

# *REFERRAL STRATEGY AND GUIDELINES FOR EMERGENCY OBESTETRIC AND NEWBORN CARE*

*Developed Under National Health Support Program,  
Health Department, Government of Sindh.  
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## Background

The Sindh Health Support Program (SHSP) is a critical provincial initiative aimed at bolstering the Primary Health Care (PHC) systems and advancing the cause of universal health coverage (UHC) in the Sindh region. This program is an integral part of the broader National Health Support Program, financed by the World Bank and various donor organizations, which collaborates with the Ministry of National Health Services Regulation and Coordination (MNHSR&C) and the Provincial Governments of KP, Punjab, and Sindh to enhance Health Systems Performance and, consequently, health and nutrition outcomes. It operates on a three-fold approach:

- The first set of reforms focuses on optimizing PHC to deliver High-quality Basic Package (BP) of EPHS., encompassing both demand generation and supply-side readiness in terms of facilities, human resources, and referral systems.
- The second set of reforms centres on establishing integrated approaches to PHC delivery, including financing, human resources management, and information systems.
- The third set of reforms addresses the issue of inadequate financing for PHC and strengthens Public Financial Management (PFM).

Within this framework, there are a total of 9 Disbursement Linked Indicators (DLIs), each consisting of yearly outputs known as Disbursement Linked Results (DLRs). This project will deal with **DLI-3, which centres on ensuring timely and appropriate referrals between PHC facilities and higher levels of care, particularly in lagging areas.** The DLRs associated with DLI-3 include:

- **Year 1:** Development of referral guidelines and inclusion of relevant indicators in the District Health Information System 2 (DHIS2).
- **Year 3:** Establishment of a referral system in up to 30% of PHC facilities, with the capability to access Comprehensive Emergency Obstetric and New-born Care (CEmONC), of which 20% are in lagging areas.

## Maternal & Neonatal Mortality

Maternal & Neonatal mortality is an important indicator of a nation's development and has been the focus of attention for public health since 1980's. The safe motherhood initiative by the World Health Organization (WHO) in 1987 identified a few strategies to reduce these deaths which included family planning access, access to antenatal care and trained birth attendants along with the importance of emergency obstetric care. In 2005, the WHO report on "Make every mother every child count" highlighted the importance of continuum of care from pre-pregnancy to childhood and led to the formation of Partnership for Maternal, Newborn and Child health (MNCH).

Despite all the various forms of health services the health indicators of Pakistan are less encouraging. Facility-based childbirth has been identified as a key strategy to improve the safety of intrapartum care, particularly in low- and middle-resource settings. In a study "A prospective study of maternal, fetal and neonatal deaths in low- and middle-income countries" it has been concluded that "most maternal, fetal and neonatal deaths occurred at or around delivery and were attributed to preventable causes. Maternal death increased the risk of perinatal and neonatal death. Improving obstetric and neonatal care around the time of birth offers the greatest chance of reducing mortality".<sup>1</sup>. Although progress has been made towards reduction in maternal and neonatal mortality and morbidity, in many resources limited countries, poorly staffed and equipped primary health facilities and non-functional referral systems have been recognized as constraints to improving maternal and newborn health outcomes.

Considering the significance of issue, under the first set of reforms under NHSP, these guidelines concentrate on the supply- side readiness for establishing a streamlined referral system focusing Emergency Obstetric & Newborn Care across the province, with a particular emphasis on lagging districts. These guidelines are based on WHO and National Guidelines for management of EmONC so this document will be updated on

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<sup>1</sup> A prospective study of maternal, fetal and neonatal deaths in low- and middle-income countries. Bull World Health Organ. 2014 Aug 1;92(8):605-12. doi: 10.2471/BLT.13.127464. Epub 2014 Jun 5. PMID: 25177075; PMCID: PMC4147405.

regular basis keeping in view the M&E outcomes of referral system and updated National EmONC Framework.

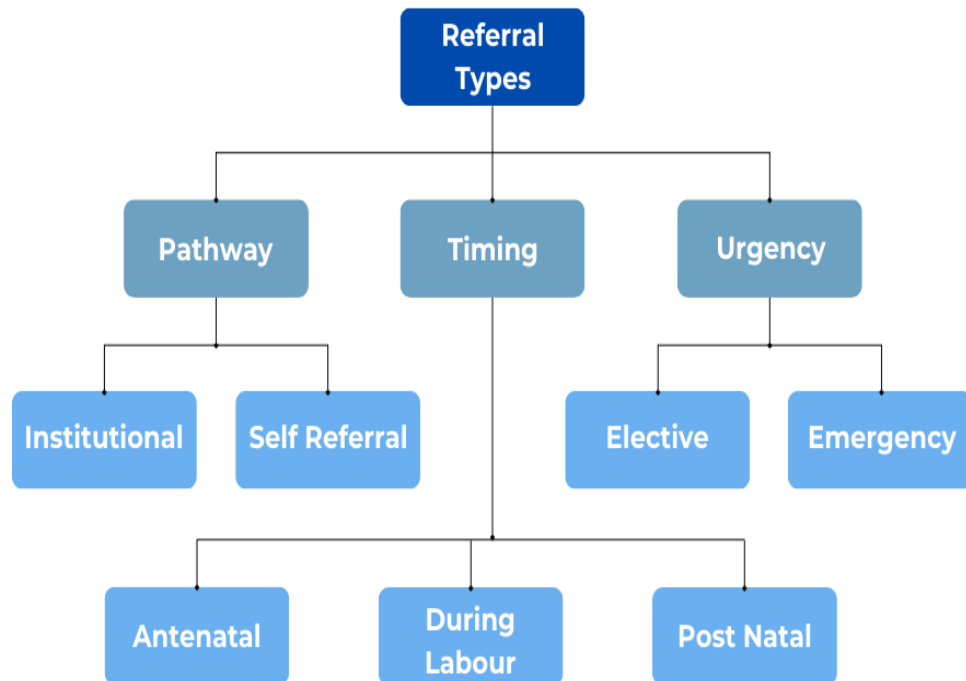
### **Referral System and its importance**

Referral system is defined as a system of transferring cases which are beyond the technical competence of one infrastructure to a higher-level infrastructure/ institution having technical competency and all other resources to provide desired health services supported by an organizational structure for coordinating, linking and transferring responsibilities of care.

The referral system stands as a fundamental element within healthcare delivery systems, playing a pivotal role in antenatal care and the childbirth process. It facilitates access to emergency obstetric & newborn care, as well as antenatal and delivery services in primary-level facilities. Referral, in this context, signifies the recommendation of a healthcare provider at one tier of the health system—often one with limited resources like medications, equipment, and skilled professionals—to seek assistance from a better-resourced facility of a similar or higher level. This collaborative approach is aimed at enhancing the management of clinical conditions.

Typically, referrals involve upward movements, directing individuals to higher institutions with more advanced capabilities. In cases of obstetric and newborn emergencies, the referral system becomes indispensable due to the unpredictable nature of pregnancy complications and the potential for rapid progression, creating a situation where timely intervention is essential to safeguard lives.

Pregnancy and childbirth inherently pose risks to both the mother and the newborn. To mitigate potential complications and unfavorable outcomes, it is essential to conduct referral services promptly and at the right time. Timely referrals can significantly contribute to positive outcomes. The categorization of referrals in the context of pregnancy and childbirth is based on various factors, including the pathway (whether institutional or self-referral), the timing of the referral (whether antenatal, during labor, or postnatal), and the urgency of the referral (whether elective or emergency).



## Importance

A robust referral system is crucial in primary health care (PHC) to reduce maternal and neonatal mortality and morbidity. It ensures that pregnant women and newborns receive timely and appropriate care, especially in emergencies. By efficiently linking primary health facilities with higher-level care centers, complications during pregnancy, childbirth, and the postpartum period can be quickly addressed, preventing life-threatening situations. The referral system also helps in the early detection of risks and facilitates the transfer of patients to specialized care, thus improving outcomes and reducing the overall burden on the health system. In essence, an effective referral system is a key component in safeguarding the lives of mothers and their newborns.

## Referral Strategy

The Government of Sindh is implementing a robust, urgent, and necessity-driven patient sensitive referral care system for both comprehensive emergency and non-emergency cases. This initiative aims to address the challenges faced at facilities where only a midwife, lady health visitor and other healthcare provider is available during evening and

night shifts, operating with limited resources, infrastructure, and competency. These constraints often create obstacles in effectively managing emergency situations.

Through the establishment of a well-coordinated and efficiently managed referral system, we anticipate a significant reduction in maternal & newborn deaths caused by medical complications requiring emergency referral. This system will ensure timely and appropriate care by facilitating the transfer of patients from facilities with restricted capabilities to more advanced healthcare settings, thus enhancing the overall maternal healthcare outcomes in the region.

Moreover, the Sindh government's policy of providing free referral services for emergency transfers from community to facility and facility to higher level health facilities through public sector ambulance services is significantly reducing out-of-pocket expenditures for families, improving healthcare access, and alleviating financial burdens, particularly for underprivileged communities.

## **Levels of Healthcare Referral System**

### ***Community Level Health Care***

The LHWs and CMWs forms mainstream of continuum of care at community level for strengthening mother-child dyad and constitute initial part of pillar of referral through the life cycle approach that is right from household to health facility to be followed for pregnancy, ante-natal, child birth, post-natal care, family planning and child care as per guidelines enunciated in UN Newborn – an action plan to reach every child and every mother. The CMWs enlists the danger signs during pregnancy, do's and don'ts and enlist the most appropriate facilities for referral for different situations and needs. LHWs refer cases to Birth Station of CMWs or MCH Center or BHU, whichever is nearest.

### ***Primary Health Care Level***

The MCH centers, Government Dispensaries, Basic Health Units and Rural Health Centers constitute progressive infrastructure of primary health care services. Basic healthcare services are being provided at primary health centers, including preventive care, antenatal care, natal and postnatal care, child health services, first aid services and



treatment of common illnesses, whereas BHU+ and RHCs provide 24/7 Basic Emergency Obstetric & Newborn Care BEmONC services. PHC facilities often serve both as the first or filtering point for referral to more appropriate Health Facility for major health problems for patients. In practice, the MCH center and BHU & MCHC provides first level referral to patients referred by LHWs or who present at their own. BHU & MCHC refers patients to higher level facilities (RHC/ THQH/DHQH) as and when necessary.

### ***First Level Hospitals / Secondary Health Care Level***

Secondary / First Level Hospital (FLH) including Taluka Headquarter Hospitals (THQH) and District Headquarter Hospitals (DHQH) offer a broader range of services compared to PHCs. They provide more specialized care, including surgeries, diagnostic services, and management of moderate to severe medical conditions which include Comprehensive Emergency Obstetric & Newborn Care CEmONC.

### ***Tertiary Health Care Level***

Tertiary Healthcare Facilities including Teaching Hospitals and Specialized Hospitals are major referral centers equipped with specialized medical services, advanced diagnostic facilities, and a higher level of expertise. Teaching hospitals are often associated with medical universities and are involved in medical education and research.

## **Referral Pathways**

### ***Community to Facility***

Clients & Patients with danger signs are referred to nearby facility for proper case management or services. Community referrals not always for identification of complications but also seeking consultation in normal checkups for ANC, PNC, Newborn, FP, Diagnostics like Basic laboratory tests and routine ultrasonography etc.

### ***Primary to FLH / Secondary***

Patients with complications not dealt at primary healthcare level and are more complex health issues with danger signs identified through Labour Care Guide (LCG) are referred from primary health centers to Taluka and District headquarter hospitals for further evaluation and treatment. (Annex: A – Referral Matrix).

### ***FLH / Secondary to Tertiary***

Cases requiring specialized care or advanced medical interventions like hysterectomy, abruptio placentae, eclampsia, ruptured uterus, ruptured bladder, fistula, maternal sepsis, Respiratory Distress Syndrome (RDS), congenital anomalies, severe disease, meningitis, cervical cancer, vasectomy, etc. are referred from Taluka/ District headquarter hospitals to tertiary healthcare facilities.

## **Obstetric and Newborn Referral System**

### ***Preventive Obstetrics & Newborn Care***

Provided at community level (LHWs & CMWs) for community-based distribution of Iron Folic Acid, Advance antenatal distribution of misoprostol, danger signs in antepartum, postpartum & newborn danger signs

### ***Basic Obstetric & Newborn Care***

Provided at primary health centers with routine antenatal care, normal deliveries, postnatal care and immunization at MCH, GDs & BHU,

### ***Basic Emergency Obstetric & Newborn Care***

All seven signal functions of basic emergency obstetric & newborn emergency care (BEmONC) are mandated to be provided 24/7 at BHU+ and RHCs which include:

1. Use of Uterotonics,
2. Use of Parenteral anticonvulsants (Magnesium Sulphate),
3. Use of parenteral Antibiotics,
4. Manual removal of Placenta,
5. Manual vacuum aspiration (MVA) of retained products of conception,
6. Assisted vaginal delivery &
7. Newborn resuscitation of asphyxiated baby through helping babies breathe (HBB).

### ***Comprehensive Emergency Obstetric and Neonatal Care (CEmONC)***

District Headquarter and Taluka Headquarter Hospitals are mandated and equipped with

the resources to handle 24/7 CEmONC services which include cesarian section and blood transfusion in addition to seven signal functions of BEmONC

### **Specialized Obstetric Care**

Tertiary hospitals may provide specialized care for high-risk pregnancies, pregnancy with cardiac disease complicated deliveries, and neonatal intensive care with CEPAP facility & newborn ventilators etc.

## Referral System

Effective communication and coordination between different levels of the healthcare system are crucial for ensuring smooth referrals, timely interventions, and optimal patient outcomes. This coordination involves sharing patient information, ensuring the availability of necessary resources during referrals like Labour Care Guide (LCG) for labouring women, filled Referral form, and fostering a collaborative approach among healthcare providers at various levels.

- ☐ In an ideal setup **Primary health care activities** in community are supported by **successive level of referrals**
- ☐ In our system, referral services are provided at two levels.

### ***Horizontal referral***

within same level of care from one PHC like CMW, GD, MCHC & BHU to another BHU like for Laboratory services, ultrasound services, TB services or any other.

### ***Vertical referral***

from PHC to FLH level OR tertiary care level facility. These are from lower-level services to higher level services.

Sindh took the lead to develop localized Essential Package of Health Services (EPHS) to actualize UHC Benefit Package. The Honorable Minister Health approved it on 22nd June, 2022. This documents well defines the organizational structure for referral coordination, linkage and transferring responsibilities of care tabulated as matrix appended as Appendix: A.

## Selection of patients

The process of selecting patients for referral in obstetric & newborn care is a critical aspect of healthcare management. It involves meticulous consideration of factors that indicate serious conditions where immediate intervention could be lifesaving. However, the decision to refer should not be impulsive; rather, it requires a thoughtful approach aimed at reducing the severity of the condition before opting for referral. Complications cannot be predicted but can be managed by timely provision of life saving services

wherein active referral system is having a pivotal role.

Before initiating the referral process, healthcare providers must make earnest attempts to mitigate the severity of the patient's condition through timely and appropriate interventions. This proactive strategy not only optimizes patient care but also ensures that referrals are reserved for situations where they are genuinely necessary.

One specific scenario where the need for referral becomes evident is in the management of high-risk pregnancies, particularly those at risk of postpartum hemorrhage (PPH). Several factors contribute to this heightened risk, warranting careful consideration before deciding on referral.

### **Emergency Referrals**

Selection and triaging of patients should be considered along the guidelines as are laid out in the WHO Triage tool. **(Appendix – E).**

Acuity-based triage is the action of sorting and prioritizing patients based on the estimation of the urgency for intervention. This is used as the basis for identification of those patients who require immediate medical intervention and those who can safely wait. Acuity-based triage is the standard method of sorting patients in medical settings and can be performed at any point of access to the health care system, including in both pre-hospital ambulance services and hospitals.

The “Interagency Integrated Triage Tool” (IITT) is a new triage tool developed in collaboration between WHO, the International Committee of the Red Cross (ICRC) and Médecins Sans Frontières (MSF) to provide an integrated set of protocols for routine triage of adults and children. It is intended to be used for facility-based triage within emergency units.

There is one tool for adults, one for children < 12 years, and a reference card that defines high-risk signs. The tool is designed around a three-colour system:

- a. red (high acuity; need to be seen immediately),
- b. yellow (moderate acuity; need to be seen soon),
- c. and green (low acuity; can wait).

- 1. Interagency Integrated Triage Tool:
- 2. Age  $\geq 12$  Interagency Integrated Triage Tool:
- 3. Age  $< 12$  Interagency Integrated Triage:
- 4. Reference card Posters

The Triage and Treatment in the Emergency Unit posters (adult and paediatric) are intended for use in the triage area of emergency units. The posters integrate guidance from the IITT and the for early recognition and initiation of resuscitation for the acutely ill and injured.

WHO Basic Emergency Care manual The “level of healthcare referral system” should be used to have an overview of core functions for each level healthcare facilities and “obstetric and newborn referral system” shall focus on the core functions of the 3 levels (Basic, secondary and tertiary) EmONC care and these guidelines have been categorized and developed based on urgency level of patients and fetus condition, as

- A. non-emergency referrals, or elective
- B. urgent
- C. life-threatening emergency referrals with standardized diagnosis terms (e.g. shock is a general symptom might develop during the patients clinical progress but not an OBS specific diagnosis) following the WHO integrated management of pregnancy and childbirth package.

For urgent and life-threatening emergency referrals, BLS with ABC approach should be implemented. There are other obstetrical conditions that need referral, e.g. rupture of uterus, other infectious diseases including syphilis and HIV, HELLP, fetus distress and

malformation. Guidelines include both the pre-referral treatment (neonatal, shock management), and care during referral. Pregnant women with severe non-obstetric conditions (e.g. cardiac diseases, renal dysfunction, trauma, COVID) who need an advanced level of care/intensive care are to be referred to tertiary care level hospitals.

## Obstetric and Newborn Complications

Below given table is a for healthcare providers to have guidance on Obstetric and Newborn complications requiring immediate referral to higher level health facility:

Complication	Definition	Referral Protocol
Unruptured & Ruptured Ectopic Pregnancy	<p>An ectopic pregnancy is one in which implantation occurs outside the uterine cavity. The fallopian tube is the most common site of ectopic implantation (greater than 90%).</p> <ul style="list-style-type: none"> <li>Symptoms of early pregnancy: <ul style="list-style-type: none"> <li>irregular spotting or bleeding,</li> <li>nausea,</li> <li>swelling of breasts,</li> <li>bluish discoloration of vagina and cervix,</li> <li>softening of cervix,</li> <li>slight uterine enlargement,</li> <li>increased urinary frequency</li> </ul> </li> <li>Abdominal and pelvic pain</li> <li>Collapse and weakness</li> <li>Fast, weak pulse (110 beats per minute or more)</li> <li>Hypotension</li> <li>Hypovolemia</li> <li>Acute abdominal and pelvic pain</li> <li>Abdominal distension</li> <li>Rebound tenderness</li> <li>Pallor</li> </ul>	<p>Refer the woman to FLH / Secondary Level Hospital where management of these complication is readily available according to the tubal damage for immediate:</p> <ul style="list-style-type: none"> <li>laparotomy</li> <li>salpingectomy or</li> <li>salpingostomy</li> </ul> <p>and in case of shock, first manage the shock then refer the woman.</p>

	<ul style="list-style-type: none"> <li>• Shock</li> </ul>	
Antepartum Hemorrhage (APH)	<p>Antepartum hemorrhage refers to “<i>bleeding from the birth canal that occurs after the 24th week of pregnancy and before the birth of the baby</i>”.</p> <p>It can be caused by various factors such as:</p> <ul style="list-style-type: none"> <li>• placental abruption,</li> <li>• placenta previa, or other issues with the placenta.</li> </ul> <p>It demands vigilant monitoring and intervention to prevent further complications.</p> <p>Timely assessment and intervention can significantly impact patient outcomes</p>	<ul style="list-style-type: none"> <li>• Urgently mobilize all available personnel and resources.</li> <li>• Perform a rapid evaluation of the woman’s general condition,</li> <li>• Check / observe: <ul style="list-style-type: none"> <li>• vital signs (pulse, blood pressure, respiration),</li> <li>• level of consciousness,</li> <li>• presence of anxiety and/or confusion,</li> <li>• volume of blood loss, whether bleeding is accompanied by pain,</li> <li>• colour and temperature of skin.</li> </ul> </li> </ul> <p><b><i>If shock is suspected,</i></b> immediately begin treatment even if signs of shock are not present, keep shock in mind as you evaluate the woman further because her status may worsen rapidly.</p> <p><b><i>If condition worsen and/or shock develops,</i></b> it is important to begin treatment immediately and refer the woman to FLH / Secondary level of health facility with referral slip and summary of management done.</p>
Chorioamnionitis	<p>Chorioamnionitis is:</p> <ul style="list-style-type: none"> <li>• an “<i>infection of the fetal membranes (amnion and chorion):</i></li> <li>• <i>and amniotic fluid</i>”.</li> </ul> <p>It often occurs when bacteria ascend from the lower genital tract into the uterus.</p> <p>It requires prompt attention to avert adverse maternal and fetal</p>	<p>If amniotic membranes are ruptured (Premature / Preterm Rupture of Membrane - PPRM):</p> <ul style="list-style-type: none"> <li>• give an antibiotic (oral erythromycin 250 mg every six hours for 10 days (or until birth) - OR ampicillin 2 g IV every six hours.) to reduce the risk of neonatal infections (e.g. pneumonia, cerebral</li> </ul>



	<p>outcomes.</p> <p>Referral may be necessary to access specialized care and interventions.</p>	<p>abnormality).</p> <p>If condition worsen refer to FLH / Secondary level health facility.</p>
<p>Preeclampsia, Severe Pre-Eclampsia and Eclampsia</p>	<p><i>It is a hypertensive disorder after 20 weeks of gestation:</i></p> <p>Preeclampsia:</p> <ul style="list-style-type: none"> <li>• <i>SBP is higher than 140mmHg and lower than 160mmHg</i></li> <li>• <i>DBP is 90mmHg or higher but lower than 110mmHg</i></li> <li>• <i>Proteinuria + 2 on dipstick</i></li> </ul> <p>Severe preeclampsia:</p> <ul style="list-style-type: none"> <li>• SBP 160 mmHg or higher, and/or</li> <li>• DBP 110 mmHg or higher</li> <li>• Proteinuria 2+ on dipstick</li> </ul> <p>Eclampsia:</p> <ul style="list-style-type: none"> <li>• Convulsions with;</li> <li>• SBP 140 mmHg or higher or</li> <li>• DBP 90 mmHg or higher and/or</li> <li>• Trismus (difficulty opening mouth and chewing)</li> </ul>	<p>Refer the woman to the FLH / Secondary level health facility.</p> <p>While referring severe preeclamptic and eclamptic patients:</p> <ul style="list-style-type: none"> <li>• give antihypertensive and</li> <li>• loading dose of mgso4 (4g of 20% magnesium sulfate solution) IV over five minutes.</li> <li>• Follow promptly with (10g of 50% magnesium sulfate solution).</li> <li>• Stabilize the patient,</li> <li>• clear airway,</li> <li>• catheterize the patient</li> <li>• keep warm and</li> </ul> <p>refer with summary of the treatment given at the health facility.</p>
<p>Severe Anemia</p>	<p>Maternal anemia refers to a condition where <i>“a pregnant woman has a lower-than-normal level of red blood cells or hemoglobin”</i>. This can be caused by various factors, including iron deficiency.</p> <p>Severe anemia: Hemoglobin levels <i>below 7 g/dL</i>.</p> <p><i>Severe anemia during any trimester of pregnancy requires</i></p>	<p>Check:</p> <ul style="list-style-type: none"> <li>• vital sign</li> <li>• fetal condition</li> <li>• check client for cardiac failure due to severe anaemia.</li> </ul> <p>Manage:</p> <ul style="list-style-type: none"> <li>• sign of shock</li> <li>• shock if needed</li> </ul> <p>and refer the client for blood</p>

	<p><i>specialized attention and may necessitate a blood transfusion.</i></p> <p><i>The urgency for blood transfusion is underscored by the critical need to improve oxygen delivery and prevent potential complications, such as:</i></p> <ul style="list-style-type: none"> <li><i>• respiratory distress,</i></li> <li><i>• cardiac failure etc.,</i></li> <li><i>• compromised fetal development,</i></li> <li><i>• and increased risk of maternal and fetal complication.</i></li> </ul>	<p>transfusion to the FLH / Secondary level health facility where blood transfusion facility is available.</p>
Chronic Co-Morbid Infections like Hepatitis or Liver Cirrhosis	<p>Women with chronic co-morbid infections, such as Hepatitis or Liver Cirrhosis, require specialized care due to the added complexity of their health condition.</p> <p>These co-morbidities can exacerbate anemia and pose additional risks during pregnancy.</p> <p>Managing such cases involves a multidisciplinary approach, addressing both the anemia and the underlying chronic infections.</p>	<p>Close monitoring, timely interventions, and coordination with specialists are essential to optimize maternal and fetal outcomes is required.</p> <p>Urgently refer to the higher level of health facility for management where needed specialized services are available.</p>
Blood and bleeding disorders	<p>Pregnant women with known blood disorders, such as Thalassemia or bleeding disorders, necessitate careful management throughout pregnancy.</p> <p>These conditions may impact both maternal and fetal health, requiring specialized care to prevent complications.</p>	<p>Close monitoring, timely interventions, and coordination with specialists are essential to optimize maternal and fetal outcomes is required.</p> <p>Urgently refer to the higher level of health facility for management where needed specialized services are available.</p>

	Regular monitoring of hemoglobin levels, coordination with hematologists, and a proactive approach to address potential challenges are crucial for ensuring a safe and successful pregnancy.	
Postpartum hemorrhage (PPH)	<p><b>Primary PPH</b> is defined as <b><i>“blood loss in excess of 500 mL within 24 hours after birth”</i></b>, while severe PPH is defined as <b><i>“blood loss of 1000 mL or more within the same timeframe”</i></b>.</p> <p>While the same amount of bleeding following the first 24 hours after childbirth is defined as <b>“Secondary PPH”</b>.</p> <p>Postpartum hemorrhage (PPH) can be caused due to:</p> <ul style="list-style-type: none"> <li>• Uterine atony (<b><i>a failure of the uterus to contract after childbirth</i></b>).</li> <li>• Trauma (Vaginal OR Cervical Tear)</li> <li>• Thrombin</li> <li>• Tissue (Retained Product)</li> </ul> <p>Bleeding can occur at a slow rate over several hours; the condition might not be recognized until the woman suddenly enters shock.</p> <p>National Guidelines for PPH 2023 focuses on PPH bundle approach. Calling the 1st Bundle “MOTIVE” may help practitioners to help recall all</p>	<p>Close monitoring of:</p> <ul style="list-style-type: none"> <li>• postpartum uterine tone,</li> <li>• vaginal bleeding,</li> <li>• pulse and blood pressure</li> <li>• prompt identification of and rapid response to uterine atony,</li> <li>• excessive bleeding and hemodynamic changes.</li> </ul> <p>The most important intervention to reduce postpartum hemorrhage before referring is the:</p> <ul style="list-style-type: none"> <li>• immediate postpartum administration of a uterotonic within one minute of birth by making sure there is no additional baby(s) before giving an injectable uterotonic medication IM or giving large doses of misoprostol orally,</li> <li>• Manage shock and PPH as per protocol</li> <li>• insertion of a balloon tamponade (if available) is a crucial intervention to control bleeding.</li> <li>• and refer the client to FLH / Secondary Level health facility with proper</li> </ul>

	<p>the components, and not forget to give something:</p> <p>MOTIVE: Uterine Massage, Oxytocic drugs, Tranexamic acid, IV fluids, and Examination or Establish Cause and Escalation.</p>	<p>documentation of the treatment given at the health facility.</p>
Planned Cesarean Section	<p>A woman with a planned cesarean section, as outlined in her antenatal card delivery plan, requires careful coordination and preparation.</p> <p>Planned cesarean sections often involve medical indications necessitating surgical delivery.</p>	<p>Counsel the client and give psychological support, birth preparedness and complication readiness and refer the client to the FLH/Secondary level health facility.</p>
Macrosomia Fetus	<p>Fetal macrosomia is a term used when a fetus is larger than expected for gestational age, and is usually defined by an absolute weight (for example an estimated fetal weight of more than 3500g at 36 weeks) or in relation to centiles (for example, an estimated fetal weight above the 95th percentile at or after 36 weeks of gestation), 3700 g at 37 weeks, 3900g at 38 weeks, and 4000 to 4500g fetal weight. Birth of a large baby can lead to problems for both mother and baby:</p> <ul style="list-style-type: none"> <li>• Third/fourth degree perineal tears</li> <li>• Shoulder dystocia</li> <li>• Perinatal death</li> <li>• Hypoxic ischaemic encephalopathy (HIE) • Maternal satisfaction/HRQoL</li> </ul>	<ul style="list-style-type: none"> <li>• Check blood glucose level for gestational diabetes, manage if needed.</li> <li>• Counsel the client and give psychological support, birth preparedness and complication readiness</li> <li>• and refer the client to the FLH/Secondary level health facility.</li> </ul>

	<b>(Health-related quality of life)</b> <ul style="list-style-type: none"> <li>• Brachial plexus injury</li> <li>• Caesarean birth</li> </ul>	
Uncontrolled Hypertension and Diabetes during pregnancy	<p>Pregnant women identified with uncontrolled hypertension and diabetes at any trimester require meticulous management to mitigate associated risks.</p> <p>Uncontrolled hypertension and diabetes can lead to complications for both the mother and the fetus, including preeclampsia, preterm birth, and macrosomia.</p> <p>Close monitoring, timely interventions, and a collaborative approach involving obstetricians and specialists in managing these conditions are essential to ensure a healthy pregnancy and delivery.</p>	<p>Give hypertensive and stabilize the client and refer to the higher level of health facility.</p> <p>Check blood glucose level and refer for management of diabetes to FLH/secondary level health facility.</p>
Shock	<p>Shock is characterized by failure of the circulatory system to maintain adequate perfusion of the vital organs.</p> <p>Shock is a life-threatening condition that requires immediate and intensive treatment</p> <p>In cases where women exhibit signs of shock due to complication like postpartum hemorrhage (PPH), Sepsis, Ectopic Pregnancy etc. immediate referral is essential.</p>	<p>Prerequisites for referral, includes:</p> <ul style="list-style-type: none"> <li>• Urgently mobilize all available personnel and resources.</li> <li>• the establishment of a double intravenous (IV) line,</li> <li>• Giving IV fluids,</li> <li>• insertion of a urine catheter,</li> <li>• provision of oxygen,</li> <li>• and stabilize the patient during transportation.</li> </ul> <p>Then refer the patient to FLH / secondary level health facility.</p>
Preterm Birth / Labour	This is defined as birth before 37 weeks of gestation and is the single most important	Give antenatal corticosteroids to accelerate fetal lung maturation.

	<p>determinant of adverse infant outcomes, in terms of survival and quality of life.</p> <p>The most beneficial maternal interventions are those that are aimed at improving outcomes for preterm infants when preterm birth is inevitable such as administration of:</p> <ul style="list-style-type: none"> <li>antenatal corticosteroid therapy to improve fetal lung maturity and chances of neonatal survival from 24 weeks to 34 weeks of gestation;</li> <li>magnesium sulfate up to 32 weeks of gestation to prevent preterm birth-related neurologic complications;</li> <li>antibiotics for women with preterm pre-labour rupture of membranes and/or clinical signs of infection.</li> </ul>	<p>Antenatal corticosteroid therapy is recommended for women with pregnancies at a gestational age of 24–34 weeks.</p> <p>Then refer the woman to FLH / secondary level health facility for management.</p>
Postpartum Psychosis	<p>Postpartum psychosis typically occurs around the time of childbirth, most often within the first two weeks of postpartum, and affects less than 1% of women.</p> <p>Severe postpartum depression may be associated with psychosis.</p> <p>Symptoms of postpartum psychosis include:</p> <ul style="list-style-type: none"> <li>delusions,</li> <li>hallucinations,</li> <li>sleep disturbances,</li> <li>obsessive thoughts about the baby,</li> </ul>	<p>Arrangements should be made for supplemental care to ensure the safety of the newborn. A woman with active psychosis should not care for her infant “as usual.”</p> <p>Immediately seek comprehensive psychiatric and medical care by referring the patient to FPH / Secondary (if available) of any other higher level health facility as hospitalization is required for women with postpartum psychosis.</p>

	<ul style="list-style-type: none"> <li>• severe depression,</li> <li>• anxiety,</li> <li>• despair, and suicidal or infanticidal impulses,</li> </ul>	
Newborn		
Cyanosis or Breathing Difficulty	<p>If the baby is cyanotic (bluish) or is having difficulty breathing:</p> <ul style="list-style-type: none"> <li>• less than 30 or more than 60 breaths per minute</li> <li>• severe indrawing of the lower chest wall</li> <li>• or grunting,</li> </ul> <p>Some newborns may have fast breathing as the only sign of severe illness,</p>	<p>This needs immediate care, including <b>clearing airway and giving oxygen</b> then transferring the baby to the FLH / Secondary level health facility for the care of sick newborns.</p> <p><b>Note:</b> Keep baby warm during transpiration.</p>
Low Birth / Very Low Birth Weight or Preterm Baby	<p><b><u>Low birth weight</u></b> weighing 2,500g (2.5 kg) or less at birth.</p> <p><b><u>Very Low birth weight</u></b> weighing 1,500g (1.5 kg) or less at birth.</p> <p><b>Preterm baby</b> born before 37<sup>th</sup> week.</p> <p>If a baby is very small (less than 1500 g or less than 32 weeks), severe health problems are likely and include difficulty in breathing, inability to feed, severe jaundice and infection.</p> <p>LBW babies having 2000g (2kg) or less and preterm babies born before 32 weeks require immediate referral for management as per protocol including Kangaroo Mother Care (KMC) as without special</p>	<p>Before and during transfer, ensure that the baby is kept warm, give breastfeed.</p> <p>The baby can be transferred in skin-to-skin contact with the mother</p>

	thermal protection (e.g. KMC or an incubator), the baby is susceptible to hypothermia.	
Lethargy	<p>If the baby is lethargic:</p> <ul style="list-style-type: none"> <li>• low muscular tone,</li> <li>• drowsy,</li> <li>• does not move spontaneously or when stimulated),</li> </ul> <p>it is very likely that the baby has a severe illness and should be transferred to the appropriate service for the care of sick of newborns.</p>	<p>Before transferring the new born:</p> <ul style="list-style-type: none"> <li>• open and maintain the baby's airway.</li> <li>• give oxygen by nasal prongs</li> <li>• give bag and mask ventilation if the newborn is cyanosed in severe respiratory distress or hypoxaemic (oxygen saturation of 90% or less)</li> <li>• and give IV antibiotics.</li> <li>• check blood glucose</li> <li>• keep warm</li> </ul> <p>Transfer to the HLF / Secondary level health facility for specialized care for sick newborns.</p>
Newborn Hypothermia	<p>Hypothermia is a state when the Newborn's body temperature drops below normal (37°C).</p> <p>This condition can be severe when the body temperature drop to axillary temperature less than 32°C.</p>	<p>Transfer the baby as quickly as possible to the FLH / Secondary level health facility for the care of preterm or sick newborns.</p> <p>Before referring warm the baby with dressing, ensure skin to skin contact and give first dose of antibiotic as per protocol.</p>
Convulsions	<p>Convulsions can be defined as abnormal, involuntary contraction of the muscles and in newborn that can be due to:</p> <ul style="list-style-type: none"> <li>• asphyxia,</li> <li>• birth injury,</li> <li>• hypoglycaemia</li> <li>• hypocalcaemia,</li> </ul> <p>and are also a sign of meningitis or neurologic</p>	<p>Transfer the baby as quickly as possible to the FLH / Secondary level health facility for management and care as per protocol.</p> <p>Before referring warm the baby and give first dose of anti-convulsion as per protocol.</p>



	<p>problems eg.:</p> <ul style="list-style-type: none"> <li>• hypoxic-ischaemic</li> <li>• encephalopathy,</li> <li>• intracranial haemorrhage.</li> </ul>	
Fetal Macrosomia	<p>Fetal macrosomia is a condition where the <i>“fetus is larger than average for its gestational age”</i>. This is often defined as a birth weight above a certain threshold, such as <b>4,000 grams (8 pounds, 13 ounces)</b> or <b>4,500 grams (9 pounds, 15 ounces)</b>.</p> <p>It is associated with an increased risk of several complications, particularly maternal and/or fetal trauma during birth and neonatal hypoglycemia and respiratory problems.</p>	

References:

1. *Pregnancy, Childbirth, Postpartum and Newborn Care (PCPNC)*.
2. *Integrated Management of Pregnancy and Childbirth (IMPAC)*.

### Back-Referral System

The back-referral system provides for transferring patients, such as mothers and newborns, who initially required higher-level care but are now stable enough to continue their recovery at a lower-level healthcare facility.

The process begins with a comprehensive assessment by the treating team at the higher-

level facility, determining the patient's readiness based on clinical stability, ongoing needs, and the availability of necessary resources at the lower-level facility. Once deemed appropriate for transfer, a coordinated communication between the higher and lower-level facilities will occur to ensure continuity of care.

Documentation, including treatment records and ongoing care plans, should accompany the patient to provide the receiving team with a clear understanding of the patient's condition.

The transportation must be well-organized, ensuring the patient's safety during transfer, and the referring team should follow up to ensure the smooth transition of care and management at the lower-level facility.

## **Referral Protocols**

### ***Referral Directory***

Ensuring a smooth referral process begins with disseminating crucial information to all health facilities in the district. The Department of Health aims to achieve this by developing displaying , regularly updating and widely sharing a directory of designated referral health facilities, blood banks, and Safe Blood Transfusion Authority's centers along with lists and contact details of transport available at that facility including PPHI ambulance, SIEHS ambulances, DoH ambulance and any other & locally run service like Eidhi & Chippa etc. This proactive approach enhances awareness among healthcare providers and facilitates informed decision-making in the event of a necessary referral.

### ***Referral Communication & Coordination***

Efficient coordination at the district level is imperative for the success of the referral strategy. District Referral Coordinator (DRCs) play a pivotal role in this aspect, by notifying referral Referral Coordinator at district and Referral Focal Person (RFP) at health facility levels, taking charge of guaranteeing the availability of essential resources. This includes maintaining a supply of the patient record includes the referral letter/ slip and indications for referral, keeping up-to-date referral directory & registers includes review of volume of activity, source and appropriateness of referrals and adverse events, mapping available transportation vehicles for referral purposes which include fleet of ambulances under the Sindh Integrated Emergency and Health Services (SIEHS) complemented by HCIP / 1000 Days Project, existing ambulances available at PHC, FLH, PPHI and other partners and fostering coordination with referral health facilities. These efforts at the district level form the foundation for a well-organized referral system.

Timely communication and preparedness are critical components of successful referral implementation. The Department of Health emphasizes establishing regular communication channels with referral health facilities to confirm the ongoing availability of emergency services. A monthly duty roster, duly signed by the Medical Superintendent of Referral Health Facility, serves as a comprehensive guide for shift-wise preparedness. This ensures that referral health facilities are well-informed and adequately prepared for any emergency situation. For effective coordination between SIEHS ambulances 1122 and Medical Superintendent/ Duty Administrator at the facility is imperative to ensure timely management of referral cases.

### ***Record keeping and Monitoring & Evaluation***

Maintaining accurate records is paramount for monitoring and evaluating the effectiveness of the referral strategy. The Department of Health mandates the meticulous documentation of each referral through designated referral slips. Additionally, a feedback form is provided to the client, with another copy for the referral health facility staff. This comprehensive record-keeping system contributes to transparency and accountability in the referral process. Appendix – B – Referral Slip and C - Referral Form.

In situations where a referral is refused or delayed, the Department of Health has established immediate notification protocols to address these critical issues. Healthcare providers are instructed to promptly notify health facility staff through telephonic communication in the case of a woman or her relatives refusing a referral. Similarly, quick notifications are mandated if a referral is delayed due to transportation unavailability or any unforeseen circumstances, allowing for swift resolution of issues by District Referral Coordinator and referral focal person of respective health facilities

Facilitating collaboration and feedback exchange between District Referral Coordinator, SIEHS Focal Person, District Manager PPHI, District manager of any other organization managing health facilities under PPP and Referral Health Facility staff / focal person is a cornerstone of the referral strategy. Regular meetings, or invitations extended to Referral Health Facility in charge/Focal persons during District Progress Review Forums organized by DHOs, PPHI District Offices and other Health Facility Management Organizations, provide a platform for discussing referred cases, sharing feedback, and addressing any related issues. District Health Officers through District Referral Coordinators are obligated to initiate this collaborative effort by sending formal letters to all Referral Health Facility in charges, emphasizing the importance of coordination meetings.

To continually improve the referral system, the Department of Health emphasizes the compilation and analysis of referral data. District Referral Coordinator with assistance of DDHO RMNCH, SIEHS Focal Person, MNCH Coordinator/MOHQ at PPHI and other stakeholder takes charge of this responsibility, systematically analyzing referral results. Leading monthly/quarterly referral meetings with referral health facilities, this individual ensures that data-driven insights guide strategies for ongoing improvement.

### ***Roles and responsibilities in the referral process***

A snapshot of roles of responsibilities of referring point, transport / ambulance and referral point is annex at annexure “D”.

### ***Referral Feedback Mechanism***

Feedback mechanism is very critical step of referral mechanism to close the loop of care

provided to a women & newborn at different levels of health facilities. Feedback mechanism involves, , feedback forms, feedback registers filling & feedback coordination mechanism by holding regular (Monthly, Quarterly or Biannually) based on quality of referrals to trouble shoot any related issue..

Establishing a feedback loop based on data analysis and continuous improvement is the final pillar of the referral strategy. The Directorate General Health Services Sindh (DGHSS) takes on the primary responsibility of regularly analyzing overall referral data and providing constructive feedback and necessary directions to the field, however, the RMNCH wing at DGHSS will be closely coordinating all efforts in connection with EmONC services including referrals . This iterative process allows for the identification of gaps and the implementation of targeted improvement strategies, ensuring the ongoing effectiveness of the referral system.

## **Indicators**

Following are some recommended indicators for PHCs:

1. **Referral completion rate:** The percentage of referred cases from PHC that successfully reach the higher-level facility and receive the intended care.
2. **Time of Referral:** Measure the time taken for higher-level facilities, and identify the delays in the referral process.
3. **Referral Outcome:** The outcomes of the referred cases (quality indicators: appropriateness and effectiveness of referrals).
4. **Post-Referral Follow-Up:** Percentage of referred patients who receive follow-up care at the PHC after discharge from the higher-level facility. It completes the referral loop.
5. **Number of Unnecessary Referrals (and/or Self-Referrals):** This indicator can help adjust training and triage protocols to avoid unnecessary referrals in the future.

6. **Adverse Events or Complications During Referral:** Recording any complications, delays, or adverse events during the referral process.

***Quality of Care indicators:***

7. **Mortality and Morbidity Reviews for Referred Cases:** if there is the report of regular review of maternal and neonatal outcomes for referred cases, and/or "near-miss" reviews to identify preventable factors and areas for improvement of PHC level.
8. **Patient and caregiver feedback:** Satisfaction level with the referral process, quality of care at the higher-level facility, and communication between the facilities. Those can help with user satisfaction and is highly relevant to the core function of the health system.

## Appendix-A - Health Services “Provision” and “Referral” Matrix

Community, PHC and FLH Level – in accordance with Essential Package of Health Services (EPHS) – 2021.

P = Provide – R = Refer

S#	Service	Community / LHW	GD	BHU 8/6	BHU+ 24/7	RHC 24/7	THQH	DHQH
<b>1</b>	<b>Reproductive Health</b>							
1.1	Education and counseling on birth spacing during antenatal and post-natal / post-abortion care	P	P	P	P	P	P	P
1.2	Provision of contraceptives: (Condoms, Hormonal pills, Emergency contraceptive pills & injectables)	P	P	P	P	P	P	P
1.3	Insertion and removal of the intrauterine device (IUD)	R	P	P	P	P	P	P
1.4	Surgical contraceptive methods (Implant)	R	R	R	P	P	P	P
1.5	Early detection and treatment of early-stage cervical cancer			R	R	R	P	P
1.6	Tubal ligation	R	R	R	R	R	P	P
1.7	Vasectomy	R	R	R	R	R	R	P
<b>2</b>	<b>Antenatal care</b>							
2.1	Counseling on providing thermal & kangaroo care to new-born	P	P	P	P	P	P	P
2.2	Counseling on breastfeeding and growth monitoring	P	P	P	P	P	P	P
2.3	Monitoring of pregnant women using MCH card (at least 4 ANC visits)	P	P	P	P	P	P	P
2.4	Nutrition counseling and provision of Iron and folic acid to pregnant women	P	P	P	P	P	P	P
2.5	Immunization against tetanus (CBAs & Pregnant women)	R	P	P	P	P	P	P
2.6	Screening and care for hypertensive disorders in pregnancy	R	P	P	P	P	P	P
2.7	Screening and care for diabetes in pregnancy	R	Screen	P	P	P	P	P

S#	Service	Community / LHW	GD	BHU 8/6	BHU+ 24/7	RHC 24/7	THQH	DHQH
			R					
2.8								
2.9	Management of diabetes in pregnancy (gestational diabetes or pre-existing type II diabetes)	R	R	R	R	R	P	P
2.10	Management of Hypertension during pregnancy	R	R	R	R	R		
<b>3</b>	<b>Basic Emergency Obstetric and Newborn Care (BEmONC)</b>							
3.1	Management of Pre-eclampsia and Eclampsia with MgSo4	R			P	P	P	P
3.2	Management of Obstetric and Prolong Labour (Vacuum Assisted Deliveries)	R			P	P	P	P
3.3	Management of Haemorrhage (APH – PPH)	R			P	P	P	P
3.4	Manual Removal of Placenta	R			P	P	P	P
3.5	Removal of Retained Products with Manual Vacuum Aspiration (MVA)	R			P	P	P	P
3.6	Management of Sepsis/infections with IV antibiotics	R			P	P	P	P
3.7	Newborn resuscitation	R			P	P	P	P
3.8	Management of Pre-term labour and intrauterine growth retardation						P	P
<b>4</b>	<b>Delivery Care</b>							
4.1	Normal / Low Risk Labour and Delivery	R	R	R	P	P	P	P
4.2	Identification and referral for complications and danger signs	R	R	R – CEmoNC	R- CEmoNC	R	P – R – Tertiary	P – R – Tertiary
4.3	Management of premature rupture of membranes, including administration of antibiotic	R	R	R	R	P	P	P



S#	Service	Community / LHW	GD	BHU 8/6	BHU+ 24/7	RHC 24/7	THQH	DHQH
4.4	Management of miscarriage or post-abortion care	R	R	R	R	P	P	P
<b>5</b>	<b>Delivery care (CEmoNC)</b>							
5.1	Management of labour and delivery in high-risk women, including operative delivery (C-Section)	R	R	R	R	R	P	P
5.2	Surgical termination of pregnancy by maternal vacuum aspiration and dilatation & curettage	R	R	R	R	R	P	P
5.3	Management of Ectopic Pregnancy including surgery	R	R	R	R	R	P	P
5.4	Management of Post Partum Haemorrhage (PPH) including surgical procedures (Hysterectomy, Arterial Ligation etc.)	R	R	R	R	R	P	P
5.5	Repair of 3rd and 4th degree tear						P	P
5.6	Facility of Blood Transfusion	R	R				P	P
<b>6</b>	<b>Postnatal Care</b>							
6.1	Post-natal care services	P	P	P	P	P	P	P
<b>7</b>	<b>Newborn Care</b>							
7.1	New-born care including care of cord	P	P	P	P	P	P	P
7.2	Provide thermal and Kangro care to newborn	P	P	P	P	P	P	P
7.3	Early initiation of breastfeeding (within ½ hour of birth) and Initiation of growth monitoring	P	P	P	P	P	P	P
7.4	Initiation of immunization for BCG, zero dose polio	R	P	P	P	P	P	P
7.5	Management of Neonatal sepsis / infections, meningitis, septicemia, pneumonia, and other very serious infections requiring continuous supportive care (such as antibiotics, IV fluids and oxygen etc.)						R	P

S#	Service	Community / LHW	GD	BHU 8/6	BHU+ 24/7	RHC 24/7	THQH	DHQH
7.6	Full supportive care for preterm new-born with incubator						P	P
7.7	Jaundice Management with Phototherapy						P	P
8	<b>Nutrition</b>							
8.1	Screening for malnutrition in children and growth monitoring, provision of food supplements for moderately acute malnourished cases and severely acute malnourished cases	P	P	P	P	P	P	P
8.2	Management of severely acute malnourished cases with medical complications	R	R	R	R	R	R	P
8.3	Provision of vitamin A (after National immunization days are stopped) and zinc supplementation	P	P	P	P	P	P	P
8.4	Provision of micro-nutrients (iron and folic acid / MMS) to women adolescent girls	P	P	P	P	P	P	P
9	<b>Child care</b>							
9.1	Integrated management of childhood illnesses (IMCI)	R	P	P	P	P	P	P
9.2	Immediate referral for danger signs and follow up visits	R	R	R	R	R	P	P
9.3	Education on handwashing and safe disposal of children's stool	P	P	P	P	P	P	P
9.4	Management of infections in children i.e. meningitis, septicemia, pneumonia, and other very serious infections requiring continuous supportive care (such as antibiotics, IV fluids and oxygen etc.)						P	P

S#	Service	Community / LHW	GD	BHU 8/6	BHU+ 24/7	RHC 24/7	THQH	DHQH
9.5	Full supportive care for severe childhood infections with danger signs						P	P
<b>10</b>	<b>Childhood Vaccination:</b>							
10.1	BCG	R	P	P	P	P	P	P
10.2	Polio (OPV & IPV)	R	P	P	P	P	P	P
10.3	Pentavalent	R	P	P	P	P	P	P
10.4	Pneumococcal	R	P	P	P	P	P	P
10.5	Rota	R	P	P	P	P	P	P
10.6	Measles	R	P	P	P	P	P	P
<b>11</b>	<b>School-age Child Care</b>							
11.1	Education and counseling on oral health	P	P	P	P	P	P	P
11.2	Vision pre-screening and referral if required	P	P	P	P	P	P	P
11.3	Deworming for soil-transmitted helminthiasis	P	P	P	P	P	P	P
<b>12</b>	<b>Adolescent Health</b>							
12.1	Syndromic management of common sexual and reproductive tract infections	R	P	P	P	P	P	P
12.2	Psychological treatment of depression, anxiety, and disruptive behaviour disorders among adolescent; referral if required	R	P	P	P	P	P	P
12.3	Post-gender-based violence care including counselling and referral	R	R	R	R	P	P	P
<b>13</b>	<b>Infectious diseases</b>							
13.1	Education & counselling for prevention of STI and HIV, screening and referrals	P						
13.2	HIV testing, counselling, and referral for ART	R	R	R	R	P	P	P
13.3	Hepatitis B and C testing & referral	R	R	R Only HE Hep. B&C	R	P	P	P

S#	Service	Community / LHW	GD	BHU 8/6	BHU+ 24/7	RHC 24/7	THQH	DHQH
13.4	Partner notification and expedited treatment for STI and referral for HIV	R	R	R Only HE STI and HIV	P	P	P	P
13.5	Systematic screening and routine contact tracing exposed to TB	P						
13.6	Diagnosis and Treatment of Tuberculosis (TB)	R	R	R Suspected cases	R	P R – for MDR	P	P
13.7	Screening of HIV in all individuals with a diagnosis of active TB	R	R	R	R	P	P	P
13.8	Screening for TB in all newly diagnosed PLHIV and close contacts	R	R	R	R	P	P	P
13.9	Referral of Malaria suspect	P						
13.10	Conduct Larvicidal & Water Management	P						
13.11	Diagnosis of Malaria-suspect with RDT and & Treatment of Positive Cases	R	P	P	P	P Pre-referral treatment of complicated case	P	P
13.12	Identification and referral of suspected cases of Dengue, Influenza and Trachoma	P						
13.13	Early detection and referral of Dengue & Trachoma cases	R	P	P	P	P	P	P
13.14	Management of Dengue & Trachoma cases						P	P
13.15	Identification, reporting, and referral of notifiable diseases	P	P	P	P	P	P	P
13.16	Secondary prophylaxes with penicillin for Rheumatic fever		P	P	P	P	P	p
13.17	Treatment of acute pharyngitis		P	P	P	P	P	P
13.18	Health Education on Hepatitis B & C and referral of suspected cases	P						

S#	Service	Community / LHW	GD	BHU 8/6	BHU+ 24/7	RHC 24/7	THQH	DHQH
13.19	Assessment and treatment of hepatitis B						P	P
13.20	Assessment and treatment of hepatitis C						P	P
13.21	Immediate ART initiation with Regular Monitoring of Viral Load in HIV +ve Patients							P
13.22	Treatment of MDR-TB						P	P
13.23	Referral of TB cases of treatment failure for drug susceptibility testing;						R	R
13.24	Management of Dengue Cases						P	P
13.25	Evaluation and management of fever in clinically unstable individuals using WHO IMAI guidelines, including empiric parenteral antimicrobials and antimalarial and resuscitative measures for septic shock						R	P
<b>14</b>	<b>Non-communicable diseases</b>							
14.1	Exercise based Pulmonary Rehabilitation of COPD	P						
14.2	Low dose corticosteroid and bronchodilator for Asthma and selected COPD		P	P	P	P	P	P
14.3	Cardiovascular risk factor screening using non-lab-based tools and regular follow up		P	P	P	P	P	P
14.4	Provision of aspirin for suspected acute myocardial cases		P	P	P	P	P	P
14.5	Screening of albumin urea for kidney disease in diabetics		P	P	P	P	P	P
14.6	Secondary prophylaxes with penicillin for Rheumatic fever		P	P	P	P	P	P
14.7	Treatment of acute pharyngitis		P	P	P	P	P	P
14.8	Self-managed treatment of migraine	P	P	P	P	P	P	P
14.9	Support caregivers of patients with dementia		P	P	P	P	P	P
14.10	Management of anxiety and depression disorders		P	P	P	P	P	P

S#	Service	Community / LHW	GD	BHU 8/6	BHU+ 24/7	RHC 24/7	THQH	DHQH
14.11	Calcium and Vit D supplementation for prevention of osteoporosis in high-risk individuals		P	P	P	P	P	P
14.12	Screening of hearing loss using an otoscope and basic management/ referral		P	P	P	P	P	P
14.13	WASH behavior changes interventions	P	P	P	P	P	P	P
14.14	Screening (Clap Test) and referral of congenital hearing loss among newborn	P						
14.15	Health Education of CVD and Diabetes	P						
14.16	Screening for Hypertension	P						
14.17	Management of acute coronary exacerbations of asthma and COPD using systemic steroids, inhaled beta-agonists with antibiotics and oxygen therapy						P	P
14.18	Management of acute coronary syndromes with unfractionated heparin and generic thrombolytics						R	P
14.19	Medical management of acute heart failure						R	P
14.20	Treatment of albumin urea for kidney disease						P	P
14.21	Management of Rheumatoid Arthritis including methotrexate						P	P
14.22	Early childhood development rehabilitation interventions, including motor, sensory, and language stimulation						R	P
14.23	Identification of Carriers and prospective screening for thalassemia and other single gene disorders						P	P
14.24	Management of bowel obstruction						R	P
14.25	Management of intoxication/ poisoning syndromes						R	R
14.26	Management of Psychiatric Disorders		P	P	P	P	P	P

S#	Service	Community / LHW	GD	BHU 8/6	BHU+ 24/7	RHC 24/7	THQH	DHQH
<b>15</b>	<b>Emergency Health Services</b>							
15.1	Management of Shock / Basic Life Support			P	P	P – R	P	P
15.2	Management of poisoning/intoxication					P – R	P	P
15.3	Management of Road Traffic Accidents, Injuries, Burn, Suffocations, Drowning etc.					P – R	P	P
15.4	Management of Medico Legal Services (Post-mortem and related proceedings)					P	P	P
15.5	Resuscitation with Advanced Life Support Measures including Surgical Airway						P	P
15.6	Appendectomy						P	P
15.7	Fracture reduction & placement of external fixator and use of traction for fractures						P	P
15.8	Removal of gallbladder, including emergency surgery						R	P
15.9	Repair of perforations (perforated peptic ulcer, typhoid ileal perforation)						R	P
15.10	Tube thoracostomy						P	P
15.11	Trauma laparotomy						R	P
15.12	Trauma-related amputations						P	P
15.13	Compression therapy for amputations, burns, and vascular or lymphatic disorders						P	P
15.14	Cataract extraction and insertion of intraocular lens						R	P
15.15	Hernia Repair						P	P
15.16	Surgery for filarial hydrocele						P	P
15.17	Management of Swallowing dysfunction						P	P
<b>16</b>	<b>Other Services</b>							

S#	Service	Community / LHW	GD	BHU 8/6	BHU+ 24/7	RHC 24/7	THQH	DHQH
16.1	Health Education of Dental Care	P						
16.2	Health Education on scabies, lice and skin infection	P						
16.3	Dental pain and infection management	R	P	P	P	P	P	p
16.4	Drainage of a superficial abscess		P	P	P	P	P	P
16.5	Treatment of scabies, lice, and skin infections.		P	P	P	P	P	P
16.6	Identification screening of early childhood development issues and referral	P	P	P	P	P	P	P
16.7	Management of non-displaced fracture referral			P	P	P	P	P
16.8	First Aid, Dressing and Care of wounds and referral	P						
16.9	Circumcision			P	P	P	P	P
16.10	Suturing of small laceration		P	P	P	P	P	P
16.11	Basic management of musculoskeletal injuries and disorders	P	P	P	P	P	P	p
17	Laboratory Services	R	P (Basic and rapid diagnostic lab services)	P (Basic and rapid diagnostic lab services)	P (Essential PHC lab services including radiology)	P (RHC level lab services including radiology)	P	



[illegible]40

## Appendix – C - Referral Form

### Referral Form



Name of Health Facility: \_\_\_\_\_ Type of HF: \_\_\_\_\_

Date & Time of Referral: \_\_\_\_\_

Name of Patient / Client: \_\_\_\_\_ Father/Husband's Name: \_\_\_\_\_

Age: \_\_\_\_\_ Gestational Age: \_\_\_\_\_ Gravida: \_\_\_\_\_ Parity: \_\_\_\_\_ EDD: \_\_\_\_\_

Allergy: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_ Contact No. \_\_\_\_\_

Presenting Complaints:

Date & Time of Admission: \_\_\_\_\_ Indoor/Obs Reg. No. \_\_\_\_\_

Date of Delivery: \_\_\_\_\_ Time of Delivery: \_\_\_\_\_

Outcome: \_\_\_\_\_ Weight of baby: \_\_\_\_\_

Patient's status on referral: Conscious: \_\_\_\_\_ Semiconscious: \_\_\_\_\_ Unconscious: \_\_\_\_\_

Pulse		BP		Temp		RR		SpO2	
FHS		Fetal Lie / Position		Membrane		Uterine Contractions		Cervical Dilatation	
HB		Blood Group		RBS		Hep B,C, HIV		Urine Protein	

Other findings: \_\_\_\_\_

Reason of referral: \_\_\_\_\_

**Pre-referral management given:**

S#	Date	Time	Treatment Given
01			
02			
03			
04			
05			

Referred to: \_\_\_\_\_

Accompanying person: \_\_\_\_\_

Name of Focal Person at referred HF: \_\_\_\_\_ Contact Number: \_\_\_\_\_

Name of referring HCP: \_\_\_\_\_ Designation: \_\_\_\_\_ Signature: \_\_\_\_\_

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Feedback / suggestions: \_\_\_\_\_

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Name of receiving doctor: \_\_\_\_\_ Desig: \_\_\_\_\_ Signature: \_\_\_\_\_

*(Please send feedback through WhatsApp at contact Number: \_\_\_\_\_ for improvement of services).*

## Appendix – D - Roles and responsibilities in the referral process

Stage	Role	Responsibility
<b>Referring facility</b>	<b>Skilled birth attendant</b>	<ul style="list-style-type: none"> <li>• Timely and accurately identify complicated cases</li> <li>• Implement stabilizing protocols for the patient</li> <li>• Fill referral slip for the patient with the required details</li> <li>• Arrange transfer mechanism for the patient</li> </ul>
<b>Patient transfer via ambulance</b>	<b>Caller (Call Center)</b>	<ul style="list-style-type: none"> <li>• Record essential data for the patient</li> <li>• Prepare the optimal referral health facility for the incoming patient through coordination with the Referral Coordinator/ Duty Administrator/ Medical Superintendent</li> </ul>
	<b>Ambulance paramedic</b>	<ul style="list-style-type: none"> <li>• Stabilize the complicated case while transferring</li> <li>• Timely transfer the patient to the most optimal facility</li> </ul>
<b>Referral Health Facility</b>	<b>Medical Superintendent/Duty Administrator</b>	<ul style="list-style-type: none"> <li>• Ensure timely response to the calls from ambulance call center</li> <li>• Timely arranging the treatment for the incoming patient</li> <li>• Monitor the treatment of the referred case</li> <li>• Make feedback call to the referring facility on case outcome</li> <li>• Record the maternal case in the maternal referral register at the facility</li> </ul>
	<b>Specialized staff (i.e gynecologist, etc)</b>	<ul style="list-style-type: none"> <li>• Provide required treatment to the referred case</li> </ul>

## Appendix – E - Triage and treatment in the emergency unit ≥12 years



### TRIAGE AND TREATMENT IN THE EMERGENCY UNIT ≥12 YEARS

