	Inj. Amoxicillin 250mg.	-	-	Yes	Yes	Yes	Yes
14	Inj. Amoxicillin 500mg.	-	-	Yes	Yes	Yes	Yes
15	Susp. Amoxicillin 250mg/5ml.	-	Yes	Yes	Yes	Yes	Yes
16	Tab. Amoxicillin + Clavulanic acid 500 mg + 125 mg	-	-	Yes	Yes	Yes	Yes
17	Syp. Amoxicillin + Clavulanic acid 125+31.25 mg	-	-	Yes	Yes	Yes	Yes
18	Inj. Benzyl Penicillin 5,00,000 units.	-	-	Yes	Yes	Yes	Yes
19	Inj. Benzyl Penicillin 10,00,000 units.	-	-	Yes	Yes	Yes	Yes
20	Tab. Ciprofloxacin 250mg.	-	-	Yes	Yes	Yes	Yes
21	Tab. Ciprofloxacin 500mg.	-	-	Yes	Yes	Yes	Yes
22	Inf Ciprofloxacin 100 mg/ 50 ml	-	-	-	-	Yes	Yes
23	Inf Ciprofloxacin 200 mg/ 100 ml	-	-	-	-	Yes	Yes
24	Syp/Susp. Ciprofloxacin 125 mg/5 ml	-	-	-	-	Yes	Yes
25	Syp/Susp. Ciprofloxacin 250 mg/5 ml	-	-	-	-	Yes	Yes
26	Tab. Metronidazole 200 mg and 400mg	Yes	-	Yes	Yes	Yes	Yes
27	Metronidazole vaginal cream	Yes	-	-	-	-	-
28	Tab. Diloxanide Furoate 500mg.	-	-	Yes	Yes	Yes	Yes
29	Susp. Metronidazole 5 ml/200mg	-	-	Yes	Yes	Yes	Yes
30	Tab. Diloxanide Furoate 250 mg.	-	-	Yes	Yes	Yes	Yes
31	Tab. Erythromycin 250 mg	-	-				
32	Susp. Erythromycin 200mg/5ml	-	-	Yes	Yes	Yes	Yes
33	Cap. Tetracycline 250 mg	-	-	Yes	Yes	Yes	Yes
34	Tab. Azithromycin 1g.	-	-	Yes	Yes	Yes	Yes
35	Tab. Doxycycline cap 100 mg	-	-	Yes	Yes	Yes	Yes

S. No.	Class/Name	CMW	LHW	BHU	BHU 24/7	RHC	RHC+
36	Tab. Sulfamethoxazole + Trimethoprin (400 mg +80 mg)	-	-	Yes	Yes	Yes	Yes
37	Susp. Sulfamethoxazole + Trimethoprim 200mg+40mg/5ml	-	-	Yes	Yes	Yes	Yes
38	Inj. Ceftriaxone 250mg and 500mg	-	-	-	-	Yes	Yes
39	Syp. Piperazine	-	-	Yes	Yes	Yes	Yes
40	Cap. Cefaclor 250/500 mg	-	-	-	-	Yes	Yes
C	**Antiallergics and drugs used in anaphylaxis**						
41	Tab. Chlorpheniramine Maleate 4mg.	-	-	Yes	Yes	Yes	Yes
42	Syp Chlorpheniramine Maleate 2mg/5ml	-	-	Yes	Yes	Yes	Yes
43	Inj. Dexamethasone 4mg/ml.	-	-	Yes	Yes	Yes	Yes
44	Inj Adrenaline 1 in 1000 (0.1%)/1mg/ml	-	-	Yes	Yes	Yes	Yes
45	Hydrocortisone Powder for inj.250mg (assodium succinate)in vial	-	-	Yes	Yes	Yes	Yes
46	Hydrocortisone Powder for injection , 100mg(as sodium succinate)in vial	-	-	Yes	Yes	Yes	Yes
D	**Oxytocics**						
47	Inj. Methyl Ergometrine 0.2mg/ml.	Yes	-	Yes	Yes	Yes	Yes
48	Inj. Oxytocin 10 IU/ml.	Yes	-	Yes	Yes	Yes	Yes
49	Tab Misoprostol 200 mcg	Yes	-	Yes	Yes	Yes	Yes
E	**Anti-oxytocic/tocolytic**						
50	Tab Nifedipine 20mg	Yes	-	-	-	Yes	Yes
F	**Contraceptives**						
51	Male Condoms	Yes	Yes	Yes	Yes	Yes	Yes
52	Contraceptives (IUCD)	Yes	-	Yes	Yes	Yes	Yes
53	Medroxyprogesterone acetate (12 weekly) Inj. 150mg	-	-	Yes	Yes	Yes	Yes
54	Norethisterone + ethinyl oestradiol Tab. 1mg + 35mcg	Yes	Yes	Yes	Yes	Yes	Yes
55	Levonorgestrel + ethinyl oestradiol Tab. 150mg + 30mg	-	-	Yes	Yes	Yes	Yes
56	Contraceptive emergency: Levonorgestrel Tab 30mcg, 750mcg, 1.5mg	-	-	Yes	Yes	Yes	Yes
G	**Oral Rehydration**						
57	Low osmolarity ORS (20.5 g sachet)	-	Yes	Yes	Yes	Yes	Yes
58	Zinc Sulphate Suspension (20mg, bottle of 60 ml)	Yes	Yes	Yes	Yes	Yes	Yes
59	Tab. Zinc Sulphate	Yes	-	Yes	Yes	Yes	Yes

S. No.	Class/Name	CMW	LHW	BHU	BHU 24/7	RHC	RHC+
H	**Parasitic Infections**						
60	Tab. Mebendazole 100 mg	Yes	Yes	Yes	Yes	Yes	Yes
61	Syp. Mebendazole 100mg/5ml in 30ml	-	-	Yes	Yes	Yes	Yes
I	**Antimalarial (Malaria Control Program)**						
62	Syp. Chloroquine Sulphate/Phosphate equivalent to 50mg base/5ml.	-	-	Yes	Yes	Yes	Yes
63	Tab. Chloroquine Sulphate/Phosphate 250 mg	-	-	Yes	Yes	Yes	Yes
64	Tab. Sulfadoxin 500mg+ Pyrimethamine 25mg	-	-	Yes	Yes	Yes	Yes
65	Syp. Sulfadoxin500mg+ Pyrimethamine 25mg/5ml	-	-	Yes	Yes	Yes	Yes
66	Tab Artesunate 50mg	-	-	Yes	Yes	Yes	Yes
67	Tab Primaquine phosphate 15 mg base	-	-	Yes	Yes	Yes	Yes
J	**Antituberculosis drugs (TB program)**						
68	Tab Ethambutol 400 mg Strip/blister	-	-	Yes	Yes	Yes	Yes
69	Tab Rifampicin+Isoniazid 150 mg + 100 mg strip/blister	-	-	Yes	Yes	Yes	Yes
70	Tab Rifampicin+Isoniazid 300 mg + 150 mg Strip/blister	-	-	Yes	Yes	Yes	Yes
71	Tab. Isoniazid+Ethambutol 150 mg + 400 mg strip/blister	-	-	Yes	Yes	Yes	Yes
72	Tab. Rifampacin+Isoniazid+ Pyrazinamide+Ethamutol 150mg+75mg+400mg+275mg strip/blister	-	-	Yes	Yes	Yes	Yes
73	Inj. Streptomycin (powder) 1g (as sulfate) in vial	-	-	Yes	Yes	Yes	Yes
74	Tab. Isoniazid 100mg	-	-	Yes	Yes	Yes	Yes
K	**Antifungal Drugs**						
75	Vaginal cream Clotrimazole 2%	-	-	Yes	Yes	Yes	Yes
76	Skin cream Clotrimazole 1%.	-	-	Yes	Yes	Yes	Yes
77	Ointment or Cream Benzoic Acid +Salicylic Acid 6% + 3%	-	-	Yes	Yes	Yes	Yes
78	Tab. Nystatin 500,000 iu	-	-	Yes	Yes	Yes	Yes
79	Oral drops Nystatin 100,000 iu/ml	-	-	Yes	Yes	Yes	Yes
L	**Antianemia drugs**						
80	Tab. Ferrous sulphate	-	-	Yes	Yes	Yes	Yes
81	Tab. Ferrous Fumarate + Folic Acid (150mg+0.5 mg blister strip)	Yes	Yes	Yes	Yes	Yes	Yes
M	**Scabicides and pediculicides**						
82	Lotion/Emulsion Benzyl Benzoate 25%	-	-	Yes	Yes	Yes	Yes

S. No.	Class/Name	CMW	LHW	BHU	BHU 24/7	RHC	RHC+
83	Cream Permethrin 5%	-	-	Yes	Yes	Yes	Yes
N	**Antipruritic**						
84	Lotion Calamine 15%	-	-	Yes	Yes	Yes	Yes
O	**Anticonvulsant**						
85	Tab. Phenobarbitone 30mg.	-	-	Yes	Yes	Yes	Yes
86	Syp. Elixir Phenobarbitone 20mg/ 5ml	-	-	Yes	Yes	Yes	Yes
87	Inj. Magnesium Sulphate 500mg/ml	Yes	-	Yes	Yes	Yes	Yes
P	**Diuretics**						
88	Tab. Furosemide 40 mg Strip/blister	-	-	Yes	Yes	Yes	Yes
89	Inj. Furosemide 20 mg /2ml	-	-	Yes	Yes	Yes	Yes
90	Tab. Hydrochlorthiazide 25 mg	-	-	Yes	Yes	Yes	Yes
91	Tab. Spironolactone 25mg	-	-	Yes	Yes	Yes	Yes
Q	**Antihypertensive/ cardiovascular drugs**						
92	Tab. Atenolol 50mg.	-	-	Yes	Yes	Yes	Yes
93	Tab. Atenolol 100 mg.	-	-	Yes	Yes	Yes	Yes
94	Tab. Isosorbide Dinitrate 10mg	-	-	-	-	Yes	Yes
95	Tab. Dispirin CV/Loprin 75mg	-	-	-	-	Yes	Yes
96	Tab. Glyceryl Trinitrate Sublingual 0.5 mg	-	-	Yes	Yes	Yes	Yes
97	Tab. Propranolol 40mg Strips/blister	-	-	Yes	Yes	Yes	Yes
98	Tab. Amlodipine Tab 5mg	-	-	-	-	Yes	Yes
99	Tab. Enalapril maleate 5mg	-	-	-	-	Yes	Yes
100	Tab. Methyl Dopa 250mg	-	-	-	-	Yes	Yes
R	**Antacids and other anti-ulcer**						
101	Tab. Aluminium Hydroxide 250mg + Magnesium Trisilicate 500mg	-	-	Yes	Yes	Yes	Yes
102	Cap. Omeprazole 20mg	-	-	Yes	Yes	Yes	Yes
103	Tab. Ranitidine 150mg.	-	-	Yes	Yes	Yes	Yes
104	Tab. Ranitidine 300mg.	-	-	Yes	Yes	Yes	Yes
105	Inj. Ranitidine 50mg/2ml.	-	-	-	-	Yes	Yes
S	**Anti-emetic drugs**						
106	Tab. Metoclopramide 10mg.	-	-	Yes	Yes	Yes	Yes
107	Syp. Metoclopramide 5mg/5ml.	-	-	Yes	Yes	Yes	Yes
108	Inj. Metoclopramide 5mg/ml.	-	-	Yes	Yes	Yes	Yes
109	Tab. Dimenhydrinate 50mg	-	-	Yes	Yes	Yes	Yes
110	Syp. Dimenhydrinate 12.5mg/4ml	-	-	Yes	Yes	Yes	Yes
111	Inj. Dimenhydrinate 10mg/2ml	-	-	Yes	Yes	Yes	Yes
T	**Antispasmodic drugs**						
112	Tab. Hyoscine butyl bromide 10 mg	-	-	Yes	Yes	Yes	Yes

S. No.	Class/Name	CMW	LHW	BHU	BHU 24/7	RHC	RHC+
113	Inj. Hyoscine butyl bromide 20mg/2ml	-	-	Yes	Yes	Yes	Yes
U	**Laxatives**						
114	Ispaghol Husk	-	-	Yes	Yes	Yes	Yes
115	Glycerine Suppository	-	-	Yes	Yes	Yes	Yes
116	Enema-small and large	-	-	Yes	Yes	Yes	Yes
V	**Antidiabetic**						
117	Tab. Metformin 500mg	-	-	Yes	Yes	Yes	Yes
118	Tab. Glibenclamide 5mg	-	-	Yes	Yes	Yes	Yes
119	Inj. Insulin 100IU/ml (regular)	-	-	Yes	Yes	Yes	Yes
120	Inj. Insulin 100 IU/ml (70:30)	-	-	Yes	Yes	Yes	Yes
W	**Ophthalmic preparation**						
121	Eye Drops Chloramphenicol 0.5%	-	-	Yes	Yes	Yes	Yes
122	Eye ointment Tetracycline 1%	-	-	Yes	Yes	Yes	Yes
123	Eye drops 10% Sulphacetamide	-	-	Yes	Yes	Yes	Yes
124	Eye ointment PolymyxinB+Bacitracin Zinc 10,000iu+500iu	Yes	-	Yes	Yes	Yes	Yes
X	**Ear drops**						
125	Ear Drops Chloramphenicol 1%	-	-	Yes	Yes	Yes	Yes
126	Ear drops Soda glycerine	-	-	Yes	Yes	Yes	Yes
127	Ear drops Chloramphenicol	-	-	Yes	Yes	Yes	Yes
128	Ear drops PolymyxinB+LignocaineHCl 10,000iu+ 50mg	-	-	Yes	Yes	Yes	Yes
Y	**Antiasthmatic drugs**						
129	Inj. Salbutamol 0.5mg/ml.	-	-	-	-	Yes	Yes
130	Salbutamol Inhalation 100mcg/dose for use in nebuliser	-	-	Yes	Yes	Yes	Yes
131	Tab. Salbutamol 2mg.	-	-	Yes	Yes	Yes	Yes
132	Tab. Salbutamol 4mg.	-	-	Yes	Yes	Yes	Yes
133	Syp. Salbutamol 2mg/5ml.	-	-	Yes	Yes	Yes	Yes
134	Inj. Aminophyllin 250mg	-	-	Yes	Yes	Yes	Yes
135	Tab. Theophyllin SR 200mg	-	-	Yes	Yes	Yes	Yes
136	Tab. Prednisolone 5mg	-	-	Yes	Yes	Yes	Yes
Z	**Antitussives**						
137	Cough Syrup-5ml: TriprolidineHCl. 1.25mg + Pseudoephedrine HCl . 30mg +Dextromethorphan HBr. 10mg.	-	-	Yes	Yes	Yes	Yes
AA	**Antidepressants/ Anxiolytics**						
138	Tab. Diazepam 2mg	-	-	Yes	Yes	Yes	Yes

S. No.	Class/Name	CMW	LHW	BHU	BHU 24/7	RHC	RHC+
139	Tab. Diazepam 5mg	-	-	-	-	Yes	Yes
140	Cap Fluoxetine 20mg	-	-	Yes	Yes	Yes	Yes
BB	**Vitamins and minerals**						
141	Tab. Calcium Carbonate	-	-	Yes	Yes	Yes	Yes
142	Tab Ascorbic Acid 100mg	-	-	Yes	Yes	Yes	Yes
143	Cap. Vitamin A 50,000 IU, 100,000 IU, 200,000 IU	-	-	Yes	Yes	Yes	Yes
144	Tab. Pyridoxin 50mg	-	-	Yes	Yes	Yes	Yes
145	Syp. Multivitamin	-	-	Yes	Yes	Yes	Yes
146	Inj. Vitamin K 10mg/1ml	-	-	Yes	Yes	Yes	Yes
147	Cap. Vitamin A&D	-	-	Yes	Yes	Yes	Yes
148	Syp Vitamin B		Yes				
CC	**Antidotes and other substances used in poisonings**						
149	Inj Naloxone 400mcg/ml	-	-	Yes	Yes	Yes	Yes
DD	**Disinfectants, antiseptics and anti-infectives**						
150	Sol Povidone-Iodine 10%	Yes	-	Yes	Yes	Yes	Yes
151	Surgical Scrub Povidone-Iodine 7.5%.	-	-	Yes	Yes	Yes	Yes
152	Sol Hydrogen peroxide 6%	-	-	Yes	Yes	Yes	Yes
153	Paint Gentian violet 0.5%, 1%,	-	-	Yes	Yes	Yes	Yes
154	Sol Methylated spirit			Yes	Yes	Yes	Yes
155	Sol 4% Chlorhexidine	Yes	-	Yes	Yes	Yes	Yes
EE	**Parenterals**						
156	Infusion Normal Saline.	Yes	-	Yes	Yes	Yes	Yes
157	Infusion Dextrose in water 5%.	Yes	-	Yes	Yes	Yes	Yes
158	Infusion Hartman's solution.	-	-	-	-	Yes	Yes
159	Infusion dextrose saline			Yes	Yes	Yes	Yes
160	Infusion Ringer Lactate	Yes	-	Yes	Yes	Yes	Yes
161	Inf Haemaccel 3%, 5%	-	-	-	-	-	Yes
FF	**Topical antibiotics/ antibacterials**						
162	Silver sulphadiazene 1% cream	-	-	Yes	Yes	Yes	Yes
163	Tetracycline Oint. 1%	-	-	Yes	Yes	Yes	Yes
164	Skin Ointment/Cream Miconazole Nitrate 2 %, Gentamicin 0.1%	-	-	-	-	Yes	Yes
165	Skin Ointment Polymyxin B Sulphate 10000 Units Zinc Bacitracin 500 Units.	-	Yes	-	-	Yes	Yes

S. No.	Class/Name	CMW	LHW	BHU	BHU 24/7	RHC	RHC+
GG	**Anesthetics**						
166	Inj. Lignocaine Solution 2%.	-	-	Yes	Yes	Yes	Yes
167	Inj. Lignocaine Solution 4%.	-	-	Yes	Yes	Yes	Yes
168	Inj. Ketamine HCl 50 mg/ml.	-	-	-	-	Yes	Yes
169	Oxygen	-	-	-	-	Yes	Yes
170	Inj Lidocaine 1%, 2%, 5% solution/2ml ampoule	-	-	-	-	-	Yes
				-	-		
HH	**Preoperative/postoperative medication**			-	-		
171	Inj. Diazepam Inj 2ml/5mg	-	-	Yes	Yes	Yes	Yes
172	Inj Atropine Sulphate 1mg (sulphate) in 1 ml ampule	-	-	Yes	Yes	Yes	Yes
173	Inj Tramadol 100mg	-	-	-	-	Yes	Yes
II	**Vaccines**			-	-		
174	Tetanus Toxoid	-	-	Yes	Yes	Yes	Yes
175	BCG vaccine	-	-	Yes	Yes	Yes	Yes
176	OPV vaccine	-	-	Yes	Yes	Yes	Yes
177	Pentavalent vaccine	-	-	Yes	Yes	Yes	Yes
178	Measles vaccine	-	-	Yes	Yes	Yes	Yes
179	Pneumococcal vaccine	-	-	Yes	Yes	Yes	Yes
JJ	**Other medical/surgical supplies**						
180	Cotton roll	Yes	Yes				
181	Absorbent Cotton Bandage BPC 6.5cmx6m.	-	Yes	Yes	Yes	Yes	Yes
182	Cotton Crepe Bandage	-	-	Yes	Yes	Yes	Yes
	Surgical Gauze BPC cloth	Yes	-	Yes	Yes	Yes	Yes
183							
184	Surgical Hypoallergenic Latex Free Breathable Paper Tape	Yes	-	-	-	Yes	Yes
185	Bandage Plaster of Paris BPC.	-	-	-	-	Yes	Yes
186	Gloves (polyethene)	-	-	-	-	Yes	Yes
187	Surgical Gloves (all sizes), sterilized	Yes	-	Yes	Yes	Yes	Yes
188	Utility Gloves (all sizes, non-sterilized))	Yes	-	Yes	Yes	Yes	Yes
189	Disposable Insulin Syringe 1ml with needle	-	-	Yes	Yes	Yes	Yes

S. No.	Class/Name	CMW	LHW	BHU	BHU 24/7	RHC	RHC+
190	Disposable Syringe 3ml with needle	-	-	Yes	Yes	Yes	Yes
191	Disposable syringe 5ml with needle	Yes	-	Yes	Yes	Yes	Yes
192	Disposable syringe 10ml with needle	-	-	Yes	Yes	Yes	Yes
193	IV Cannula with Injection Port and Integrated Closing Cone Size 20	-	-	Yes	Yes	Yes	Yes
194	IV Cannula with Injection Port and Integrated Closing Cone Size 24	-	-	Yes	Yes	Yes	Yes
195	IV set (Sterile)	Yes	-	Yes	Yes	Yes	Yes
196	Urine Bag (Adult) with no return valve	-	-	Yes	Yes	Yes	Yes
197	LP/Spinal Anaesthesia Needles (All Sizes)	-	-	-	-	-	Yes
198	Foley's Catheters Two way Silicon Coated (All Sizes)	Yes	-	Yes	Yes	Yes	Yes
199	Black Silk size 1, 30mm, 3/8 Circle Curved Cutting needle.	Yes	-	Yes	Yes	Yes	Yes
200	Poly Propylene size 1, 40mm, Straight Cutting needle,	-	-	Yes	Yes	Yes	Yes
201	Catgut Chromic Size 1, with 45/50mm Intestinal Eye less RB Needle,	Yes	-	Yes	Yes	Yes	Yes
202	Endotracheal Tubes without Cuff (Size 3.0, 3.5, 4.0, 4.5, 7.0 and 7.5)	-	-	-	-	Yes	Yes
203	Stomach Tube (Size 12, 14, 16 and 18)	-	-	Yes	Yes	Yes	Yes
204	Sterile water for injection	-	-	Yes	Yes	Yes	Yes
205	Xylocain Gel for catheterization	-	-	Yes	Yes	Yes	Yes

22. Scopes of work of providers

22.1. Scope of work of CMW

Community midwife certified by PNC is expected to perform duties in the community she has been selected from as per her Scope of Work. This SoW has been drawn from an agreed set of skills and competencies developed for community midwives in Pakistan that has been adapted from International Confederation of Midwives (ICM) competencies 2010.

The major areas of her SoW are: assessment and management of pregnant women and the newborn independently during the antenatal, natal, postnatal and neonatal period; identification of danger signs of antenatal, natal, postnatal and neonatal periods and refer timely; and health promotion through education, motivation and counseling. In order to accomplish her SoW she therefore has to be a good team member of the public health team and communicator. She should provide midwifery care in line with professional ethics respecting women's right to information, health and life. For provision of quality midwifery care, she should keep her educational and professional knowledge up-to-date by actively seeking support from appropriate sources.

CMWs detailed SOW is given below:

Pre-Natal

- Assess nutritional status of women and give appropriate advice and treatment towomen with micronutrient deficiency e.g. iron deficiency anaemia
- Describe signs of pregnancy
- Identify pregnant women in the community
- Persuade and register pregnant women to receive Ante-Natal Care (ANC).
- Manage normal pregnancy that includes managing minor discomforts and infections(Moniliasis, Trichomoniasis, Urinary Tract Infections) of pregnancy and refer toappropriate personnel/facility for immunization
- Identify danger signs of pregnancy and manage complications as per protocols thatinclude appropriate and timely referral.

- Assess for selected acute and chronic communicable (Tuberculosis, Malaria, HepatitisB and C, Gonorrhea, Chlamydia, Syphilis, Human Immunodeficiency Virus, Dengue)and non-communicable (hypertension, heart diseases, Diabetes Mellitus and Asthma)conditions that could put mother and baby at risk and manage these as per protocols.
- Guide and facilitate pregnant women and their families to get prepared for birthkeeping in view three delays.
- Educate pregnant women regarding: care during pregnancy including guidance ondiet, rest, hygiene, exercise, suitable clothing and sexual practices; breastfeeding andthe importance of colostrum and initiating breast feeding as early as possible afterdelivery; and birth spacing.

Intranatal

- Identify when a woman is in true labour
- Prepare the environment and materials to ensure clean and safe delivery followingthe infection prevention protocols
- Regularly monitor progression of labour by using partograph
- Provide midwifery care including physical and emotional support to the motherthroughout labour and delivery
- Identify danger signs in the first, second or third stages of labour, manage
- complication as per protocols that includes appropriate and timely referral

Post-natal

- Provide post natal care immediately and in first 6 weeks post partum, particularlyduring the first 28 days.
- Help mother initiate breast feeding and manage any feeding or breast relatedproblems.
- Identify danger signs of post-natal complications and manage these as per protocolsthat includes appropriate and timely referral
- Educate women regarding: self and baby care including guidance on diet, rest,hygiene, exercise, suitable clothing and sexual practices; exclusive breastfeedingand weaning; immunization of the newborn; and birth spacing
- Counsel for birth spacing and provide family planning supplies
- Register births and deaths.

Newborn care

- Provide immediate care to the newborn according to the protocol
- Manage minor disorders of the newborn.
- Identify danger signs in newborn and manage these as per protocols that includesappropriate and timely referral
- Educate mothers regarding care of the newborn including clean cord care, eye care,warmth, immunization, nutrition, breast feeding, clothing and hygiene.

Community Based Midwifery Care

- Assess her community using rapid assessment techniques
- Build linkages with existing health care providers, facilities, leaders and influentialpeople of the community
- Accurately collect record, interpret and use essential information and submit reportsmonthly to the Lady Health Supervisor (LHS).
- Regularly interact with health providers of public health system (Lady Health Worker,Lady Health Visitor, Women Medical Officer) for rapport building and two wayfeedback
- Function as an effective member of health systems team to ensure continuity of careto mother and newborn
- Practice midwifery within the legal and ethical framework

Miscellaneous

- Identify and manage infertility and sexually transmitted infections as per protocolsthat includes appropriate and timely referral
- Provide appropriate support to parents who have lost a baby
- Provide education and counseling to women on sexual health, ill effects of smoking,chewing tobacco, beetle nuts, alcohol abuse and illicit drugs and violence
- Actively seek support for improving midwifery related competencies.

22.2. Scope of work of LHW

The scope of work of LHW will be to provide PHC services to the communities in her catchment area. These include:

- Register all eligible couples for child spacing interventions i.e., a man married to a woman of age between 15-49 years, and maintain up to date information of eligible couples;
- Form women group in her area. She will arrange meetings of these women groups on fortnightly basis to discuss family planning, immunization, antenatal and post natal examination, growth monitoring of children, diarrhoea, ARI, iodized salt, tuberculosis, etc. Preferably one topic will be discussed in one meeting.
- Keep close liaison with influential women of her area including lady teachers, community midwives, traditional birth attendants and satisfied clients.
- Visit 7-10 households every day to ensure that all registered households are visited once every month; discuss importance of family planning, immunization, growth monitoring of children, iodized salt, personal hygiene, better nutrition, sanitation, antenatal and post natal examination, prevention from hepatitis and tuberculosis, etc.;
- Coordinate with community midwives and other skilled birth attendants and local health facilities for referrals.
- Register all pregnant women in her area and will conduct antenatal care as described in her training and will refer the women to CMW for antenatal care and preparations for delivery.
- Act as a liaison between formal health system and her community;
- Undertake nutritional interventions such as anemia control, growth monitoring, assessing common risk factors causing malnutrition and nutritional counselling. They will treat iron deficiency anemia among all women especially pregnant and lactating mothers as well as anaemic young children.
- Promote nutritional education with emphasis on early initiation of breastfeeding i.e., within one hour after birth, exclusive breastfeeding for

six months, adequate weaning practices, improving maternal nutrition and preventing macronutrient malnutrition.

- Establish vaccination post and to vaccinate children and women in coordination with area vaccinator.
- Participate in various campaigns for immunization against EPI target diseases e.g. polio, MNT, measles etc. in her catchment area only. The LHWs will also be involved in surveillance activities.
- Motivate and counsel clients for adoption and continuation of family planning methods, she will provide condoms, oral pills and administer injectable contraceptives (second dose), to eligible couples in the community and refer them to CMW and health facility.
- Refer clients needing IUD insertions, contraceptive surgery to the nearest Government health facility preferably to CMW, BHU and RHCs.
- Carry out prevention and treatment of common ailments e.g. diarrheal disease, acute respiratory infections, tuberculosis, intestinal parasites, malaria, primary eye care, scabies. First aid for injuries and other minor diseases using essential drugs. She will refer cases to nearest centres as per given guidelines. For this purpose a kit of certain inexpensive basic medicines will be provided to LHW.
- LHWs will also be involved in TB, AIDS, Hepatitis and Malaria prevention and control.
- Attend monthly continuing education session at her base facility to share progress regarding all activities carried out by her including the home visits, number of family planning acceptors by methods and stock position of contraceptives. She will also attend education session, submit her monthly report and collect one month supplies from the FLCF.
- LHWs will not be involved in any other activity without the prior permission from the DMU who will seek guidance from PMU if not already issued on case to case basis.

22.3. Scope of work of School Health Nutrition Supervisor (SHNs)[19]

- SHNS will be an outreach person, based at the BHU.
- He / she would be working under the supervision & guidance of Health Officer I/C BHU.
- He/she will implement the School Health & Nutrition Program in the catchment area of the BHU.
- He/she should have complete list and record of Primary & Elementary schools in the area of jurisdiction.
- He/she will be responsible to train the school teacher for health screening of the students. SHNS along with teachers, will also be conducting health screening in the schools regularly.
- SHNS will also train the LHVs/female paramedics of the BHU, for health screening of the girls students. They will accompany the male SHNS for girls school at the time of half yearly screening of students.
- The SHNS should be working in the field, at least three days a week. All office work will be completed in the remaining days, including the management of referred patients/students. He/she would try to arrange appointments of the students with the doctors in his/her presence.
- Schools falling in the catchment area and the visit program of SHNS duly approved by the Health Officer I/C should be displayed in the BHU.
- SHNS will establish communication channels with the schools, coordinating his/her activities with them and duly informing in advance the visit schedule.
- SHNS should be present in each school at the time of screening. The time table should be prepared in a manner that screening is not done in two schools on the same day.
- SHNS will submit monthly report and post screening report on prescribed format to the Health Officers for comments and signature. The screening report should be submitted not later than two months after screening.

[19] Roles and responsibilities of government functionaries. School health program. Punjab Health Sector Reforms Program. Government of the Punjab.

- After signature of Health Officer, SHNS will submit these reports to the Program Director, DHDC. Where there is no PD DHDC, the report will be submitted to DO(H).
- In coordination with the schools, SHNS would impart health education, to create awareness amongst teachers & students about common health problems.
- He/she would ensure that the students referred for medical attention by the teachers are seen by concerned health professionals.
- He/she would provide the feed back to the concerned teachers about the outcome of referral.
- SHNS will collect the referred slip from the teachers after Medical Officer has given the advice and the slip is signed by the parents.
- The SHNS will be responsible for keeping the record of all the students referred to the medical facility i.e. BHU/RHC.
- The SHNS will also keep a close liaison with parents of the referred children and inform them of the doctor's advice.
- In case of referral to the RHC he/she will coordinate the visit of students with the doctors in the health facility and ensure treatment at RHCs.
- SHNS will attend the meetings of School Councils and brief the members about his / her activities.
- These responsibilities of SHNS are only with respect to the School Health Program. They will be assigned roles and responsibilities separately for other activities as per their job description.

22.4. Scope of work of Sanitary Inspector [20]

- Sanitary inspector will be an outreach team member of the BHU/RHC.
- He will move in the villages, with fellow members of the out reach team according to the pre announced master plan.

[20] Adapted from the Training Manual for MOs and WMOs (July 2013), Dept of Health, Punjab

- He shall, along with the fellow out reach workers, establish an active link with the village based health workers/traditional birth attendants and village activists, interested in human welfare and community development.
- He shall conduct sessions on health and nutrition education, sanitation practice and clean environment including use of latrines, clean water for drinking and washing and safe disposal of excreta. In case of non compliance and when the individual/family action, in this regard, is hazardous to the environment and community, the sanitary inspector shall report in writing to the Medical Office/Health Officer (BHU/RHC) for legal action by the DO(H).
- He shall himsleof and with the help of sanitary patrol (where posted) conduct campaign to kill stray dogs, flies, insects, etc. in the villages
- He shall chlorinate/disinfect the wells and pounds of drinking water.
- He shall, with the help of the village based health workers, TBAs and local activitsts, collect information on the epidemicity or endemicity of diseases in areas under his jurisdiction. Upon finding such cases he shall immediately inform the MO of his health facility and at the same time, take appropriate action with the assistance of fellow out reach workers to combat such menaces.
- He shall keep the diary of his movements and daily activities counter signed by the MO in charge of his respective health facility.
- He shall maintain and keep stock of various items in his use, updated in all respects.
- He shall collect sample of food items, stocked or displayed for sale, suspected of adulteration. The MO incharge of the health facility shall then dispatch such sample for analysis by the public analyst and subsequent action, if required, by the DO(H).

22.5. Scope of work of CDC Supervisor [21]

- CDC Supervisor will be an outreach team member of the BHU/RHC.

[21] Adapted from the Training Manual for MOs and WMOs (July 2013), Dept of Health, Punjab

- He will move in the villages, with fellow members of the out reach team according to the pre announced master plan.
- He shall be responsible for numbering the houses (geographical renaissance) and keep record of the number of rooms in the houses.
- He shall, along with the fellow out reach workers, establish an active link with the village based health workers/traditional birth attendants and village activists, interested in human welfare and community development.
- He shall get information from the village based health workers and TBAs about the patients in their locality suffering from fever and other communicable diseases.
- He shall visit and assess such patients. In case of suspected malaria, he shall:
    - Prepare the thick blood slides for examination of malarial parasite and
    - Administer radical anti malarial treatment to the malaria positive cases.
- However, in case of long standing low grade fever i.e. suspected TB, he shall collect sputum for AFB detection at BHU/RHC by the microscopist/medical technician.
- He shall arrange spray of insecticides on pons, drainage channels and other sites suspected of mosquito breeding.
- He shall conduct and ensure that the insecticidal spray is done in the area according to the instruction by the tehsil supervisors.
- He shall maintain and keep the instruments, insecticides, stock register, etc. upto date and periodically counter signed by the MO in charge of the health facility.
- He shall maintain a diary of his movement and activities counter signed by the MO in charge on daily basis
- He shall assist and cooperate with the fellow out reach workers and other health workers in his area
- He shall ensure that the items on stock with him are consumed before expiry and any situation otherwise is brought in the notice of the MO in charge immediately.
- He shall conduct health education sessions and deliver talks to the individuals and communities on how to prevent and control communicable diseases in their localities.

22.6. Scope of work of Vaccinator

- Vaccinator will be an outreach person, based at the BHU/RHC.
- He would be working under the supervision & guidance of Health Officer I/C BHU.
- He will implement the EPI Program in the catchment area of the BHU.
- He should have complete list and record of children under one year of age in his catchment area and ensure that immunization is complete before reaching one year of age for each of the registered child
- He will perform vaccination of children and pregnant women in the center and in the field; in his catchment area
- He will maintain the list of children who are fully immunized, those who are up to date with their immunization schedules, those who are due and those who are defaulter.
- He will work in liaison with the LHWs and CMWs for follow up with the defaulter children and complete their immunization course.
- He will motivate people during outreach vaccination visits to the villages
- He will spend at least five days of the week in the field and one day at the BHU for the weekly immunization services at the BHU.
- The vaccinator will maintain all immunization record on the permanent immunization register. He will also maintain the daily register and keep both of the registers up to date.
- He will maintain stock register and accounting of vaccines, medicines, refrigerator, vaccine carrier, ice cubes, radial thermometer, etc.
- He will ensure that the equipment is in working order and that they are not used for purposes other than the EPI program.
- He will assess monthly requirements of the center and ensure that sufficient stock of vaccines is always available. He shall keep the vaccine and other items of stock at optimal conditions and ensure that the items are consumed before their expiry and the situation is brought to the notice of the MO incharge in case of any disruption.
- He will attend any trainings / refresher courses planned for the vaccinators by the provincial health department or district health management team.

- He will prepare monthly EPI disease surveillance reports
- He will prepare outreach program at the start of each month and display it in the center. He will send a copy of it for information to the DSV through proper channel
- He will display charts, maps, graphs and tables in the center showing the area and monthly/annual progress reports of the center.
- He will submit the monthly report containing vaccine consumption and immunization report on prescribed format to the Health officer I/C BHU or the SMO RHC for onward submission to the office of the EDOH and the provincial EPI Program.

22.7. Scope of work of Sanitray Patrol

- Sanitary Patrol will be an outreach team member of the BHU/RHC.
- He will move in the villages, with fellow members of the out reach team according to the pre announced master plan.
- He shall, along with the fellow out reach workers, establish an active link with the village based health workers/traditional birth attendants and village activists, interested in human welfare and community development.
- He shall chlorinate/disinfect the wells, pounds and tanks of drinking water
- He shall drive a campaign to kill stray dogs
- He shall assist and motivate people for environmental sanitation, clean water for drinking and washing, building and keeping the VIP latrines clean and appropriate disposal of excreta
- He collects samples of food items; stored or displayed for sale, suspected of adulteration and carry these to the laboratory/pubic analyst for analysis under a written authority of the medical officer incharge of the BHU/RHC
- He shall report, for legal action, to the MO regarding health hazard environmental factors in the area of his jurisdiction
- He shall keep diary of all his activities performed as member of the out reach team, for counter signature by the sanitary inspector / MO incharge

- He shall keep the stock and items on his stock well maintained and functional
- He shall carry out the equipment in use by the out reach team and assist them in performance of their duties.

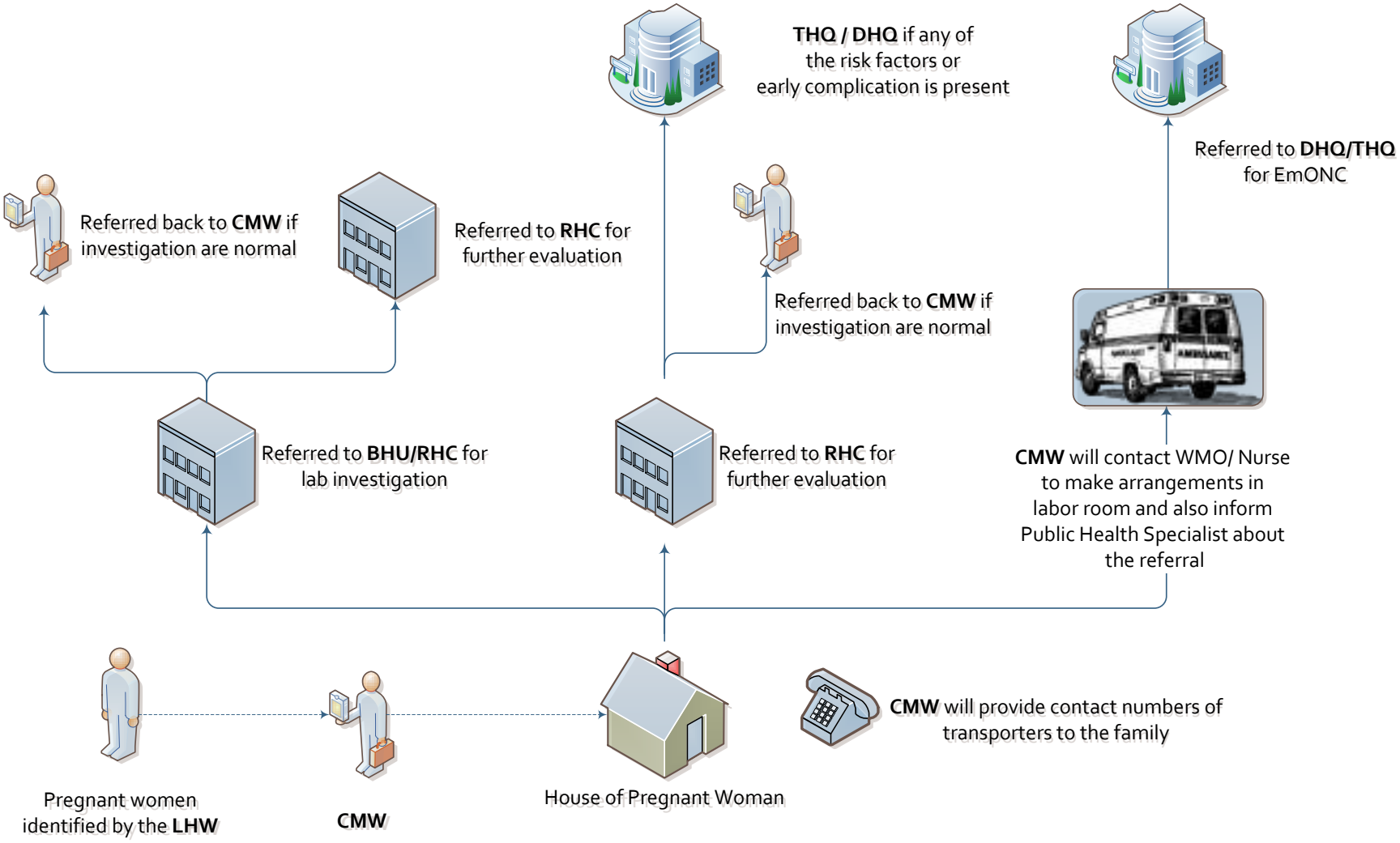
22.8. Scope of work of Lady Health Supervisor [22]

- She will be responsible for supervision of all LHWs (15-20) and CMWs (3-5) attached to her respective health facility. She will provide only administrative supervision to the CMWs in her catchment areas while both administrative and technical supervision to the LHWs.
- She will attend the refresher programme arranged by the programme management on managing Lady Health Workers and Community Midwifes for their performance monitoring.
- She will provide performance feedback to her LHWs and CMWs using the prescribed checklists; having visited the LHWs and CMWs and their households (with and without them) at least once a month.
- She will carry out extensive supervision and monitoring of the field activities of LHWs and CMWs. She should visit the Health House of LHWs under her supervision at least once a month. She should also visit the Work Station of CMWs under her supervision at least once a month.
- She will provide supportive supervision and on job training to LHWs and CMWs under her supervision and provide verbal and written feedback to them.
- She may act as trainer in the refresher training as and when required by the district program management unit.
- She will attend the continued education session in all the relevant health facilities.
- She will carry out verbal Autopsy of Infant Death reported by her LHWs and CMWs.
- She will assist the district management unit in the preliminary scanning for verification of LHWs and CMWs.

[22] Adapted and updated from PC-1 LHWs Program

- She will attend the monthly Maternal Mortality conferences at district level.
- She will liaise between district and the health facility for the effective coordination of the activities of the program.
- She will execute the above duties and functions under the supervision and technical guidance of district management unit, FPO and health facility in charge.
- She will ensure regular maintenance of vehicle and its movement register.
- She will compile and prepare the facility based monthly report of the LHWs and CMWs and submit it to the district management unit.

Figure 5: Referral Mechanism for CMWs[23]



[23] Adapted from CMW Deployment Guidelines. TRF. 2011. Islamabad.

23. Role of Health Managers in Implementation of EPHS

The implementation of EPHS is dependent on effective role of health managers at both provincial and district levels.

23.1. Role of Provincial Health Mangers

The office of the Director General Health Services, Punjab should take the lead role in implementation of the EPHS across the province by

1. In depth orientation of the EDOs (H) and DHOs on the EPHS document and steps needed to be taken at district level to ensure effective implementation of the essential package of services
2. Training need assessment at provincial level to develop a pool of provincial master trainers to conduct refresher trainings on various services described in the EPHS
3. Capacity building of the DHMT
4. Strengthening of the existing monitoring and evaluation system to track the implementation of EPHS at health facility and community level
5. Annual review of implementation status of the EPHS and revision of EPHS if required
6. Monitoring of the health facilities and field workers using the checklists derived from the services described in the EPHS and the standards set in the MSDS document

23.2. Role of District Health Managers

The office of the EDO Health of each district should take the lead role in implementation of the EPHS at each health service delivery point (RHC+, RHC, BHU+, BHU, Vaccinators, CMWs, and LHWs) by:

1. Orientation of all members of DHMT on the EPHS document
2. Training need assessment within the district to identify gaps in the capacity of service providers at each level
3. Development of a pool of district master trainers who would conduct further trainings of service providers within the district on a regular basis
4. Development of a capacity building plan for the service providers, ensuring refresher trainings of the staff at appropriate intervals
5. Monitoring of the health facilities and field workers using the checklists derived from the services described in the EPHS and the standards set in the MSDS document

24. COST ESTIMATES SUMMARY

In order to estimate the overall cost implications of implementing the EPHS at BHU and RHC, an estimation exercise was carried out. This exercise used the estimates that had been already developed under unit costing for medicines, vaccines, supplies and lab investigations. Standard staffing and equipment were taken as proposed under the EPHS for each of the facility. For detailed note on methodology and other technical details please refer to the full costing report.

24.1.COST ESTIMATES: RHC

Table below presents the cost estimates for RHC.

Table 34: Cost Estimates RHC

Catchment Population	40,000	75,000	125,000	175,000	225,000
Expenditure Categories	PKR	PKR	PKR	PKR	PKR
Salaries	23,753,502	23,753,502	23,753,502	23,753,502	23,753,502
Medicines, Supplies, Lab	927,883	1,739,781	2,899,635	4,059,489	5,219,343
Immunisation	700,881	1,314,153	2,190,254	3,066,356	3,942,458
Operating Expenditure	2,830,115	2,872,115	2,932,115	2,992,115	3,052,115
Total	**28,212,381**	**29,679,550**	**31,775,506**	**33,871,462**	**35,967,418**
Sensitivity: +7.5%	**30,328,310**	**31,905,517**	**34,158,669**	**36,411,822**	**38,664,974**
Sensitivity: -7.5%	**26,096,453**	**27,453,584**	**29,392,343**	**31,331,102**	**33,269,862**

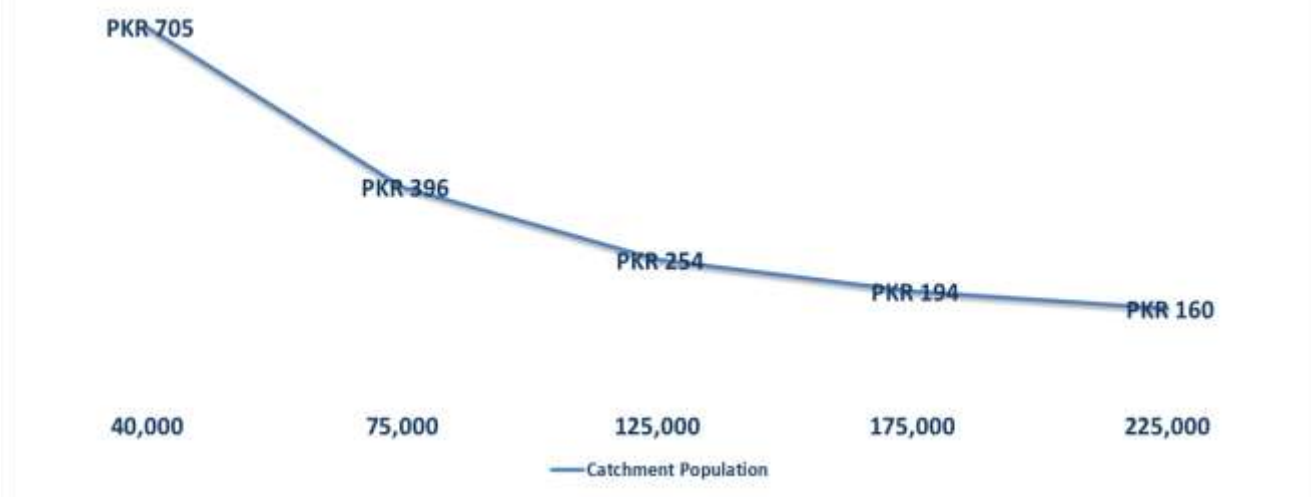
Cost estimates were also analyzed by fixed and variable costs, in order to determine the behaviour of overall costs with the increase in catchment population. Table below presents the breakdown of overall cost by fixed and variable.

Table 35: Cost Estimates by Variable and Fixed Cost – RHC

Catchment Population	40,000	75,000	125,000	175,000	225,000
Variable Cost (PKR)	1,676,765	3,143,934	5,239,890	7,335,846	9,431,801
Fixed Cost (PKR)	26,535,617	26,535,617	26,535,617	26,535,617	26,535,617

Figure below presents the total cost per capita, which is showing a decline with the increase in catchment population.

Figure *6*: Total Cost Per Capita – RHC



24.2.COST ESTIMATES: BHU

Table below presents the cost estimates for BHU.

Table 36: Cost Estimates BHU

Catchment Population	10,000	15,000	20,000	25,000
Expenditure Categories	**PKR**	**PKR**	**PKR**	**PKR**
Salaries	4,837,116	4,837,116	4,837,116	4,837,116
Medicines, Supplies, Lab	333,009	499,513	666,017	832,522
Immunisation	438,051	657,076	876,102	1,095,127
Operating Expenditure	627,986	633,986	639,986	645,986
Total	**6,236,161**	**6,627,691**	**7,019,221**	**7,410,751**
Sensitivity: +7.5%	**6,703,874**	**7,124,768**	**7,545,663**	**7,966,557**
Sensitivity: -7.5%	**5,768,449**	**6,130,614**	**6,492,779**	**6,854,945**

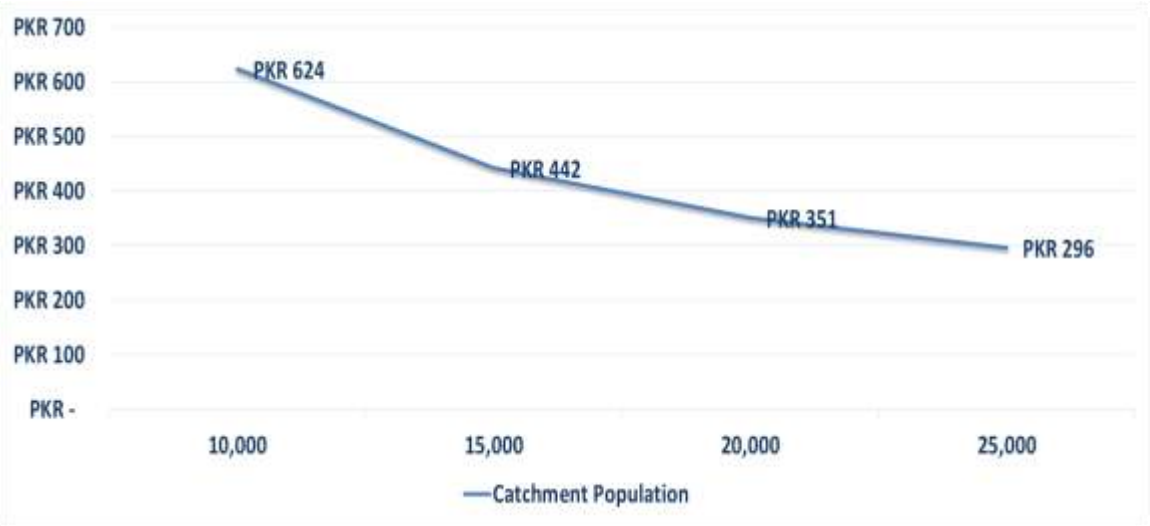
Cost estimates were also analyzed by fixed and variable costs, in order to determine the behaviour of overall costs with the increase in catchment population. Table below presents the breakdown of overall cost by fixed and variable.

Table 37: Cost Estimates by Variable and Fixed Cost – BHU

Catchment Population	10,000	15,000	20,000	25,000
Variable Cost (PKR)	783,060	1,174,589	1,566,119	1,957,649
Fixed Cost (PKR)	5,453,102	5,453,102	5,453,102	5,453,102

Figure below presents the total cost per capita, which is showing a decline with the increase in catchment population.

Figure 7: Total Cost Per Capita – BHU



24.3.UNIT COST OF SERVICES

This section presents the unit cost of services as defined under the EPHS at RHC+, RHC, BHU 24h, BHU, LHW and CMW. These estimates have been prepared in accordance with the methodology as defined under section **Error! Reference source not found.** of the osting report. Table below presents the services for which unit cost exercise was carried. Service with (✘)symbol means that the particular service is not being provided (as per EPHS) at that level of health care.

Table 38: Services Included for Unit Costing

Services	CMW	LHW	BHU	BHU 24h	RHC	RHC+
Antenatal Care	✓	✓	✓	✓	✓	✓
Delivery Care	✓	×	✓	✓	✓	✓
Caesarian Section	×	×	×	×	×	✓
Postpartum Care	✓	✓	✓	✓	✓	✓
Postpartum Hemorrhage	×	×	×	×	×	✓
Newborn Care	✓	×	✓	✓	✓	✓
Neonatal Complications	×	×	×	×	×	✓
Child: Pneumonia	×	×	✓	✓	✓	✓
Child: Wheeze	×	×	✓	✓	✓	✓
Child: Ear infection	×	×	✓	✓	✓	✓
Child: Diarrhea (no dehydration)	✓	✓	✓	✓	✓	✓
Child: Diarrhea (some dehydration)	×	✓	✓	✓	✓	✓
Child: Dysentery	×	×	✓	✓	✓	✓
Child: Fever	×	✓	✓	✓	✓	✓
Fully Immunised Child	×	✓	✓	✓	✓	✓
Family Planning: Condoms	×	✓	✓	✓	✓	✓
Family Planning: Pills	×	✓	✓	✓	✓	✓
Family Planning: Injection	×	✓	✓	✓	✓	✓
Family Planning: IUD	×	×	✓	✓	✓	✓
Family Planning: Female Sterilisation	×	×	×	×	×	✓
Common cold and cough	×	✓	✓	✓	✓	✓
Acute Bronchitis	×	×	✓	✓	✓	✓
Pneumonia	×	×	✓	✓	✓	✓
GI Problems	×	×	✓	✓	✓	✓
TB Diagnosis	×	×	✓	✓	✓	✓
TB Treatment	×	×	✓	✓	✓	✓
Malaria	×	✓	✓	✓	✓	✓
Typhoid	×	×	×	×	✓	✓
Sexually Transmitted Infections	×	×	✓	✓	✓	✓
Trachoma	×	×	✓	✓	✓	✓
Urinary Tract Infection	×	×	✓	✓	✓	✓
Vitamin A Supplementation (children)	×	×	✓	✓	✓	✓

Table below presents the summary of unit costs of services as detailed in **Error! Reference ource not found.**5.

Table 39: Summary of Unit Costs

Services	PKR					
	CMW	LHW	BHU	BHU 24h	RHC	RHC+
Antenatal Care	526	1,085	1,398	1,726	1,457	1,597
Delivery Care	310	-	1,458	1,962	1,479	1,633
Caesarian Section	-	-	-	-	-	12,431
Postpartum Care	245	539	657	839	663	743
Postpartum Hemorrhage	-	-	-	-	-	11,411
Newborn Care	-	-	413	973	418	470
Neonatal Complications	-	-	-	-	-	7,047
Child: Pneumonia	-	-	350	468	354	405
Child: Wheeze	-	-	164	228	166	194
Child: Ear infection	-	-	221	285	223	251
Child: Diarrhea (no dehydration)	37	156	182	238	184	208
Child: Diarrhea (some dehydration)	-	203	222	278	224	248
Child: Dysentery	-	-	183	248	186	214
Child: Fever	38	118	207	287	210	245
Fully Immunised Child	-	4,720	3,878	3,957	3,880	3,876
Family Planning: Condoms	129	201	215	259	216	236
Family Planning: Pills	129	244	260	325	263	291
Family Planning: Injection	94	209	249	321	252	283
Family Planning: IUD	-	-	253	337	256	292
Family Planning: Female Sterilisation	-	-	-	-	-	1,904
Common cold and cough	-	146	121	167	122	143
Acute Bronchitis	-	-	121	167	122	143
Pneumonia	-	-	312	412	316	359
GI Problems	-	-	173	238	176	204
TB Diagnosis	-	-	205	281	251	283
TB Treatment	-	-	4,741	5,182	4,805	4,995
Malaria	-	-	481	571	484	523
Typhoid	-	-	389	529	482	543
Sexually Transmitted Infections	-	-	355	454	369	412
Trachoma	-	-	516	598	519	554
Urinary Tract Infection	-	-	231	293	233	260
Vitamin A Supplementation (children)	-	-	31	37	31	31

FOR DETAILS ON THE COSTING METHODOLOGY AND INDEPTH ANALYSIS OF UNIT COSTS PLEASE REFER TO THE FULL COSTING REPORT.

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