सत्यमेव जयते

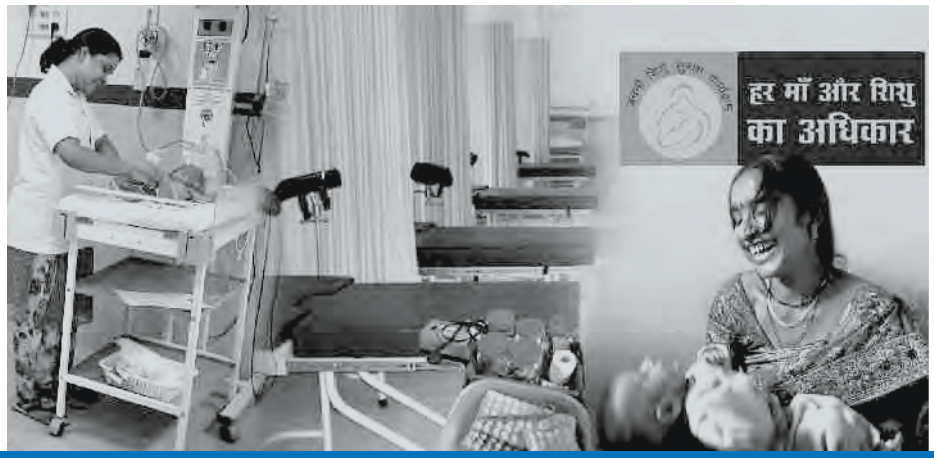
NATIONAL HEALTH MISSION
राष्ट्रीय स्वास्थ्य मिशन

# Maternal and Newborn Health Toolkit


*To provide quality maternal and newborn health services at health facilities in India*

**Maternal Health Division**
Ministry of Health & Family Welfare
Government of India

**November 2013**

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भारत सरकार
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
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# PREFACE

With the launch of many new initiatives such as Janani Suraksha Yojana (JSY) and Janani Shishu Suraksha Karyakram (JSSK) there has been a sharp surge in institutional deliveries across States. Several steps have been taken to cope with the increasing case loads at public health facilities. As a major beginning, 100 bedded maternal & child health hospitals wings have been sanctioned in this year which will add more than 25,000 beds for mothers and children in a bid to improve the quality of services.

Our past experience indicates that lack of standardization of design in terms of infrastructure, equipment, HR, infection prevention and control and also referral models have been major bottlenecks in ensuring quality maternal and neonatal health services.

Maternal Health Division therefore embarked on extensive deliberations with experts, development partners and other stakeholders in designing a Maternal and Newborn Health (MNH) Toolkit which lays out in detail uniform and standard designs and protocols for setting up state of the art maternal and newborn facilities at different levels. The toolkit would also be useful for improving the existing Labour room/OT/wards.

Improving quality has a special focus in the 12th Five Year Plan and is an important conditionality in this year's ROP. I would therefore hope that the state policymakers and programme managers would use this toolkit optimally. The MNH toolkit, I am sure will help in planning and operationalizing safe motherhood services with dignity and quality for lakhs of women approaching public health maternity facilities in all the States.

(Anuradha Gupta)

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# FOREWORD

Timely provision of emergency obstetric care and routine essential obstetric and newborn care are the key strategies for reduction of maternal and neonatal morbidity and mortality. Mother and newborn is a dyad, hence the service packages should be designed to provide care to the mother from antenatal to postnatal period. Essential newborn care should start soon after delivery and continue thereafter.

However, during various field visits (such as JRM, CRM, IMT) it has been observed that there are weaknesses and substantial gaps in the type of care provided during pregnancy and childbirth. One of the reasons being lack of orientation of state programme officers in effective planning for provision of quality maternal and newborn health services at public health facilities.

The toolkit aims to provide knowledge/information on standardized maternal and neonatal care package across the country to provide quality services at public health institutions. Most of the information given in this toolkit has been taken out from various existing guidelines. The additions however are on making state of the art MCH wing, labour room, ward, and OT etc., with complete technical protocols in place.

The MNH toolkit will help the programme officers in operationalizing the health facilities in providing quality care to the best of client satisfaction.

(Dr. Rakesh Kumar)

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# ACKNOWLEDGEMENT

To accelerate the decline in MMR it is necessary to improve the quality of care being rendered at the public health facility. During the field visits, it has been observed that there is a lack in knowledge on how to design and place a client-friendly facility which renders quality services with dignity and respect to the mother and baby.

The Maternal and Newborn Health Toolkit has been developed to help programme managers and clinicians in organizing the critical areas of service provision as per standards laid down in the toolkit for Maternal and Neonatal Health (MNH) services in the States and districts. These guidelines for toolkit have come up after thorough deliberations and sustained efforts of Maternal Health Division of this Ministry and other stakeholders.

I would like to express my sincere gratitude to Ms. Anuradha Gupta, AS&MD, NRHM, GOI for conceptualizing this idea and guiding us in preparing this toolkit with special focus for improving the condition and protocols of labour room. I would also like to thank Dr. Rakesh Kumar, JS (RCH), MOHFW for his regular technical guidance and administrative support in completing this process of developing the toolkit.

I would also like to acknowledge the support given by Mission Director (NRHM), Govt. of Maharashtra and Mission Director (NRHM), Govt. of Madhya Pradesh for facilitating the deliberations and technical assistance. I would like to acknowledge the contribution of UNICEF particularly Dr. V. K. Anand, Dr. Malalay Ahmadzai and Dr. Ritu Agrawal in initiating the process and for technical inputs. The support and inputs given by the technical officers of development partners. UNFPA and WHO, has been valuable. I must thank Dr. Bulbul Sood, Country Director, JHPIEGO and her team for their proactive support in framing these guidelines.

My sincere thanks to Dr. P. Padmanaban, and Mr. K. Prasanth from NHSRC who always joined the expert group deliberations even though they had to cancel their other commitments. I must acknowledge the fact that all the National and State experts

participated in the deliberations particularly Dr. Aboli Gore, MP TAST, Dr. Archana Mishra, DD(MH), Govt. of Madhya Pradesh, Dr. Alka Gupta, Govt. of Chhattisgarh, Dr. Poonam Shivkumar, MGIMS Sewagram, and Dr. Manju Chuggani, Principal, Jamia Hamdard College of Nursing, for their valuable inputs.

I would like to appreciate the contribution given by Child Health and Family Planning Division of this Ministry for their contribution in framing these guidelines. The technical support given by Dr. Manisha Malhotra, DC (MH), Dr. Dinesh Baswal, DC (MH), Dr. Ravinder Kaur, Dr. Pushkar Kumar, and Dr. Rajeev Agarwal, all Senior Consultants at the MH Division, helped in firming the technical components and also in bringing this document to its final edited version.

It is my earnest request to all the States Mission Directors and Programme Officers to take personal initiative in changing the outlook of maternity wing particularly labour room, OT, wards as per the standards given in the guidelines so that Standard treatment protocols are followed in order to ensure quality service to every pregnant woman, mother and newborn accessing public health facilities.

(Dr. H. Bhushan)

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# Abbreviations

| | |
|---|---|
| **AMTSL** | Active Management of Third Stage of Labour |
| **ANC** | Ante Natal Care |
| **ANM** | Auxiliary Nurse Midwife |
| **ART** | Anti-Retroviral Therapy |
| **ASHA** | Accredited Social Health Activist |
| **AWC** | Anganwadi Centre |
| **BEmOC** | Basic Emergency Obstetric Care |
| **BMO** | Block Medical Officer |
| **BMW** | Biomedical Waste |
| **BP** | Blood Pressure |
| **BPL** | Below Poverty Line |
| **BSU** | Blood Storage Unit |
| **CBR** | Crude Birth Rate |
| **CEmOC** | Comprehensive Emergency Obstetric Care |
| **CFL** | Compact Fluorescent Lamp |
| **CH** | Child Health |
| **CHC** | Community Health Centre |
| **CMO** | Chief Medical Officer |
| **CRM** | Common Review Mission |
| **CS** | Civil Surgeon |
| **CSSD** | Central Sterile Supply Department |
| **CTT** | Conventional Tubectomy |
| **DDK** | Disposable Delivery Kit |
| **DEO** | Data Entry Operator |
| **DH** | District Hospital |
| **DLHS** | District Level Health Survey |
| **DP** | Delivery Point |
| **EDD** | Expected Date of Delivery |
| **EDL** | Essential Drug List |
| **ELA** | Expected level of achievement |
| **EmOC** | Emergency Obstetric Care |
| **ENBC** | Essential Newborn Care |
| **EVA** | Electric Vacuum Aspiration |
| **FIGO** | International Federation of Gynaecology and Obstetrics |
| **FIMNCI** | Facility based Integrated Management of Neonatal and Childhood Illnesses |

| | |
|---|---|
| **FP** | Family Planning |
| **FPOT** | Family Planning Operation Theatre |
| **FRU** | First Referral Unit |
| **GoI** | Government of India |
| **Hb** | Hemoglobin |
| **HBNC** | Home Based Newborn Care |
| **HIV/AIDS** | Human Immuno deficiency Virus/ Acquired Immune Deficiency Syndrome |
| **HLD** | High Level Disinfection |
| **HMIS** | Health Management Information System |
| **HR** | Human Resource |
| **I/C** | In-Charge |
| **ICTC** | Integrated Counselling and Testing Centre |
| **ICU** | Intensive Care Unit |
| **IEC** | Information, Education and Communication |
| **IFA** | Iron and Folic Acid |
| **IMEP** | Infection Management and Environment Protection |
| **IMNCI** | Integrated Management of Neonatal and Childhood Illnesses |
| **IMR** | Infant Mortality Rate |
| **IMT** | Integrated Monitoring Teams |
| **INC** | Intranatal Care |
| **IPD** | Inpatient Department |
| **IPHS** | Indian Public Health Standards |
| **IU** | International Unit |
| **IUCD** | Intra Uterine Contraceptive Device |
| **IV** | Intra Venous |
| **JRM** | Joint Review Mission |
| **JSSK** | Janani Shishu Suraksha Karyakram |
| **JSY** | Janani Suraksha Yojana |
| **KMC** | Kangaroo Mother Care |
| **L1, L2, L3** | Level 1, Level 2, Level 3 |
| **LBW** | Low Birth Weight |
| **LCD** | Liquid Crystal Display |
| **LHV** | Lady Health Visitor |
| **LR** | Labour Room |
| **LSAS** | Life Saving Anesthesia Skills |
| **LSCS** | Lower Segment Caesarian Section |
| **LT** | Lab Technician |
| **LTT** | Laparoscopic Tubectomy |
| **MCH** | Maternal and Child Health |

| | |
|---|---|
| **MCP** | Mother and Child Protection |
| **MCTS** | Mother and Child Tracking System |
| **MDG** | Millennium Development Goal |
| **MDR** | Maternal Death Review |
| **MH** | Maternal Health |
| **MMR** | Maternal Mortality Ratio |
| **MNH** | Maternal and Neonatal Health |
| **MO** | Medical Officer |
| **MoHFW** | Ministry of Health and Family Welfare |
| **MP** | Malaria Parasite |
| **MPW** | Multipurpose Worker |
| **MTP** | Medical Termination of Pregnancy |
| **MVA** | Manual Vacuum Aspiration |
| **NBCC** | Newborn Care Corner |
| **NBSU** | New Born Stabilization Unit |
| **ND** | Normal Delivery |
| **NACO** | National Aids Control Organization |
| **NFHS** | National Family Health Survey |
| **NG** | Naso Gastric |
| **NMR** | Neonatal Mortality Rate |
| **NRC** | Nutritional Rehabilitation Centre |
| **NRHM** | National Rural Health Mission |
| **NSSK** | Navjat Shishu Suraksha Karyakram |
| **NSV** | Non Scalpel Vasectomy |
| **Ob/Gyn/OBG** | Obstetrician and Gynecologists |
| **OPD** | Out Patient Department |
| **OT** | Operation Theatre |
| **P/V** | Per Vaginum |
| **PEP** | Post Exposure Prophylaxis |
| **PHC** | Primary Health Centre |
| **PIH** | Pregnancy Induced Hypertension |
| **PNC** | Postnatal Care |
| **PPIUCD** | Post-partum Intra Uterine Contraceptive Device |
| **PPS** | Post-partum Sterilisation |
| **PPOT** | Post-partum Operation Theatre |
| **PW** | Pregnant woman |
| **PPH** | Post-partum Haemorrhage |

| | |
|---|---|
| **PPTCT** | Preventing Parent to Child Transmission |
| **RCH** | Reproductive and Child Health Programme |
| **RDK** | Rapid Diagnostic Kit |
| **RDS** | Respiratory Distress Syndrome |
| **RGI** | Registrar General of India |
| **RMNCH** | Reproductive Maternal Newborn and Child Heath |
| **RPR** | Rapid Plasma Reagin |
| **RTI/STI** | Reproductive Tract Infection/ Sexually Transmitted Infection |
| **SBA** | Skilled Birth Attendant |
| **SC** | Sub Centre |
| **SM** | Safe Motherhood |
| **SNCU** | Special Newborn Care Unit |
| **SHCs** | Sub-health Centre |
| **SDH** | Sub-district Hospital |
| **SN** | Staff Nurse |
| **SRS** | Sample Registration System |
| **TT** | Tetanus Toxoid |
| **TV** | Television |
| **U5MR** | Under-5 Mortality Rate |
| **USG** | Ultrasonography |
| **VHND** | Village Health and Nutrition Day |
| **WC** | Water Closet |
| **WHO** | World Health Organization |

# Introduction

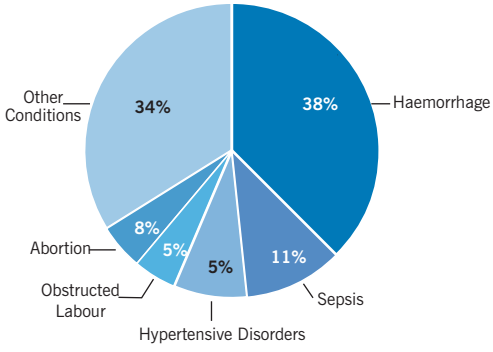
# Introduction

*"Women are not dying because of a disease we cannot treat. They are dying because societies have yet to make the decision that their lives are worth saving."* ***Mamoud Fathalla, President of the International Federation of Gynecology and Obstetrics (FIGO), World Congress, Copenhagen 1997***

Maternal mortality is a sensitive indicator. It helps to understand the health care system of a country and also indicates the prevailing socio-economic scenario. India contributes to 20% of global maternal deaths. Around 56,000 women die every year in the country due to pregnancy or pregnancy related causes. Over the last decade, there has been a decline in maternal mortality ratio (MMR) from 301 (SRS 2001-2003) to 212 (SRS 2007-09). Despite the appreciable decline, the current MMR continues to be unacceptably high. Moreover, within the country, there is a wide interstate and intrastate variation in MMR with an MMR of 390 in Assam and 81 in Kerala[1]. Even within the states, MMR varies widely from one division/region to another, for example Agra and Faizabad divisions in Uttar Pradesh have MMR of 167 and 437[2], respectively.

Causes of maternal deaths may be direct or indirect. The focus till now has largely been on addressing the direct causes of maternal deaths. However, indirect causes also need to be addressed to further reduce MMR and achieve the Millennium Development Goal (MDGs). The indirect causes also include the socio-economic determinants of health which are referred to as the three known delays: 1) delay in making a decision on the need for medical care; 2) delay in reaching the appropriate facility in time; and 3) delay in initiating the correct treatment at the health facility.

**Figure 1: Causes of maternal deaths in India[3]**




[1] *SRS 2007–2009*
[2] *AHS 2011-12*
[3] *RGI (1997-2003)*

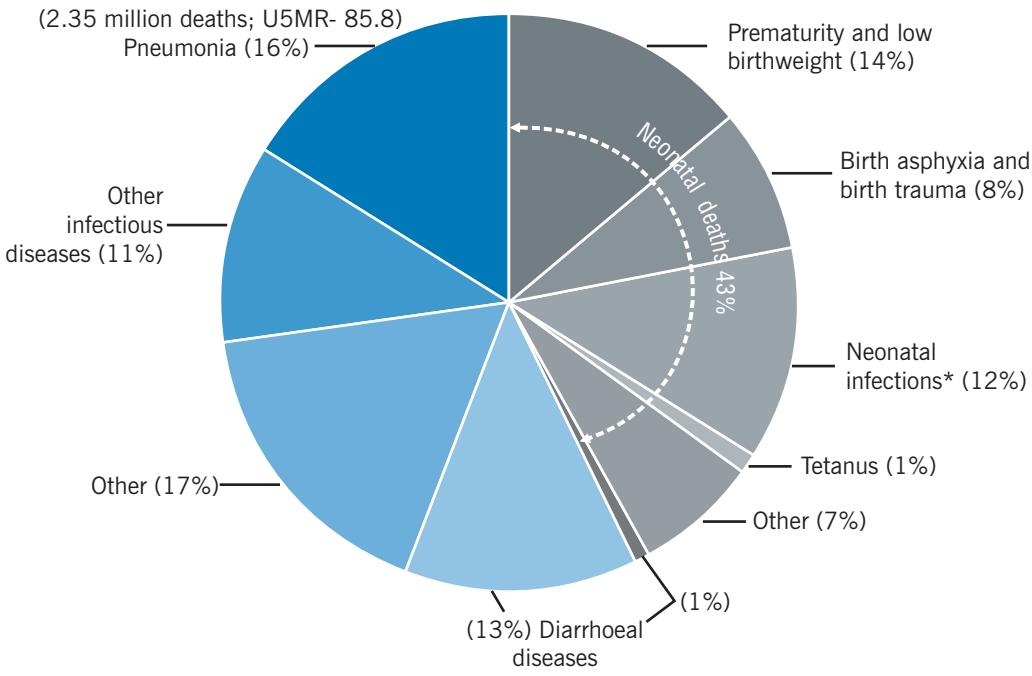
The Janani Suraksha Yojana (JSY) initiative under the aegis of the National Rural Health Mission (NRHM) resulted in a phenomenal increase in the rate of institutional deliveries in India from 47% as reported in the District Level Health Survey (DLHS-3, 2007-08) to 73% in the Coverage Evaluation Survey (CES 2009). Yet, about 17% births continue to take place at home and, even those women who come into the fold of institutional delivery are many a time deprived of quality services. The 12th Five Year Plan aims to bring all women during pregnancy and childbirth into the institutional fold so that delivery care services of good quality can be provided to them at the time of delivery at zero expense as envisioned under the Janani Shishu Suraksha Karyakram (JSSK) programme. The programme entitles all pregnant women to absolutely free institutional delivery including C-section with a provision for free drugs, diagnostics, diet, blood and transport from home to facility, between facilities and drop back home.

Similarly, IMR has fallen from 80 in Year 1990 to 42 in 2012. As per SRS, NMR has fallen from 53 in Year 1990 to 31 in 2011. In absolute numbers, death among babies in 0-28 days of life decreased from 13.2 lakhs in 1990 to 8.2 lakhs in 2011 whereas number of live births has increased from 256 lakhs in 1990 to 264 lakhs in 2010. As per the Registrar General of India, Sample Registration System 2011, the under-five mortality rate is 55 per 1000 live births which translates into 14.5 lakh deaths of children below 5 years of age.

- About 43% of under-five deaths take place within the first 7 days of birth.
- About 56% of under-five deaths take place within first one month of birth.
- Approximately 80% of under-five child mortality takes place within one year of birth. (IMR)

Neonatal mortality  in India contributes towards 56% of all deaths in childhood (up to age 5 years) and 70% of infant deaths (below one year of age).

**Figure 2: Causes of under-5 deaths in India**[4]




Under NRHM, there are a number of focused interventions for improving care of both the mother and the newborn, which include focus on improving access to skilled birth attendance and emergency obstetric care for all women in rural areas. On the demand side, JSY has led in overcoming many traditional barriers to institutional deliveries. This has led to an unprecedented surge in the proportion of institutional deliveries even in the low performing states.

Capacity building trainings in Skilled Birth Attendance (SBA), Emergency Obstetric Care (EmOC), Life Saving Anesthesia Skills (LSAS), Use of Intra-uterine Contraceptive Devices (Cu-IUCD and PPIUCD), Navjat Shishu Suraksha Karyakram (NSSK), Home-based Newborn Care (HBNC), Integrated Management of Neonatal and Childhood Illness (IMNCI) along with establishment of First Referral Units (FRUs) and 24x7 Primary Health Centres (PHCs), Special Newborn Care Units (SNCUs), and New Born Care Corners (NBCCs) have enhanced access to critical maternal, newborn and child health services in health institutions. However, many of the health facilities designated for provision of BEmOC and CEmOC services are still not in a position to provide optimal quality of care.

[4] *The Million death study*

To reduce MMR and IMR including NMR, strategies and interventions have to be tailored to specific needs and situations and implemented as a continuum of care; hence service packages have to be designed to provide care to the mother and newborn pair from antenatal to postnatal period. Essential newborn care should start soon after delivery and continue thereafter in the rest of the newborn period.

The information provided in this toolkit is drawn on various existing guidelines with additional information on how to set up state-of-the-art maternal and child health (MCH) wings including labour rooms, wards and operation theatres with standard technical protocols. This MNH toolkit will aid programme managers in operationalizing health facilities to provide optimal quality care to the utmost satisfaction of the clients accessing these facilities.

## Purpose of the toolkit

The objective of this toolkit is to provide support and guidance to policymakers, programme officers and managers to establish health facilities providing maternal and neonatal services to ensure quality services.

**This toolkit provides answers to the following key questions:**

1. What are the underlying factors (e.g. delays) which can lead to maternal and neonatal deaths?
2. What are the benchmarks/signal functions to provide quality MNH services?
3. What are the standard, technical protocols for MNH services?
4. How to design, organize, and manage MNH services at various levels including specific requirements for infrastructure, equipment, supplies, human resources, capacity building, recording/reporting at L1, L2, L3 MCH centres?

## End-users of the toolkit

End-users of this MNH toolkit will be hospital administrators and health facility managers, doctors in charge, nursing staff as well as nursing school faculty, and medical school faculty. It is expected that health managers at different levels of healthcare would be able to utilize the toolkit to improve the quality of maternal and neonatal care services in their health facilities.

## Underlying factors (delays) which can lead to maternal and neonatal deaths

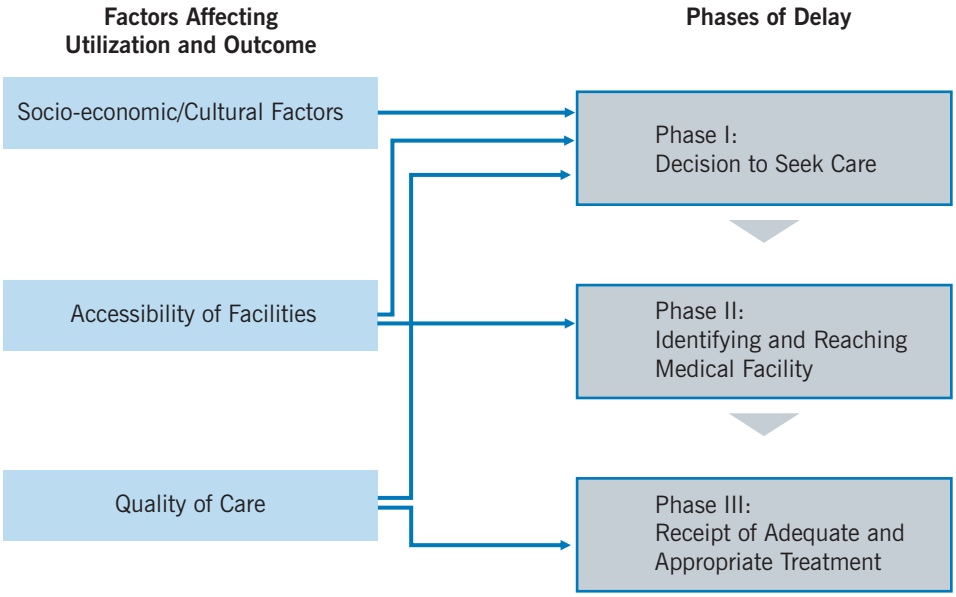
In India, haemorrhage, sepsis, obstructed labour, PIH and unsafe abortions remain the biggest direct preventable medical causes for maternal deaths. However, the underlying factors or indirect causes or 'delays' in accessing healthcare during pregnancy, childbirth or thereafter are well recognized as contributing factors to many of the maternal and neonatal deaths, which may be in:

1) Recognising danger signs and deciding to seek appropriate medical help for an obstetric emergency
2) Reaching an appropriate obstetric facility
3) Receiving adequate quality of care once a woman reaches the facility

The 'three delays' model (Fig. 3) is a useful tool to identify the points at which delays can occur in the management of obstetric complications and to design programmes to address these delays.

The first two 'delays' relate directly to the issue of access to care, encompassing factors in the family and the community, including transportation. The third 'delay'

**Figure 3: The 'three delays' model**



relates to factors in the health facility, including quality of care. Unless the three delays are addressed, mortality and morbidity cannot be reduced. In practice, it is crucial to address the third delay first, as it would be useless to facilitate access to a health facility if quality health care services are not available at the health facility.

Socio-economic status of women and families, community awareness, birth preparedness, complication readiness, and good referral linkages are linked to the first and second delays. The third delay can be addressed only through the availability of good quality basic and emergency obstetric and neonatal services. Health managers and planners must assess provision of obstetric services in their respective areas. Once the situation has been analyzed, the next step is to strengthen these facilities. This planning can be as follows:

- As a first step, strengthening of large facilities which are already conducting deliveries should be taken up.
- As a second step, identifying and strengthening sufficient number of facilities to ensure optimal geographical coverage.

Through NRHM and RCH-II, various steps have been undertaken to address the delays. However, there is still a long way to go. The States which have been able to address delay three effectively have made substantial progress in reducing MMR.

## Benchmarks/Signal functions for quality MNH services

Health facilities can be classified as Basic Emergency Obstetric Care (BEmOC) and Comprehensive Emergency Obstetric Care (CEmOC) based on the level of services provided. Table 1 lists the defined minimal 'signal functions' that these levels of health facilities should provide. These are the key interventions for treating the vast majority of maternal complications and for resuscitation of the newborn after birth. The list of signal functions is not exhaustive but these functions serve as indicators of the level of care being provided.

**Table 1: Defined minimal 'Signal Functions' that health facilities should provide**

| BEmOC Services | CEmOC Services |
|---|---|
| 1. Administer parental antibiotics<br>2. Administer uterotonic drugs (i.e. parental oxytocin)<br>3. Administer parental anticonvulsants for pre-eclampsia and eclampsia (i.e. magnesium sulphate)<br>4. Manual Removal of placenta<br>5. Remove retained products (eg. Manual vacuum extraction, dilatation and curettage)<br>6. Perform assisted vaginal delivery (eg. vacuum extraction, forceps delivery)<br>7. Performs basic neonatal resuscitation (e.g. with bag and mask) | Perform signal functions 1-7 (BEmOC Services), plus:<br>8. Perform surgery (e.g., Caesarean section)<br>9. Perform blood transfusion |
| A BEmOC facility is the one in which all functions 1-7 are performed.<br>A CEmOC facility is one in which all functions 1-9 are performed. | |

# Designing, organizing and managing MNH services

## I. MCH centres by level of care

Public health facilities such as the District Hospital (DH)/Sub-district Hospital (SDH)/Community Health Centre (CHC)/Primary Health Centre (PHC)/Sub-district Health Centre (SHC) are categorized depending on the levels (1, 2 and 3) of maternal and child health care and service delivery. Among these levels, some have been categorized as delivery points based on their performance and case load.

### Definitions[4]

**MCH Centres**

**Level 3** – (Comprehensive Level-FRU): All FRU-CHC/SDH/DH/area hospitals/ referral hospitals/tertiary hospitals where complications are managed including C-section and blood transfusion. An FRU shall be equipped also with a Newborn Stabilization Unit (NBSU) at CHC/SDH/others or Special Newborn Care Unit (SNCU) at DH and above. A District Hospital irrespective of caseload has to be a Level 3 institution.

[4] *Operational guidelines on Maternal and Newborn Health , GoI, MoHFW 2010*

**Level 2** – (Basic Level): All 24x7 facilities (PHC/Non-FRU CHC/others) providing BEmOC services; conducting deliveries and managing of medical complications (not requiring surgery or blood transfusion) and have either a NBCC or NBSU.

**Level 1** – All sub-centres and some PHCs which have not yet reached the next level of 24x7 PHC: where deliveries are conducted by a skilled-birth attendant (SBA). An NBCC must be established in all such facilities.

### Delivery points

Provision of service for delivery in a facility generally serves as an important indicator to assess whether the facility is operational or not. The concept of delivery point emerges from this presumption. Among the facilities, designated as L1, L2 and L3 there are some facilities which are conducting deliveries above a minimum benchmark. These facilities are designated as **Delivery Points** (See Annexure-1 for details). According to Government of India (GoI) mandate, these functional facilities should be the first to be strengthened for providing comprehensive reproductive maternal newborn and child health (RMNCH) services. Benchmarks for each level of facility are based on actual average number of deliveries being conducted per month.

### Criteria for establishing CEmOC and BEmOC services: Current scenario and recommendations

Currently, the population coverage for BEmOC and CEmOC facilities in India varies from state to state and is unevenly distributed. High-focus districts have very few functional facilities and therefore poor coverage, whereas bigger cities or metros have better coverage.

Health planners and managers should plan for operationalization of facilities, keeping in view both short- and long-term goals. Short-term planning should focus on making delivery points functional to provide comprehensive RMNCH services as defined for each level and ensuring adequate geographical coverage. This should be supported by a referral transport system that reaches the patient within 30 minutes of receiving a call and a health facility within the following 30 minutes.

The long-term goal should focus on planning for operationalization of the defined number of CEmOC and BEmOC centres during the 12th Five Year Plan period as indicated in Table 2. These numbers are based on WHO recommendations of at least 10 maternity beds per 1000 pregnant women with 80 % bed occupancy and three days of stay. This norm has been translated into the number of BEmOC/CEmOC facilities as required in India where an L2 delivery point is

expected to conduct at least 10 deliveries per month and an L3 delivery point at least 20 deliveries per month (including C-Section).

**Table 2: Infrastructural requirement for development of centres within 12th Five Year Plan period**

| Population | Expected deliveries in one year | Minimum no. of deliveries expected in private sector (30%)* | Maximum expected no. of deliveries in public health facilities (70%)* | Expected no. of deliveries per month (approx.) | Number of CEmOC centres (L3)** | Number of BEmOC centers (L2)** | Number of basic delivery centres with referral linkages (L1)** |
|---|---|---|---|---|---|---|---|
| 10 lakh | 23,000 | 6,900 | 16,100 | 1,350 | 2 (50% i.e. 675; 540 ND, 135 CS) | 18 (40% i.e. 540 ND) | 30 (10% i.e. 135) |
| 1,24,14, 91,960 (Census 2011) | 28,554,315 | 8,566,295 | 19,988,020 | 1,665,668 | 2,482 (50% i.e. 832,834; 666,268 ND, 166,567 CS) | 22,209 (40% i.e. 666,268 ND) | 37,250 (10% i.e., 166,567) |
| Expected number of normal deliveries in each facility per month | | | | | 270 | 30 | 5 |
| Expected number of complications in each facility per month | | | | | 70 | 8 | 0 |
| Expected number of CS in each facility per month | | | | | 67 | | |

**Estimated by current trends.* ***With expected number and % of deliveries*

The above model is suggestive and aims at achieving a long-term goal of optimal infrastructure (as per requirements).

In order to create a demand for services in the public sector, states such as Kerala, Punjab and Gujarat, which have a larger proportion of deliveries in the private sector need to evolve differential strategies for addressing the supply side. This would in effect result in diverting some deliveries from the private sector into the public sector health facilities and save them from out-of-pocket expenses. However, considerable efforts needs to be put in by states while planning of this long-term goal. Further, such plans need to be shared with the GoI.

The high focus states such Uttar Pradesh, Bihar, Madhya Pradesh, Rajasthan, Odisha, etc. which have high total fertility rates and a large number of births, will

have to calculate the requirements for BEmOC and CEmOC centres based on caseload and number of maternity beds required for catering to this.

The requirement of facility will also vary as per geographical needs (e.g. sparsely distributed population living in scattered hamlets in the inaccessible and remote hilly areas).

The HR requirement for all such facilities will also vary accordingly.

It is reiterated that these plans need to be made well in advance and must be shared with the GoI along with the detailed activities and time lines. The action plan must include a comprehensive human resource plan to ensure optimal utilization of the infrastructure which is created.

## II. Differential strategies for inaccessible/remote, hilly and tribal areas

**Tribal Areas:** States should clearly map out their remote and inaccessible areas/pockets located in the hilly and tribal districts, and accord priority to intensive monitoring of progress (physical, financial) of all health activities in these areas, and also taking necessary actions to address bottlenecks and speed up processes for implementation.

Under NRHM, there is a provision to formulate specific plans and allocate additional resources to 184 High Priority Districts which includes tribal/hilly areas of the country. For such pre-identified and notified tribal/hilly areas, there is a provision for relaxed norms for development of health infrastructure, medical mobile unit services and performance-based incentives to doctors and staff.

**Birth waiting homes:** In remote/inaccessible hilly and tribal areas, with poor road connectivity and poor access to health facilities, pregnant women often have to be carried by palkis/carts/cots to the nearest road head. To improve access in such areas, 'birth waiting homes' can be constructed within the compound of the health facility or in close proximity. Pregnant women can come and stay in these homes well before their expected date of delivery (EDD) and transferred to the facility once they go into labour. The pregnant woman should be provided the required support and suitably incentivized to move into these facilities at least a week before the EDD.

**Special/innovative schemes for transportation:** In remote and inaccessible areas where there are few motorable roads; special schemes and incentives need to be instituted for bringing pregnant women and sick neonates (by palkis, carts, etc.) to the nearest road head that serves as a pickup point for referral transport.

**Suitable incentives to ANMs (SBAs):** ANMs trained in SBA can be incentivized for attending home deliveries in pre-identified and notified villages in remote and inaccessible areas where it is difficult to bring a woman to the health facility for delivery on account of geographical barriers/climatic exigencies.

### Criteria for selection and notification of villages where home deliveries are eminent

States should identify, select and notify blocks/villages/habitations areas where

1. Remote villages/habitations which do not have access to a motorable road and are accessible only on foot.
2. Remote villages/habitations situated on hilltops accessible only on foot.
3. Habitations/villages which are snowbound and remain largely inaccessible from the district/nearest town for a substantial time period (more than a month).

### Promoting Doorstep services:

1. Deployment and selection of ASHA based on hamlets
2. Home visits by ASHA/ANM for counselling on institutional delivery, HBNC, distributon of contraceptive, community based distribution of misoprostal, etc.

**Tracking service provision through Mother and Child Tracking System (MCTS):** All pregnant women must be registered under MCTS and should be constantly monitored for timely provision of services. ASHA must ensure a follow up visit to such pregnant women at least 1-2 weeks before the EDD to ensure timely institutional delivery. ASHAs can be given suitable incentives for ensuring the provision of the full range of services during antenatal to postnatal period to these women by tracking through MCTS.

**Community monitoring:** Active participation of the community in implementation and monitoring of service delivery right up to the grass root level can produce behaviour change in the local population for timely decision making for seeking health services at different levels. This is one of the critical elements for achieving an optimal status of maternal and newborn health.

## Organizing maternal and newborn health services in a district

Maternal health services in the public health sector, as explained earlier, are categorized into Levels 1,2 and 3. In accordance with the level of facility, the specific HR, infrastructure and service delivery criteria, for all the three levels are listed in Table 3.

**Table 3: Level of service delivery, service package and HR needs for MNH services**

| | Level 1 (SC/non 24x7 PHC) | Level 2 (24x7 PHC/non-FRU CHC) | Level 3 (FRU CHC/SDH/DH) |
|---|---|---|---|
| **Basic Function** | • Normal delivery; initial management and referral in case of complications<br>• Essential New Born Care | • Normal delivery; Identification and management of basic complications<br>• Basic management and referral of such complications which requires CEmOC care including HIV and Hepatitis B positive cases<br>• Care of the sick newborn and referral after stabilization | • Normal delivery, CEmOC services including comprehensive signal functions, management of complications including HIV and Hepatitis B positive cases, C-section and referral of complications to tertiary level care if required<br>• Care of sick newborn including Kangaroo Mother Care |
| **Beds (Minimum)** | 2–6 | 6–30 | 30 or more |
| **Geographic Area** | Cluster of 5–8 villages | Sector or block | Block or district |
| **Criterion** | Minimum 3 normal deliveries per month | Minimum 10 deliveries per month including management of complications | Minimum 20–50 deliveries per month including CS |
| ***Human Resource**<br>*The total HR requirement will also be calculated according to the case load. | • 2 ANMs<br>• 1 part-time female sweeper | • 1–2 Medical Officers (on-call after OPD hours)<br>• Minimum 4 staff nurses/ANMs each for labour room and maternity ward<br>• 2 Lab Technicians (for round-the-clock service delivery)<br>• Sweeper–3 for labour room (preferably female) and maternity ward HR for NBSU (see page 40) | • Specialists including gynecologist/ EmOC, anesthetist/LSAS, pediatrician<br>• Medical Officers<br>• Staff nurse, cleaning staff, counsellor, lab technician<br>• 1 certified sonologist (on call after routine hours)<br>• HR for SNCU (see page 35) |

| | Level 1 (SC/non 24x7 PHC) | Level 2 (24x7 PHC/non-FRU CHC) | Level 3 (FRU CHC/SDH/DH) |
|---|---|---|---|
| **Maternal Health Services** | • Identification and referral for danger signs<br>• Pregnancy testing and counselling<br>• Antenatal care<br>• Intranatal care<br>  ▪ Normal deliveries by SBA (Partograph, AMTSL, etc)<br>  ▪ Pre-referral management for obstetric emergencies (Eclampsia, PPH, shock)<br>• Postnatal care– 24–48 hours stay post-delivery<br>• Immediate newborn care – drying, warming, skin to skin contact<br>• Initiation of Breastfeeding<br>• Post-partum contraceptive counselling | **All in Level 1, plus the following:**<br>• Assisted vaginal deliveries<br>• Management of complications other than those requiring referral to L3 including blood transfusion or surgery<br>• Episiotomy and suturing<br>• Stabilization of obstetric emergencies and referral to L3 wherever required<br>• Antenatal steroids for preterm labour<br>• HIV screening<br>• 48 hours stay post-delivery<br>• Comprehensive abortion care<br>• Case management of RTI/STI<br>• Antibiotics for pre-term or PROM for prevention of sepsis of newborns | **All in Level 2, plus the following:**<br>• Comprehensive management of all obstetric emergencies, eg, PIH/eclampsia, sepsis, PPH, retained placenta, shock, obstructed labour, severe anemia<br>• CS and other surgical interventions<br>• Blood bank/storage center<br>• Blood grouping and cross-matching<br>• Link ART/ART at DH |
| **Family Planning Services** | • Counseling and provision of spacing methods including interval IUCD | • Level 1, plus the following:<br>• Female sterilization including post-partum sterilization, male sterilization (conventional and NSV) | Level 2, plus the following:<br>• Laparoscopic sterilization<br>• PPIUCD insertion |
| **Newborn Care** | **NBCC**<br>• Essential newborn care including resuscitation<br>• Zero day immunization (OPV, BCG, Hep B; as per GoI schedule), Inj. Vit. K | **NBSU**<br>All those in Level 1, plus the following:<br>• **Care of sick newborn**<br>  ▪ Identification and Management of LBW infants >/= 1800 gms with no other complications | **SNCU**<br>• All those in Level 2, plus<br>• **Care of sick newborn**<br>  ▪ Management of LBW newborns <1800 gms |

| | Level 1 (SC/non 24x7 PHC) | Level 2 (24x7 PHC/non-FRU CHC) | Level 3 (FRU CHC/SDH/DH) |
|---|---|---|---|
| **Newborn Care** | • **Care of normal newborn**<br>▪ Breastfeeding/ feeding support, thermo-regulation and asepsis<br>• **Care of sick newborn**<br>▪ Identification, stabilization and initial management of complications (sepsis, LBW/premature babies, etc.) before referral and prompt referral of 'sick' newborn<br>▪ Referral services | ▪ Phototherapy for newborns with hyperbilirubinemia<br>▪ Management of newborn sepsis<br>▪ Stabilization and referral of sick newborns and those with very low birth weight | ▪ Management of all sick newborns (except those requiring mechanical ventilation and major surgical interventions)<br>▪ Follow-up of all babies discharged from the unit and including of high-risk newborns. |
| **Required Skills** | • SBA, IMNCI, NSSK, IUCD | All in Level 1, plus the following:<br>• BEmOC, Minilap, MTP, FIMNCI, NSV, Training for RTI/STI | All in Level 2, plus the following:<br>• EmOC, LSAS, FBNC, PPIUCD, Laparoscopic sterilization and Training of MO and Lab Tech on Blood storage unit |
| **Laboratory Test** | • Hb, Urine for albumin and sugar, RDK for malaria, Urine for pregnancy test | All in Level 1, plus the following:<br>• CBC<br>• Bleeding time, clotting time<br>• Routine and microscopic examination of stool<br>• Sputum for TB<br>• P/S for MP<br>• HIV screening<br>• Hepatitis B/ Australian Antigen<br>• Blood grouping and RH typing,<br>• wet mount,<br>• PR/VDRL,<br>• serum bilirubin for sick newborns | All in Level 2, plus the following:<br>• Liver function test<br>• Glucose tolerance test<br>• Platelet count<br>• Thyroid profile<br>• Gram staining<br>• USG<br>• KFT<br>• Pap smear |

Some of the health facilities might be functioning at a lower level than the level designated for that facility. Such facilities have to ensure delivery of the services as per its functional level than it has been designated. For example, if a CHC that has been designated to be functional as an FRU (MCH L3) is not able to deliver the desired services of this level then it has to ensure delivery of L2 MCH services (24x7 PHC). So, the prescribed HR for RMNCH should be placed at such facilities as per their functional level not as per designated level, ensure optimal utilization of HR and equipment. Once the minimum services are assured; state should make efforts to improve the service delivery as per its designated level. See details under table on HR.

The Ministry of Health and Family Welfare (MoHFW), Government of India, has implemented various programmes for increasing access to quality RMNCH and family planning services in the country. To ensure that these services are accessed by the communities uniformly and appropriately, it is important that awareness be created about the availability of these services at the public sector health facilities. Towards this objective, a dedicated RMNCH counsellor is being placed at the public sector health facilities under NRHM. It is envisioned that the counsellor will play a key role in increasing awareness and generating demand for the various RMNCH services provided at the facilities. The counsellor is expected to ensure that all women, children and families coming to the health facilities are given appropriate information about the available RMNCH services at the facility.

# Chapter 1 Planning and Organizing MNH Services

# Chapter 1
# Planning and Organizing MNH Services

All facilities providing MNH services should have a mother-and-newborn-friendly environment. Dignity and safety (privacy and choice) of clients should be ensured. Staff deputed at such facilities should adhere to clinical protocols/standards of service delivery and ensure infection prevention measures.

This section provides an outline for planning infrastructure, equipment, drugs and supplies, record keeping, reporting and monitoring. It is the responsibility of the facility in-charge and service providers to ensure that the institution and its premises remain clean, safe and client-friendly. A mother and baby friendly environment to be ensured. Health staff should be polite, courteous and respectful in behaviour towards their client; equipment has to be accessible and functional and subject to checks during every shift of staff duty; drugs and consumables to be made available 24x7; assured referral linkages have to be established; and daily rounds conducted by facility managers to identify gaps and bottlenecks and address these on priority basis.

A nodal officer should be designated at every institution for assuring quality of services. All staff including support staff should be oriented and trained on relevant protocols including infection prevention. Audit of sample prescriptions/case sheets should be a weekly exercise by faculty members or treating physicians to ensure rational treatment as per clinical standards. A robust grievance redressal system should also be put in place.

**Mother-and-baby-friendly environment**

**Critical steps**

- Respecting the right of every mother and baby to stay safe in the facility and with dignity
- Designing the infrastructure for easy mobility and comfortable stay
- Training the service providers for necessary behavioral and technical skills
- Providing integrated maternal newborn and child health services in accordance with protocols with required competency

- Practice of infection prevention and bio-medical waste management as per the guidelines
- Establishing assured referral linkages
- Monitoring quality of service delivery and establishing a process for improvement of quality
- Ensuring functional grievance redressal system both for client and service providers
- Assessing client satisfaction periodically
- For smooth planning at each level of facility, the plan should take care of infrastructure, equipment, drugs and supplies, record keeping, reporting and monitoring.

## Infrastructure

While planning for infrastructure, planners may face two situations:

1) To improve existing infrastructure; or

2) To create additional infrastructure particularly where bed occupancy is more than 70%.

### Improving existing infrastructure

Although, it may not be always possible to ensure the recommended layouts and infrastructure within an existing facility, it is still essential to make the existing facility as mother- and baby-friendly as possible. Planning therefore cannot be based on a one-size-fits-all, and will differ from facility to facility as per the local situation. Some of the critical steps to follow are to:

- Perform a need assessment and identify the gaps by observing client flow and time taken for actual service delivery from the time clients report to the registration or emergency.
- Plan to address gaps to improve service delivery and minimize the third delay.
- Relocate/redesign/rearrange available area/rooms for optimal utilization keep in mind client safety, privacy and comfort. (On how to optimize infrastructure and to understand the desirable flow of client and service delivery, refer to the plan for new MCH wing.)

- Repair and refurbish facility with appropriate tiling, flooring, roofing and ventilation.
- Ensure privacy, create anterooms before aseptic zones such as LR, OT, obstetric ICU, SNCU, etc.
- Ensure availability of 24x7 running water supply, uninterrupted power supply (along with power back-up), and clean toilets (separate for male and female).
- Attention should be given for improving the ambience of the premises, waiting area and other facilities for the clients.


## Creating new infrastructure

While creating new infrastructure, the criteria given below must be used:

1. Functionality of the facility
2. Delivery point
3. Bed occupancy
4. Services being delivered

## Table 4: Essential components for creating new infrastructure

| Essential components for creating new infrastructure | Level 1 | Level 2 | Level 3 |
|---|---|---|---|
| **Criteria delivery point (for detail ref. to annexure 1) and bed occupancy** | • Functioning as delivery point and increasing load of delivery | • Bed Occupancy: >70%, increasing load of delivery and existing infrastructure has been optimally utilized | • Same as in Level 2 |
| **Premises** | • Neat and clean outer surroundings, with adequate signage<br>• Boundary wall with a gate<br>• Sign board with facility name, Glow sign make it visible from a distance. Board should have name of the institution, type of institution with NRHM a state logos<br>• Direction boards leading to the different parts of facility<br>• Board indicating routine functioning hours, names of ANM and other staff with their contact numbers<br>• Emergency phone no. of ANM and vehicle drivers/call centre for referral transport<br>• Adequate lighting and ventilation<br>• Bio-medical waste pits are constructed, to be away from the water source (follow the IMEP guidelines | Same as in Level 1, plus the following:<br>• Controlled entry and exit<br>• Approach road within the facility is paved with interlocking blocks<br>• Garden clean, well maintained<br>• Covered drainage<br>• Leveled ground without water logging.<br>• Parking space for vehicles of staff and clients<br>• Exclusive slots for parking of ambulances/referral transport and driver's room<br>• Covered porch where the ambulance can de-board the patient<br>• Wheel-chair and patient stretcher are available at the entrance of the facility<br>• Entrance has a ramp for easy barrier free movement of wheel-chair/ stretcher | Same as in Level 2, plus the following:<br>• Clients have easy access to emergency area<br>• Signage in vernacular local language is displayed to guide client to various departments in the facility<br>• Canteen (may be outsourced) |

| Essential components for creating new infrastructure | Level 1 | Level 2 | Level 3 |
|---|---|---|---|
| **Waiting Area** | • Seating arrangement for clients and attendants in proportion to client load<br>• Display of doctors' names with days and duty rosters | Same as in Level 1, plus the following:<br>• Covered space, water cooler and drinking water<br>• Display of Citizen Charter, display of IEC and EDL<br>• Display of staff on duty with timing<br>• Directions to various departments and room numbers displayed clearly<br>• Functional toilets for staff, clients and patients attendants | Same as in Level 2, plus the following:<br>• Public address system, LCD/ Television for IEC<br>• Suggestion box which is opened on a regular basis<br>• A board next to suggestion box should display suggestions received and action taken<br>• Help desk/ grievance redressal system<br>• Token system and electronic display for high caseload facility |
| **Registration Counter** | • Availability of register<br>• Mother and Child Protection (MCP) card and Safe Motherhood (SM) booklet with referral slips | Same as in Level 1, plus the following:<br>• Availability of space with adequate furniture<br>• Counter has a central register, OPD slip, admission slip<br>• Computerized registration for high caseload facilities<br>• Serves multiple purposes like registration, assistance and inquiry counter | Same as in Level 2, plus the following:<br>• Should be located near OPD<br>• Adequately furnished room<br>• Triage (segregation of OPD and emergency clients) |

| Essential components for creating new infrastructure | Level 1 | Level 2 | Level 3 |
|---|---|---|---|
| **Emergency** | • Assured referral after basic management<br>• Display of technical protocols | Same as in Level 1, plus the following:<br>• Designated room with emergency drug tray, oxygen, suction facility, adult and neonatal resuscitation equipment, radiant warmer, consumables and disposables, display of resuscitation protocols, display of duty staff roster with timings | Same as in Level 2, plus the following<br>• Separate emergency facilities for maternity cases at DH<br>• Casualty duty MO, emergency beds<br>• Easy access to delivery room and OT<br>• Provision for security guards and other support staff<br>• Separate room/space for injection, dressing, etc. |
| **OPD** | • Seating arrangement for staff and patient, examining facility – examination table with foam mattress, bedsheet and pillow, screen /curtains for privacy with foot step<br>• Display of working hours and duty roster of staff.<br>• Display of technical protocols<br>• Privacy for clients<br>• Hand washing facility | Same as in Level 1, plus the following:<br>• Drinking water facility<br>• Toilets | Same as in Level 2, plus the following:<br>• Separate OPD for maternity cases at DH co-located with waiting area<br>• Dedicated ANC, PNC and FP counseling rooms<br>• Air Conditioner<br>• OPD attendants/ward boy<br>• Help desk<br>• Electronic display of token number |
| **Pharmacy** | • Essential medicines for antenatal, intra-natal, postnatal, newborn and child health as per the level of the facility is required to be kept | Same as in Level 1, plus the following:<br>• Located near OPD<br>• Area is adequate to accommodate 5-10% of the OPD clients | Same as in Level 2 |

| Essential components for creating new infrastructure | Level 1 | Level 2 | Level 3 |
|---|---|---|---|
| **Pharmacy** | | • EDL is displayed available including drugs for medical abortion, contraceptives including condoms<br>• Cupboards, pigeon-holes to keep tablets, bottles/ envelops for medicine distribution<br>• Drugs to be kept according to the date of expiry<br>• Stock register to be maintained | |
| **Clinical Laboratory** | • Material needed for mandated lab test at each level<br>• Haemoglobinometer (Sahilis kit) with reagents and lancet<br>• Strips for testing urine albumin and sugar<br>• Reagents such as sulphuric acid, acetic acid, Benedict solution<br>• Specimen collection bottle (in case testing strips are not available)<br>• Test-tubes, holder, test-tube stand, match box, spirit lamp<br>• RDK for malaria testing | Same as in Level 1, plus the following:<br>• Trained laboratory technicians<br>• Lab should be operational during OPD hours and emergency lab facility available after routine working hours<br>• Lab test reports reach a centralized OPD counter directly<br>• Lab is located near OPD area and should have a toilet nearby<br>• Lab should have marble/stone top platform and wash basin with running water supply<br>• Critical equipment – sequencing of the above red content<br>• Semi Auto analyzer<br>• Infection prevention protocols to be ensured | Same as in Level 2, plus the following:<br>• USG facility/outsourced should have a declaration displayed: sex determination of the foetus is not done at this facility<br>• Autoanalyser |

| Essential components for creating new infrastructure | Level 1 | Level 2 | Level 3 |
|---|---|---|---|
| **Labour Room** | • As per the number of delivery tables envisaged. Each delivery table and medicine trolley will require at least 10x10 ft space<br>• Windows with smoked glass, well lighted, draught-free environment, interior tiling of walls and floor<br>• Labor table (min 2) with mackintosh, Kelly's pad and buckets<br>• Stepping stool for every labor table; light for conducting deliveries;<br>• 4 trays namely delivery, baby, medicine and emergency tray<br>• NBCC<br>• Equipment for autoclave/ sterilization<br>• Wall clock<br>• Colour-coded bins<br>• Tub for 0.5% chlorine solution | Same as in Level 1, plus the following:<br>• Size of LR as per the case load; stainless steel top labour table with foam mattress, sheet and pillow as per case, load changing area and buffer zone, utility room, attached hand washing area and toilet with running water supply<br>• Air conditioning<br>• NBCC with adequate number of radiant warmer as per case load<br>• Proper IMEP including waste management | Same as in Level 2, plus the following:<br>• As per case load (Min 4) labour tables<br>• Central supply of oxygen/oxygen concentrator and suction facility<br>• Air conditioning, functional telephone connection, ultrasound machine, foetal monitor, pulse oxymeter, etc. |
| **ANC/PNC Wards** | • Two beds<br>• Privacy<br>• Foetoscope, newborn thermometer, weighing scale (Paediatric and adult), BP apparatus, disposable sterile syringe and needles, puncture proof box, consumables (cotton, gloves)<br>• Safe drinking water<br>• Wall clock | Same as in Level 1, plus the following:<br>• Adequate no of beds as per delivery load<br>• utility room, washrooms, doctors and nurses duty room, room for support staff, display of technical protocols and IEC material | Same as in Level 2, plus the following:<br>• Separate ANC/PNC and post- operative wards, nursing stations with glass partitions, small pantry, LCD/TV |

| Essential components for creating new infrastructure | Level 1 | Level 2 | Level 3 |
|---|---|---|---|
| **OT** | ---------- | Minor OT:<br>• Stainless steel top adequately wide table, foot rest, shadow less lamp<br>• Air conditioning, floor and wall tiling, slab with granite top, hand washing area with elbow operated handle<br>• Cupboard, colour-coded bins and tub for 0.5% chlorine solution<br>• Drug and dressing tray<br>• NBCC | Same as in Level 2, plus the following:<br>• Major OT: to do C-section and other related surgeries<br>• DH should have separate OBG and FPOT for sterilization<br>• OT table (Hydraulic), NBCC, Boyle's apparatus, attached scrub area, separate routine and emergency tray, anaesthesia tray, sterilized equipment for each surgery, neonatal tray,<br>• Drums for sterilized consumable like cotton, gauze, etc, receiving/pre-operative area, changing area and buffer zone, attached recovery room with beds, doctors and nurses duty room, utility room, attached hand washing area<br>• Pre-sterilised set for each delivery case (including newborn care and for resuscitation) |
| **Obstetric ICU (6-8 beds) at district hospital** | | | • Central nursing station with glass walls for observing all patients<br>• Attached Multi Para monitors with each bed<br>• A central observation area with monitors<br>• Round the clock doctors and nurses for close monitoring of patients |

| Essential components for creating new infrastructure | Level 1 | Level 2 | Level 3 |
|---|---|---|---|
| **Obstetric ICU (6-8 beds) at district hospital** | | | • Separate room for the new born along with the patient attendant for feeding/nursing<br>• Proper IMEP protocols including waste management |
| **Toilets** | • One toilet in or near the labour room with supply of running water<br>• Appropriate lighting | Same as in Level 1, plus the following:<br>• Attached toilet with LR<br>• Separate toilets for the clients visiting OPD and admitted patients<br>• These should be proportionate to the client load<br>• Cleaning staff is available round the clock<br>• All toilets have running water, area to wash hands, door-latch and good lighting | Same as in Level 2 |
| **Other Rooms** | | • Training/meeting room where trainings, orientation, meetings are held<br>• Duty rooms for doctors and nurses | Same as in Level 2, plus the following:<br>• Counselors' room<br>• Store room – wall mounted cupboards for sterile gowns, leggings, gynae sheets and delivery trays, wall mounted cup boards for sterile drums, medicines |

| Essential components for creating new infrastructure | Level 1 | Level 2 | Level 3 |
|---|---|---|---|
| **Infection Prevention** | • Hand washing as per protocol<br>• Use of disposable gloves, use of disinfectants, clean sheet, sterile scissor for cord cutting, sterilized cord ties, in facility – boiling of instruments and colour coded bins | Same as in Level 1, plus the following:<br>• Autoclave, colour coded bins | • Same as in Level 2 |
| **Waste Management** | • Hub-cutter, puncture proof boxes for needle disposal, deep burial of placenta<br>• Management of liquid waste( refer to the chapter of Infection Prevention | Same as in Level 1, plus the following:<br>• Deep burial of placenta and all blood and tissue fluid stained | Same as in Level 2, plus the following:<br>• Arrangement for BMW management and disposal |

## Maternity Wing in L3 Facility

This section deals with organization of 'Maternity Wing' with minimum standards of care which should be observed in a facility. A Maternity Wing comprises:

### Delivery unit, which includes:

- Receiving area
- Examination room
- Pre-delivery room (1st stage area)
- Delivery (Labour) room both septic and aseptic with NBCC (2nd–3rd stage)
- Post-delivery observation room (4th stage area)

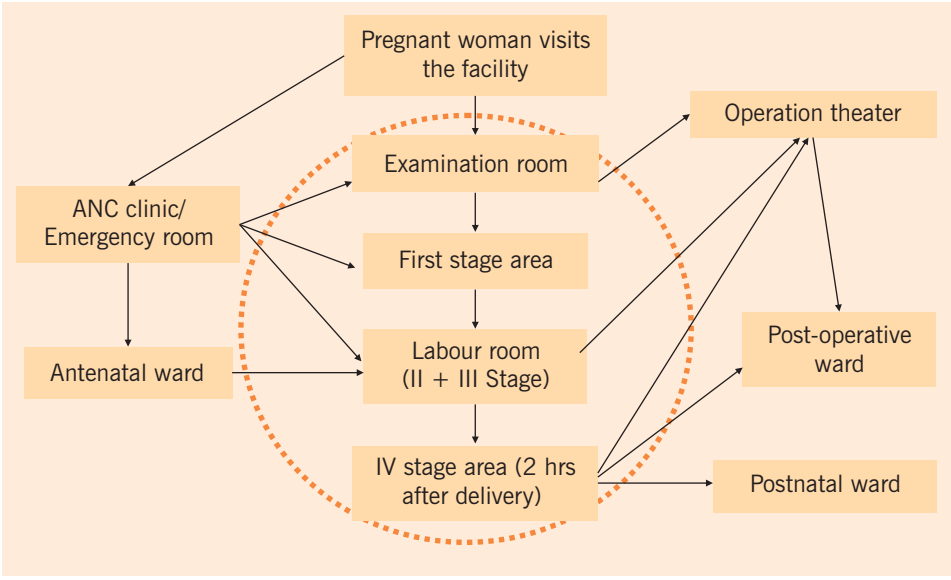
**Wards:** Antenatal, Postnatal and Post-operative

## Receiving Area

This is the place where all pregnant women including those in emergency situation are received. The pregnant woman's BP, weight, etc. are noted. Records and registers are filled and a case sheet is prepared after her examination in the Examination Room. Relevant registers and records must be kept in the receiving area.

Any woman coming to the Receiving Area has to be quickly assessed for signs of acute emergencies, danger signs or a stage of full dilatation with imminent delivery. Initial/emergency management of such cases will be done in the Examination Room. Then the woman is sent to the appropriate area for further management.

**Figure 4: Flow of a client within the Maternity Wing**




## Examination Room

This is a place where adequate privacy with curtains between examination tables schedule be maintained. It is a well-lit room with examination tables and enough space for movement of the pregnant woman/patient and also the examining doctor. The room also has the following equipment and consumables for conducting general, abdominal and vaginal examination.

**Table 5: Examination Room client-flow and equipment**

| Client-flow | Equipment and accessories |
|---|---|
| • Initial examination of all women who are in labour or in any other routine/ emergency situations, would be conducted here.<br>• On the basis of her initial assessment, the woman should be transferred either to the ward or home, if she is in false labour pains. A few hours of observation are advisable to confirm false labour.<br>• If she has good uterine contractions but cervical dilation is less than 4 cm and she is not in the active phase of labour, she will be sent to Pre-delivery Waiting room for a close observation of the progress of labor.<br>• She will be sent to the labour room if in active phase of labour i.e. cervical dilatation = or > 4 cms.<br>• In complicated cases, requiring emergency management, treatment will be initiated there itself before transferring to obstetric ICU. If C- section is required, the woman will be sent to OT. Other cases, will be transferred as per the situation e.g. to Eclampsia Room or Septic Room or the Labour Ward. | 1. Wheelchair and/or stretcher<br>2. Examination table with foot step and curtain for privacy<br>3. Foetoscope/Doppler<br>4. Table and chair for doctor<br>5. BP apparatus with stethoscope<br>6. Thermometer<br>7. Wall clock<br>8. Adult weighing scale<br>9. Measuring tape<br>10. Emergency drug tray<br>11. Hub cutter<br>12. Puncture proof container<br>13. Color coded bins<br>14. Partograph<br>15. Cetrimide swabs<br>16. Disposable gloves<br>17. Records / registers<br>18. Refrigerator<br>19. Utility gloves<br>20. MCP card, Safe motherhood booklet<br>21. IUCD Client Card<br>22. Sterilized swabs and instruments<br>23. Washbasin<br>24. 0.5% Chlorine solution and a tub;<br>25. Examination tray<br>26. Delivery tray in case of emergency<br>27. Bucket and Kelly's pad<br>28. IV stand<br>29. Scissor<br>30. For communication – telephone facility |

## Pre-delivery observation room (1st stage area)

After initial examination, the pregnant woman with good uterine contractions but cervical dilation still less than 4 cm that is not in active phase of labour will be sent to Pre-delivery room area for close observation. The woman should change into a clean gown.

**Table 6: Pre-delivery observation room criteria**

| Pre-delivery observation room criteria | Equipment and accessories |
|---|---|
| • The number of beds for this area will depend upon the delivery load of the facility.<br>• She may be allowed to bring a birth companion (preferably a relative but certainly not ASHA nor MAMTA/ YASHODA), for her emotional support.<br>• Ensure administration of antenatal corticosteroid for all pre-term deliveries | 1. Foetoscope/Doppler<br>2. BP apparatus with stethoscope<br>3. Thermometer<br>4. Wall clock<br>5. Color coded bins<br>6. Cetrimide swabs<br>7. Disposable gloves<br>8. Bed head tickets with attached Partograph<br>9. Utility gloves<br>10. Washbasin<br>11. IV stand<br>12. Sterilized instruments |

## Post-delivery observation room (4th stage area)

Mother and baby must be observed for 2 hours after delivery before shifting to the ward. This area can be planned along side the Pre-delivery observation area.

## Delivery (Labour) room

A pregnant woman will go to the Delivery/Labour room if she is in active phase of labour, i.e. cervical dilatation = or > than 4 cm. Essential services in Labour room:

Conducting normal delivery

- Plotting partograph
- Identifying and managing complications
- AMTSL
- ENBC including newborn resuscitation

## Table 7: Labour room equipment and accessories

### Labour room equipment and accessories

Every Labour Room should have the following:

1. Labour table with mattress, sheet, pillow (numbers as per case load), Macintosh, Foot-rest
2. Brass V drape to collect blood and amniotic fluid
3. Wall clock with seconds hand
4. Wall mounted thermometer
5. Suction apparatus
6. Equipment for adult resuscitation
7. Equipment for neonatal resuscitation
8. Delivery trolley
9. IV drip stand
10. Screen/Partition between two tables
11. Stool for birth companion
12. Lamp – wall mounted or side
13. Autoclave drums for instruments, linen, gloves, cotton, gauge, threads sanitary pads
    a. Autoclaved delivery set for each delivery
14. Refrigerator
15. Sphygmomanometer, adult and newborn thermometer and newborn weighing machine
16. Consumables like gloves, apron, cotton, thread, gauze, sanitary napkins, catgut, IV drip sets, needle, cord clamp, medicines (injectable, oral and parenteral, leucoplast etc.
17. Pulse oxymeter
18. Sterilizer
19. Oxygen cylinder
20. Oxygen concentrator
21. Partograph
22. Labeled plastic jars for drugs and injectables with date of expiry written on them against each drug
23. Coloured bins for bio medical waste management
24. Hub cutter
25. Puncture proof container
26. Plastic tubs for 0.5% Chlorine solution
27. Intranatal Protocols (AMTSL , PPH etc.)
28. Wheel chair/patient's trolley
29. 7 Trays: Delivery tray, Episiotomy tray, Medicine tray, Emergency drug tray, Baby tray, MVA tray, PPIUCD tray (see content below)
30. Hand-washing area and toilet for the admitted clients
31. Foeto-scope/Foetal Doppler
32. Stethoscope,
33. Display of SBA quality protocols, and shadow less lamp.
34. Mosquito Repellent

## Table 8: Trays to be kept in Labour Room

1. **Delivery tray:** Scissor, Artery forceps, Sponge holding forceps, Speculum, Urinary catheter, Bowl for antiseptic lotion, Kidney tray, Gauze pieces, Cotton swabs, Sanitary pads, Gloves.
2. **Episiotomy tray:** Inj. Xylocaine 2%, 10 ml disposable syringe with needle, Episiotomy scissor, Artery forceps, Allis forceps, Sponge holding forceps, Toothed forceps, Thumb forceps, Kidney tray, Needle holder, Needle (round body and cutting), Chromic catgut no. 0, Gauze pieces, Cotton swabs, Antiseptic lotion, Gloves.
3. **Baby tray:** Two pre-warmed towels/sheets for wrapping the baby (Baby should be received in a pre-warmed towel. Do not use metallic tray.), Mucus extractor, Bag and mask, Sterilized thread/cord clamp, Needle (26gauze) and syringe(1ml.), Inj. Vitamin K, Gloves.
4. **Medicine tray*:** Inj. Oxytocin 10 IU (to be kept in fridge), Inj. Gentamicin, Inj.Vit K, Inj. Betamethason, Inj. Hydralazine, Cap Ampicillin 500 mg, Tab. Metronidazole 400 mg, Tab Paracetamol, Tab Ibuprofen, Tab B complex, Tab.Misoprostol 200 micrograms, Tab.Nifedipine, Tab.Methyldopa, IV fluids - Ringer lactate, Normal Saline, Magnifying glass.

**(*-Nevirapin and other HIV drugs only for ICTC and ART Centres)**

5. **Emergency drug tray:**** Inj. Oxytocin (to be kept in fridge), Inj. Magsulf 50%, Inj.Calcium gluconate-10%, Inj. Dexamethasone, Inj. Ampicillin, Inj. Gentamicin, Inj.Metronidazole, Inj. Lignocaine-2%, Inj. Adrenaline, Inj. Hydrocortisone Succinate, Inj.Diazepam, Inj. Pheneraminemaleate, Inj. Carboprost, Inj Pentazocin chloride, Inj. Promethazine, Inj.Betamethasone Inj.Hydralazine, IV fluids- Ringer lactate, normal saline, IV sets with 16-gauge needle at least two, IV Cannula, Vials for blood collection, Syringes and needles, Tab.Nifedipine, Tab.Methyldopa, Suction catheter, Mouth gag.

**(** – only for L2, L3 facilities)**

6. **MVA/ EVA tray:** Gloves, Speculum, Anterior vaginal wall retractor, Posterior vaginal wall retractor, Sponge holding forceps, MVA syringe and cannulas, MTP cannulas, Urinary catheter, Small bowl of antiseptic lotion, Sterilized gauze/pads, Cotton swabs, Disposable syringe and needle, Tab.misoprostol.
7. **PPIUCD tray***: PPIUCD Insertion Forceps, Sym's speculum, Ring forceps or sponge holding forceps, Cu IUCD 380A/ Cu IUCD 375 in a sterile package, Cotton swabs, Betadine solution.

**(*** – only for L3 facilities with PPIUCD trained provider)**

Disposable masks, caps and gloves should be available in every labour room for use by service providers and for the birth companion.

Similarly, There should be enough number of disposable syringes and needles for injectable drugs

## Service area

- Every LR should have a demarcated service area for the paper work (recording/ reporting, etc.) which should not be completely segregated from the patient areas, so that the staff on duty can quickly respond to any exigency or the requirements of the women in labour.
- This area should not be used as a store for drugs, consumables, equipment, etc. which can be kept in a separate store as replacement stock. List of consumables required for 100 deliveries is placed at Annexure- 11.
- Although, Oxytocin is the drug of choice for PPH prevention and treatment, it is not always feasible in low-resource settings because it requires refrigeration, sterile equipment for injection and a skilled provider. When Oxytocin is unavailable, use of oral misoprostol (600 micro grams) is recommended.
- For smooth working of the Labour room, one labour table will require 10x10 sq.ft. of space; two labour tables will need 20x20 and so on. Every labour table should have a sleek vertical trolley with space for six trays (as mentioned above in table-8) .

## Newborn Care Corner

This is MANDATORY for all Labour rooms and obstetric OTs of 'delivery points'.

**Essential care at birth**

- Resuscitation of newborn
- Provision of warmth
- Early initiation of breastfeeding
- Weighing the neonate
- Inspecting newborn for gross congenital anomalies
- Every labour room and obstetric OT should have an NBCC, with a radiant warmer and a functional bag and mask of appropriate size
- Room should be draught free

**Please note** that every baby will not need care under a radiant warmer. Only when the following conditions are observed in the mother or baby, then the baby should be put under a radiant warmer for ENBC and, if required, given resuscitation:

- Meconium stained liquor and preterm labour
- Baby not crying and limp/flaccid limbs/floppy baby
- Or as per doctor's advice

**Table 9: Equipment and accessories needed at NBCC**

| Equipment and accessories needed at NBCC | |
|---|---|
| 1. Baby tray<br>2. Pediatric stethoscope (preferable to have a neonatal stethoscope)<br>3. Baby scale<br>4. Radiant warmer<br>5. Self-inflating bag and mask–neonatal size (0 and 1)<br>6. Oxygen hood (neonatal)<br>7. Laryngoscope and Endotracheal intubation tubes*<br>8. Two set of pencil batteries | 9. Mucus extractor with suction tube and a foot-operated suction machine NG tubes<br>10. Blankets<br>11. Two clean and dry towels<br>12. Feeding tubes<br>13. Empty vials for collecting blood<br>14. Alcohol handrub<br>15. HLD/sterile gloves<br>16. Syringe hub cutter. |

** To be available at L-3 facilities.*

**Table 10: HR, INFresv, Equip and Services required for NBSU and SNCU as per GoI Guidelines**

| | NBSU | SNCU |
|---|---|---|
| **Site** | **FRU/CHC** | **DH** |
| **Space** | • The stabilization unit should be located within or in close proximity of the maternity ward<br>• Space of approximately 40-50 sq ft per bed is needed, where four radiant warmers can be kept.<br>• 2 designated beds in the post natal ward for rooming in facility<br>• There should be provision of hand washing and containment of infection control<br>• Floor and walls should be easy to clean | • Each newborn space shall contain a minimum of 100 sq ft (9.9 sq m) of clear floor space, excluding hand washing stations and columns. This 100 sq ft per bed of space should be utilized as follows:<br>• Baby care area: 50 sq ft per bed<br>• General support and ancillary<br>• Areas: 50 sq ft per bed<br>• General support and ancillary areas: 50 sq ft per bed<br>• Provision of bed for the mother of out born must be ensured. |

** Ensure I support staff in all the shifts and are extra in morning shift for other duties.*

| | NBSU | SNCU |
|---|---|---|
| **Site** | **FRU/CHC** | **DH** |
| **HR** | • MO/Paediatrician trained in F-IMNCI/paediatrician<br>• 1 dedicated nursing staff per shift. Total 4 dedicated staff | For a 12-bed unit (plus 4 beds for step-down area), the recommended dedicated staffing is:<br>• Staff Nurses: 10 -12<br>• Pediatrician/ MO trained in SNCU: 3-4 (Pediatrician/MO and staff nurses trained in FBNC<br>• Support Staff*: 4, 1 |
| **Services** | • Care at birth<br>• Provision of warmth<br>• Resuscitation<br>• Monitoring of vital signs<br>• Initial care and stabilization of<br>• sick newborns<br>• Care of low birth weight<br>• Newborns not requiring intensive care<br>• Breast feeding and feeding support<br>• Referral services | • Care at birth, including resuscitation of asphyxiated newborns<br>• Managing sick newborns (except those requiring mechanical ventilation and major surgical interventions)<br>• Post-natal care<br>• Follow-up of high risk newborns<br>• Referral services<br>• Immunization services |

**Table 11: Expected services to be provided at newborn care facilities**

| NBCC | NBSU | SNCU |
|---|---|---|
| **Care at birth** | **Care at birth** | **Care at birth** |
| • Prevention of infection<br>• Provision of warmth<br>• Resuscitation<br>• Early initiation of breastfeeding<br>• Weighing the newborn | • Prevention of infection<br>• Provision of warmth<br>• Resuscitation<br>• Early initiation of breastfeeding<br>• Weighing the newborn | • Prevention of infection<br>• Provision of warmth<br>• Resuscitation<br>• Early initiation of breastfeeding<br>• Weighing the newborn |
| | **Care of sick newborn** | **Care of sick newborn** |
| • Identification and prompt referral of 'at risk' and 'sick' newborn | • Management of low birth weight infants ≥ 1800 g *with no other complications* | • Managing of low birth weight infants |

| NBCC | NBSU | SNCU |
|---|---|---|
| **Care of normal newborn** | **Care of normal newborn** | **Care of normal newborn** |
| • Breastfeeding/-feeding support | • Breastfeeding/-feeding support | • Breastfeeding/-feeding support |
| **Care of sick newborn** | **Care of sick newborn** | **Care of sick newborn** |
| • Identification and prompt referral of 'at risk' and 'sick' newborn | • Phototherapy for newborns with hyper-bilirubinemia*<br>• Management of newborn sepsis<br>• Stabilization and referral of sick newborns and those with very low birth weight (rooming in)<br>• Referral services | • Managing all sick newborns (except those requiring mechanical ventilation and major surgical interventions)<br>• Follow-up of all babies discharged from the unit and high-risk newborns<br>• Immunization services<br>• Referral services |
| Immunization services | Immunization services | Immunization services |

** Availability of laboratory facilities test estimate bilirubin levels is a prerequisite.*

**Table 12: Newborn care**

| Do's | Don'ts |
|---|---|
| • Always wash your hands before handling the baby<br>• Rooming in of baby with the mother<br>• Keep the baby warm<br>• Take extra care to maintain baby's temperature in preterm and LBW baby<br>• Keep the cord dry and clean<br>• Breast fed the baby exclusively.<br>• Early initiation of breast feeding is essential for a good reflex action<br>• Any signs/symptoms of complications must be referred and attended to by a doctor.<br>• The care provider should observe every 2 hours in the first 6 hours and every 6 hours from 6–24 hours after delivery<br>• If the newborn is LBW then at least three additional visits should be ensured | • Do not keep all babies as a routine under the radiant warmer<br>• Do not delay breast feeding beyond half an hour as that may lead to rapid decrease in suckling reflex of the baby<br>• Do not use prelacteals even water<br>• Do not apply anything on the cord<br>• Do not bathe the newborn for 24hrs after birth.<br>• Do not forget to undertake routine checkup |

## Table 13 : List of equipment required in Obstetric ICU

**List of Equipment and accessories in Obstetric ICU**

- ICU cot with tilting and Trendelenburg facility
- Multi Para monitor – ECG, SPO2, NIBP (Non-invasive BP and temperature) at the head end
- Provision of 3 central pipelines for supply of Oxygen, central suction and compressor for driving the ventilator/outlets for each bed
- Space between the two tables should be at least 4 feet
- Space between the head end of the ICU cot and the wall should be minimum 3 feet
- From the foot end of the cot, 5-6 feet distance should be there from the opposite row
- Saline stand ceiling type or ordinary saline stand from the floor/bed
- Syringe infusion pump mounted on IV stand/bed
- For each patient shelf for drugs and files (X-ray)
- At the end of ICU, emergency crash cot – all emergency drugs, defibrillator, venous catheter of various sizes, 3 way stop cock with venous extension 50, 100 cms, triple human central venous catheter of 7.5 French size, Laryngoscope, cuffed endotracheal tube 6,6.5 and 7 with stellate and bougie, Laryngeal mask airway ( size 3 and 4), Oral pharyngeal airway ( size 3 and 4), Naso-pharyngeal airway
- CPAP mask ventilator with well cushioned face mask with harness –1
- Transport ventilator –1
- ICU ventilator – 1

## Human resources

For quality service delivery with dignity and privacy to clients, an adequate number of competent HR is required for providing best possible care during pregnancy, delivery and postpartum period (see Table 14).

**Table 14: HR requirement based on deliveries/month for a maternity wing**

| | Criterion | < 100 deliveries/ month | 100 – 200 deliveries/ month | 200 -500 deliveries/ month | 500 deliveries and more/ month |
|---|---|---|---|---|---|
| Labour Ward | Human resource (calculated on basis of req.+ off duty) | • MO – 1-2 (avl. during routine hrs and on call during emergency)<br>• ANM/SN – 4<br>• Sweeper – 3<br>• DEO – 1<br>Guard – 4 | • MO – 4 (for round-the-clock duty)<br>• SN – 4<br>• ANM – 4<br>• LT – 2 (for round-the-clock service)<br>• DEO – 1<br>• Sweeper – 4<br>• Guard – 4 | • OBG – 1 (Mandatory)<br>• OBG/EmOC – 4 (for round the clock service)<br>• Anesth – 1 (Mandatory) exclusive for maternity cases<br>• LSAS – 4 (for round-the-clock service)<br>• Peads.– 1<br>• MO – 4 (trained in BEmOC, FIMNCI, NSSK)<br>• MO and SN trained in PPIUCD<br>• SN – 8<br>• ANM – 4<br>• LT – 4 (for round-the-clock service)<br>• Sweeper – 4 (for round-the-clock service)<br>• 1 Certified ultra sonologist (on call after routine hours), Obg should be given training if ultra sonologist not available<br>• DEO – 1<br>• Guard – 4 | • OBG – 3<br>• EmOC – 4<br>• Anesth. – 1 exclusively for maternity cases<br>• LSAS – 4<br>• Peads.– 1<br>• MO – 4 (trained in BEmOC, FIMNCI, NSSK)<br>• MO and SN trained in PPIUCD<br>• SN – 10<br>• ANM – 6<br>• LT – 4 (for round-the-clock service)<br>• 1 Certified Sonologist (on call after routine hours)<br>• Sweeper – 4 (for round the clock service)<br>• DEO – 1<br>• Guard – 4 |

| | Criterion | < 100 deliveries/ month | 100 – 200 deliveries/ month | 200 -500 deliveries/ month | 500 deliveries and more/ month |
|---|---|---|---|---|---|
| Labour Ward | No. of delivery table | 2 | 4 | 6 | 8 |
| | No. of delivery tray | 4 | 8 | 16 | 20 |
| | Pre and post observation beds | 2 | Pre – 4 and Post – 4 | Pre – 8 and Post – 6 | Pre – 8 and Post – 8 |
| | Other beds | Nil | 1 Septic<br>2 Eclampsia | 1 Septic<br>2 Eclampsia<br>5 Post – op beds | 2 septic<br>4 Eclampsia<br>10 Post – op beds |
| ANC/PNC Ward | Human resource | • MO – No additional requirement<br>• ANM/SN –<br>• Sweeper – No additional requirement<br>• Guard – No additional requirement | • MO – No additional requirement<br>• SN – 6<br>• Sweeper – No additional requirement<br>• Guard – No additional requirement | • Specialists (OBG/EmOC /Anaesth./LSAS /Paeds)- No additional requirement<br>• SN – 8<br>• Sweeper –2<br>• Guard – 4<br>• Nursing orderly/Ward Boy – 4 | • Specialists (OBG/EmOC/ Anesth./LSAS/ Peads) – No additional requirement<br>• SN – 8<br>• Sweeper – 4<br>• Guard – 4<br>• Nursing orderly/Ward Boy – 4 |
| ANC/PNC Ward | Beds in ANC and PNC | 10 | 20 | 40 | 50/100 bedded MCH Wing depending upon caseload and bed occupancy of the existing hospital more than 70% |

**Note :**

- Utilization of DEO should be as per the case load and as per the discretion of hospital in-charge
- DEO to do the documentation work related to MH training, MDR, MCTS, maintenance of case records
- Number of delivery tray will depend on the daily case load
- The above mentioned staff is exclusively for Maternity Wing

## General requirements for Labour Room

- Floor should be tiled, preferably anti-skid and white without any design on it
- Walls should also be tiled up to a height of 6 ft
- Remaining walls and ceiling should be painted white
- There should be windows and ventilators with frosted glass panes
- Windows to be covered with mesh to ward off flies, mosquitoes, insects
- Provision of running water (24x7) in the Labour Room and adjoining toilets. In case of restricted supply, an overhead tank should be set up with facility to pump-up the water
- Washing area should be hands-free with elbow operated taps
- Every Labour Room should have a refrigerator for keeping drugs such as Inj. Oxytocin
- Size of the Labour Room and number of beds and delivery tables would depend upon the delivery case load of the facility
- Maternity Wing must have a separate store where weekly/monthly stock of essential drugs and supplies are kept
- In Level 3, Labour Room should be centrally air conditioned with air handling unit
- Alternatively, cross ventilation with exhaust is required if air conditioning is not present
- If the unit is air conditioned, care must be taken to ensure newborn is protected from the cold and direct air flow not coming on to the NBCC

## Infection prevention in Labour Room

- Demarcated area for keeping slippers for the hospital staff and relatives and slippers to be used for entering the labour/pre-labour room
- Sterile gown to be given to patient going for delivery
- Floor should be cleaned as per defined GoI protocols
- Proper sterilization has to be ensured for gloves, instruments, linen etc. needed for conducting a delivery. Standard procedures for disinfection and sterilization need to be followed as indicated in the annexure
- Sodium hypochlorite solution/bleaching powder solution must be used to decontaminate the used gloves, instruments etc. After use the item should not be thrown on the floor or elsewhere
- Disinfect the items in bleaching power solution followed by washing and autoclaving. After following the steps of decontamination then proceed further with the next step for sterilization

- Clean the floor and sinks with detergent (soapy water) and keep floor dry
- Clean table top with Phenol/bleaching solution
- Clean other surfaces like light shades, almirahs, lockers, trolley, etc with low level disinfectant Phenol
- Clean electronic monitors with 70% alcohol
- In case of spillage of blood, body fluids on floor, absorb with newspaper (discard in yellow bin), soak with bleaching solution for 10 min and then mop
- Discard placenta in yellow bins
- Discard soiled linen in laundry basket and not on floor
- Disinfect with bleaching solution followed by washing and autoclaving
- Mop the floor every 3 hrs with disinfectant solution
- Clean the labour table after every delivery
- For protocols, see GoI protocol posters for DH to Medical College and Sub-centre to PHC/Non FRU–CHC

**Table 15: Do's and Don'ts for Labour Room**

| Do's | Don'ts |
|---|---|
| • Equipment must be checked for its functionality during change in shifts of nursing staff<br>• Privacy and dignity of the woman to be ensured<br>• Use sterilized instruments for every delivery<br>• Each labour table must have a light source<br>• Use plastic curtains between adjacent tables to maintain privacy<br>• LR should be draught free<br>• 20% buffer stock of LR drugs must be available all the time<br>• Temperature between 25-28 degree Celsius must be maintained in LR. Hilly, cold areas will need warmers during winters<br>• Injection Oxytocin should be kept in fridge (not freezer)<br>• Practice infection prevention protocols<br>• Initiation of breast feeding within one hour of birth<br>• Collect cord blood in RH-ve mother | • Do not keep almirahs and metal cabinets in the LR<br>• Do not burn coal in LR for lighting/heating or any other purpose<br>• Do not allow doctors/nurses and birth companion to enter LR without wearing gown, cap, slipper, mask<br>• Do not put cloth curtains between labour tables as they gather dust<br>• Do not allow people to enter labour room unnecessarily<br>• Do not put pressure on the abdomen for accelerating labour/delivery<br>• Do not give routine oxytocin IM or in drip for augmenting labour pains before delivery without indication<br>• Do not conduct frequent P/V examination<br>• Do not allow Dai, Mamta, ASHA, Yashoda conduct deliveries<br>• Do not slap the baby if not crying<br>• Do not keep the baby unwrapped<br>• Do not leave the baby unattended,if in warmer. |

## Ten key steps to ensure smooth working in the Labour Room

1. Ensure that the 7 trays are kept arranged and available for use.
2. Equipment needed in the LR are available, in good condition and functional – labour table, BP apparatus, stethoscope, foetoscope/ Doppler, footstep, stool for companion, maintained Partograph.
3. Environment in the LR is conducive – cleanliness, temperature maintained, curtains, windows with intact panes, privacy and attached functional toilet with running water.

   If the facility has the availability of specialist or trained manpower than keep him informed well in advance specially in high risk cases.
4. NBCC with:
   a. Radiant warmer plugged in functional and switched on at least half an hour before the time of delivery.
   b. A pretested and functional newborn resuscitation bag and mask is kept ready on the shelf just below the radiant warmer.
5. Suction apparatus:
   a. For Newborn: Dee Lees in the tray
   b. For mother: Foot-operated/electrical suction machine is functional along with disposable suction catheter
6. Oxygen Cylinder: Filled, with key tied on it, new disposable tube is used every time oxygen is given; the oxygen flow is checked under water (in a bowl) before inserting the tube.
7. Hand washing area has soap and running water, long handle tap which can be closed with elbow.
8. Infection Prevention Practices observed; drums to store sterilized items such as gloves, instruments, linen, swabs and gauge pieces. Autoclave exclusive for LR available and functional; delivery instruments are wrapped in a sheet and autoclaved in enough numbers (1 set for each delivery); autoclaving is done at least twice a day (at the end of morning and evening shift); 0.5% chlorine solution prepared freshly every day and soiled items are first put into this before further treatment. Personal protective equipment is used while working in the LR.
9. Waste disposal – Colour-coded bins are available; these are emptied at least once a day or as and when they are full. Liquid waste also to be managed appropriately.
10. Records – Partograph, labour register, refer-in/refer-out registers are available and completed for each case.

## Antenatal and postnatal ward

- The woman after delivery with the baby is shifted to PNC ward after 2 hours.
- Ideally at a high volume Level-3 facility, there should be separate ANC and PNC wards. However, in some situations, ANC and PNC cases can be kept in the same ward if there are more numbers of ANC or PNC cases.
- There should be adequate number of beds in PNC ward to ensure 48 hrs of stay after delivery.
- Each ward should have provision for hand washing, drinking water and toilets.
- Each bed should have a mattress, plastic sheet, a bed sheet and a mosquito net. A bedside locker, a stool and a bench should be made available for each bed.
- Adequate cooling for extreme hot conditions and room warmers for cold weather should be made available. The provisions for ambient temperature of the ward to remain constant should be ensured irrespective of the geographical conditions and weather changes.
- The room should be well ventilated but without incoming direct draught of air, to prevent hypothermia of the newborn.
- Each bed should have a bed number. Baby should be with the mother on the same bed. Mother and her baby must have identification tags.
- Space between two beds should be at least 4 ft.
- Clearance between the bed head and wall should be 1 ft (0.25 m) and between the side of a bed wall and wall should be minimum 2 ft.
- The width of a dormitory or ward should be 20 ft.
- Width of the hospital corridor should be 3 m to accommodate two passing trolleys.
- Restricted entry must be ensured in the wards with provisioning of security guards.
- Appropriate IEC material should be displayed in the wards.
- Provision of TV and DVD player to show informative and educational films on breast feeding, KMC, exclusive breast feeding and complementary feeding. Short films on JSSK, family planning, how to take care of the new born and danger signs can be shown.

- Proximity to LR, operation theatre, blood storage area and other supportive services is desirable.
- Considering that each postnatal woman stays in the facility for 2 days on an average, the beds should be at least double the daily delivery load (1:2).
- It has been observed that there is a critical requirement for the presence of mother whose newborn is admitted in the SNCU or NBSU. The presence of the mother in the facility is a must to provide correct history/breast feed the baby/ to provide expressed milk/for KMC etc. So, she should be admitted in the post natal ward. Ensure provision of daily diet to such mothers along with on-going support/treatment, if required.
- Plan in advance for additional provisions with increase case load.

## Nursing Station

Being the nerve centre of the ward unit, it should be so located that the nurses on duty can keep watch over as many patients as possible and are able to access the farthest bed as quickly as possible. The nursing station should be 20x20 ft and have:

- A large work table or counter in the open space with chairs/stools
- A built-in drug cupboard to keep medicines, stationery, forms, etc.
- A refrigerator to keep medicines/injectables etc.
- Attached bath and WC
- Wash basin
- A lockable cupboard to stock additional medicines
- A notice board and cabinet for keeping files
- Telephone
- Patients' bell board

## Treatment Room

A treatment room is required for each ward for physical examination, dressing and other procedures which cannot be carried out conveniently at the bed side of the patient. The room should be equipped with an examination table, a dressing trolley, adequate light (a spot light) and cabinets. Hand washing facilities should preferably be provided inside the treatment room.

## Emergency Laboratory

Every delivery point particularly level II+III should have facilities for essential laboratory tests along with necessary, equipments, reagents and HR needed to conduct the following tests:

- Hb
- Bleeding Time/Clotting Time
- Urine (albumin/sugar)
- Blood grouping/typing
- HIV testing
- Peripheral smear for Malaria Parasite/Rapid Diagnostic Test

**Note:** All other investigations to be carried out in the main laboratory

**Table 16: Septic Room**

| S.No. | Inventory (Essential) | Quantity (Minimum) |
|---|---|---|
| 1. | Labour tables | 2 Tables |
| 2. | Oxygen supply/cylinder | 2 |
| 3. | Foetal Doppler | 1 |
| 4. | Suction Machine (Electric) | 1 |
| 5. | Foot Operated Suction Machine | 1 |
| 6. | Stethoscope+ BP instrument | 1 |
| 7. | Adult resuscitation kit | 1 set |
| 8. | Neonatal resuscitation kit | 1 set |
| 9. | Digital weighing machine | 1 adult and 1 newborn |
| 10. | Air conditioners (to be calculated as per the volume specifications for air conditioners) | 1-2 |

| S.No. | Inventory (Essential) | Quantity (Minimum) |
|---|---|---|
| 11. | Radiant warmers | 1 |
| 12. | Pulse oxymeter – with 2 adult probe and 1 neonatal probe | 1 |
| 13. | Delivery trays | 2 |
| 14. | Episiotomy trays | 2 |
| 15. | MVA tray | 1 |
| 16. | Adult Emergency Drug Tray | 1 |
| 17. | Newborn Emergency Drug Tray | 1 |
| 18. | Mackintosh | 2 |
| 19. | Kelly's Pad | 2 |
| 20. | Open Dustbin Buckets | 2 |
| 21. | Color Coded Bins | 1 set |
| 22. | Needle Cutter | 1 |
| 23. | Wheel Chair | 1 |
| 24. | Wall Clock | 1 |
| 25. | Movable Shadow less Lamp | 1 |
| 26. | Dressing Drum – All sizes | As per requirement |
| 27. | Baby Tray | 1 |
| 28. | Thermometer | 2 |
| 29. | Drapes and Linen | As per requirement |
| 30. | Emergency Call Bell | 1 |

**Table 17: Eclampsia room**

| S.No. | Inventory (Essential) | Quantity (Minimum) |
|---|---|---|
| 1. | Labour cots with side railing | 2 |
| 2. | Oxygen supply/cylinder | 2 |
| 3. | Pulse oxymeter – with 2 adult probe and 1 neonatal probe | 1 |
| 4. | Foetal Doppler | 1 |
| 5. | Suction Machine (Electric) | 1 |
| 6. | Foot Operated Suction Machine | 1 |
| 7. | Stethoscope+ BP instrument | 2 |
| 8. | Adult resuscitation kit | 1 set |
| 9. | Neonatal resuscitation kit | 1 set |
| 10. | Air conditioners (to be calculated as per the volume specifications for air conditioners) | 1-2 |
| 11. | Pulse oxymeter – with 2 adult probe and 1 neonatal probe | 2 |
| 12. | Delivery Trays | 2 |
| 13. | Episiotomy trays | 2 |
| 14. | Adult Emergency Drug Tray (including magnesium sulphate) | 1 |
| 15. | Newborn Emergency Drug Tray | 1 |
| 16. | Mackintosh | 2 |
| 17. | Kelly's Pad | 2 |
| 18. | Open Dustbin Buckets | 2 |
| 19. | Color Coded Bins | 1 sets |
| 20. | Movable shadow less Lamp | 1 |
| 21. | Wall Clock | 1 |
| 22. | Torch | 1 |
| 23. | Nebulizer | 1 |
| 24. | Emergency Call Bell | 1 |
| 25. | Drapes and Linen | As per requirement |

## RMNCH: Key components of MCH Wing

**Figure 5: RMNCH Wing Plan: Ground Floor and First Floor**

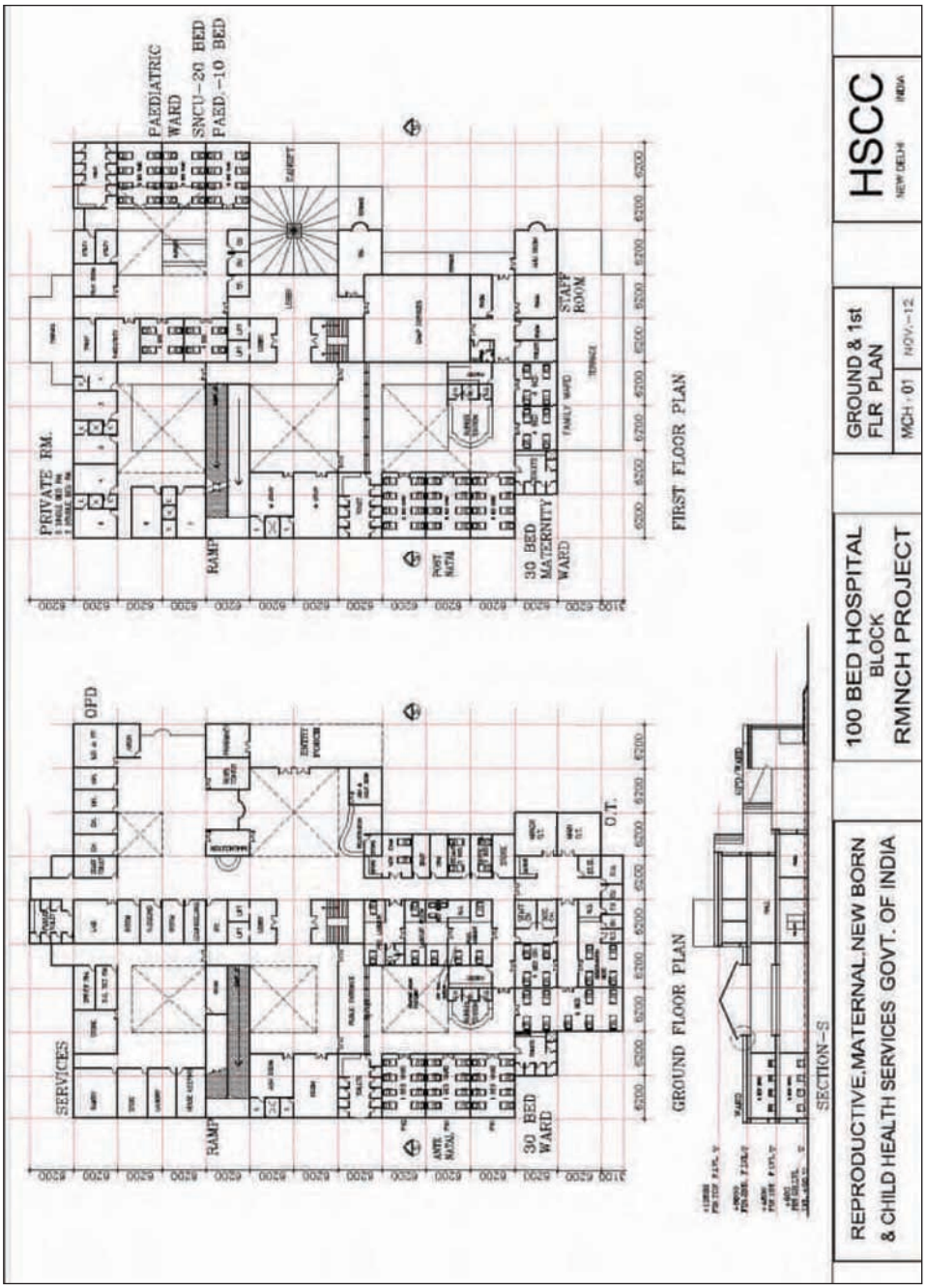


**Figure 6: RMNCH – Ground Floor**

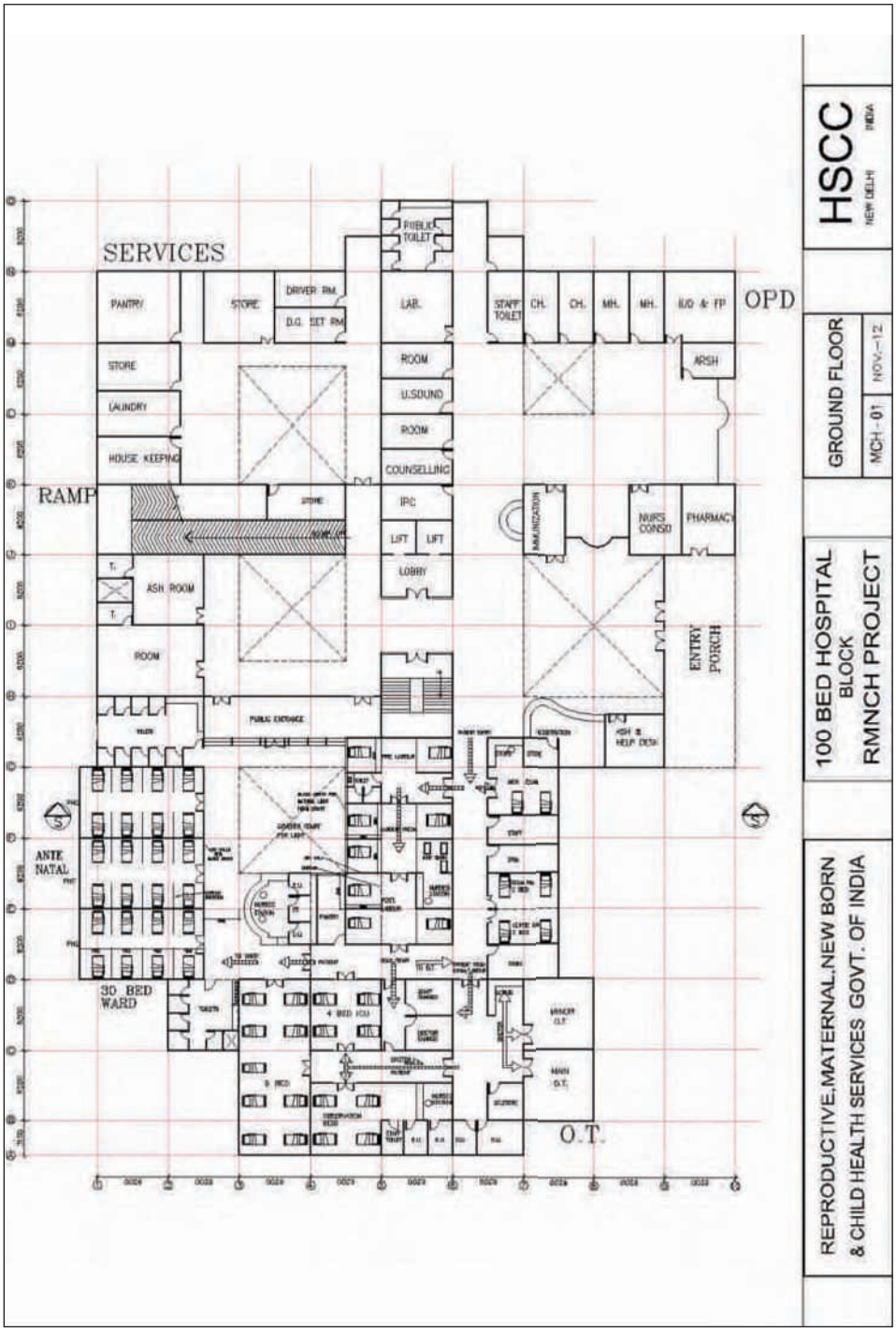


**Figure 7: RMNCH – First Floor**

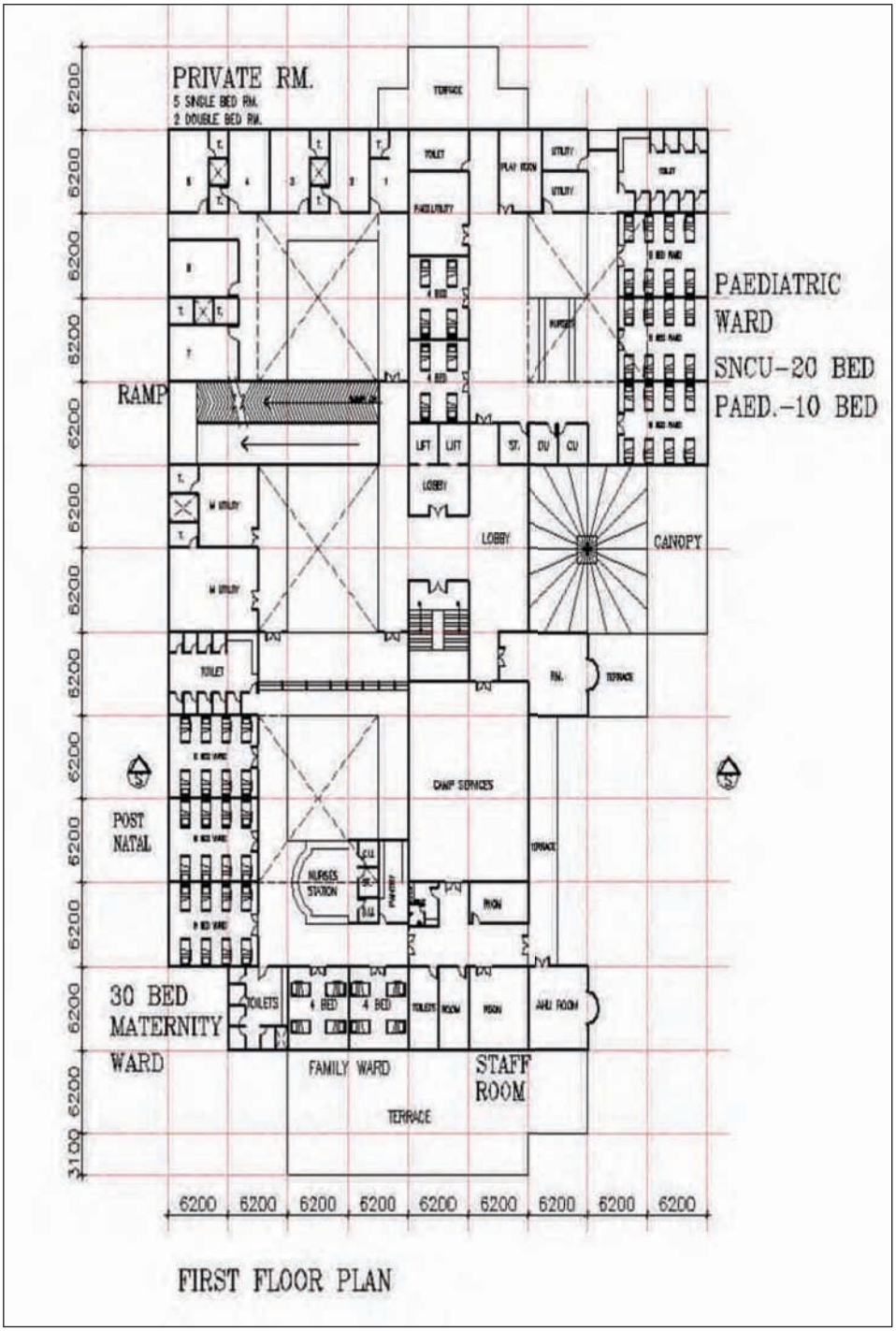


**Figure 8: RMNCH – Second Floor**

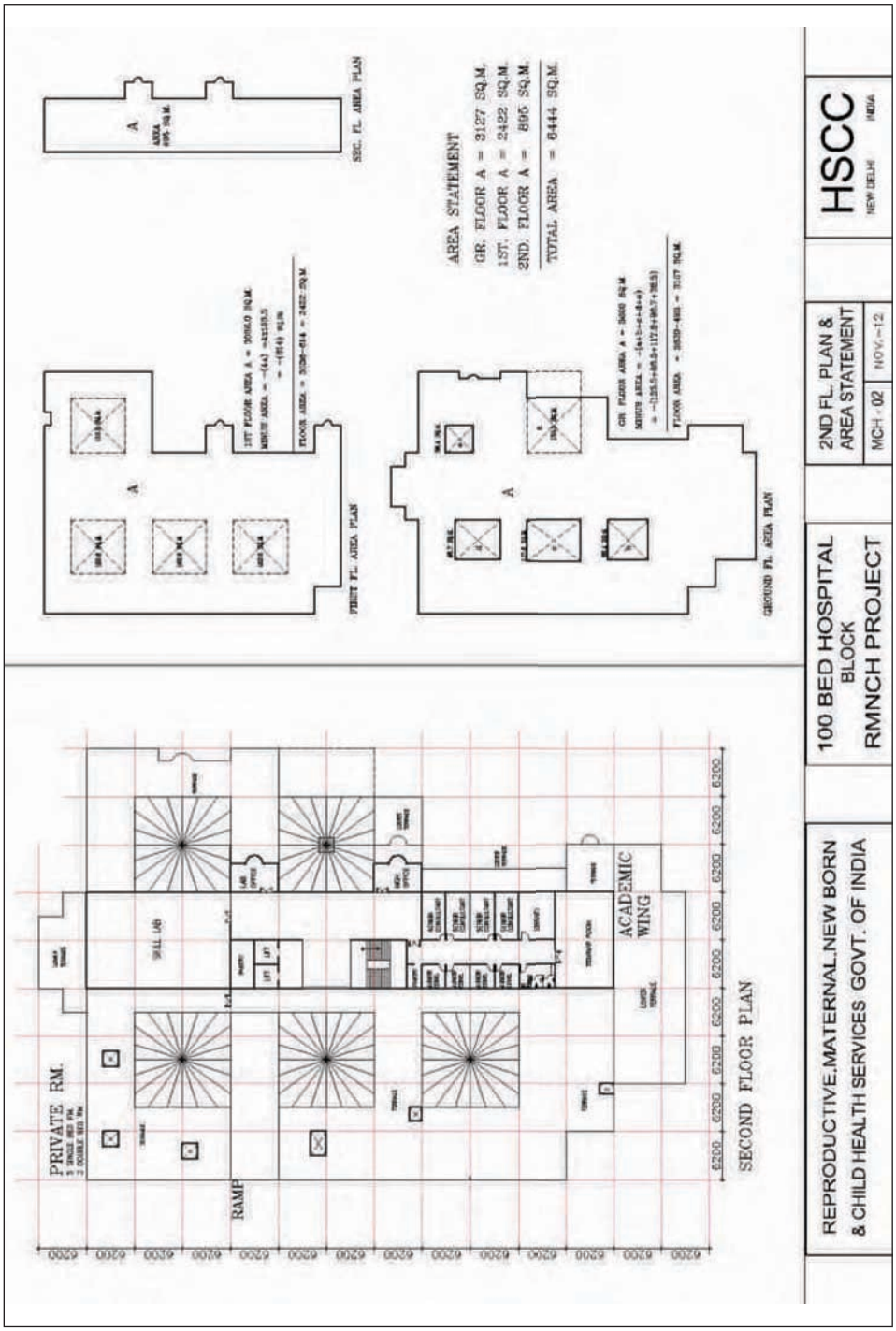


**Figure 9: RMNCH: Labor Room Plan**

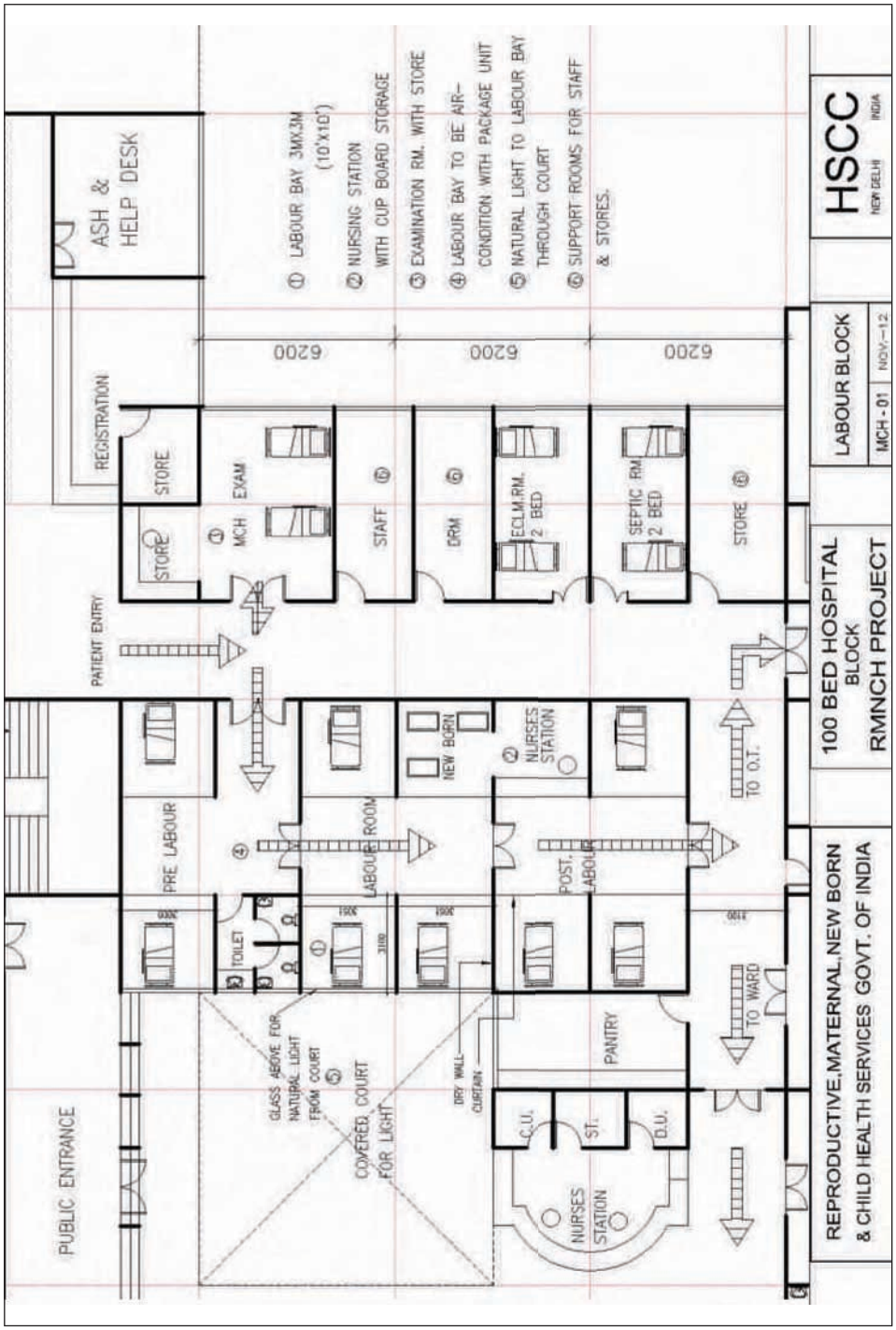


**Figure 10: RMNCH – OT Plan**

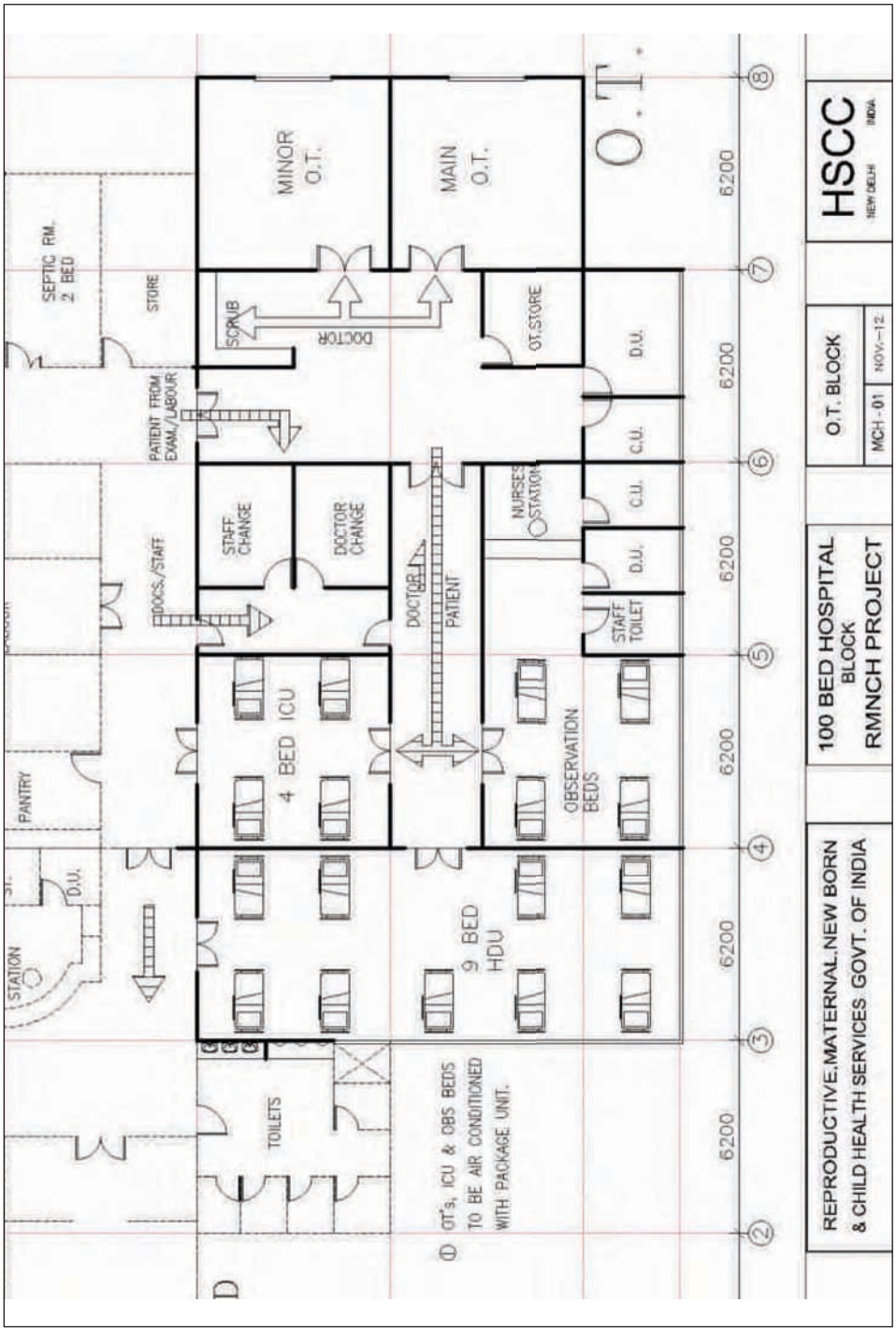


**Figure 11: RMNCH – Ward Plan-I**

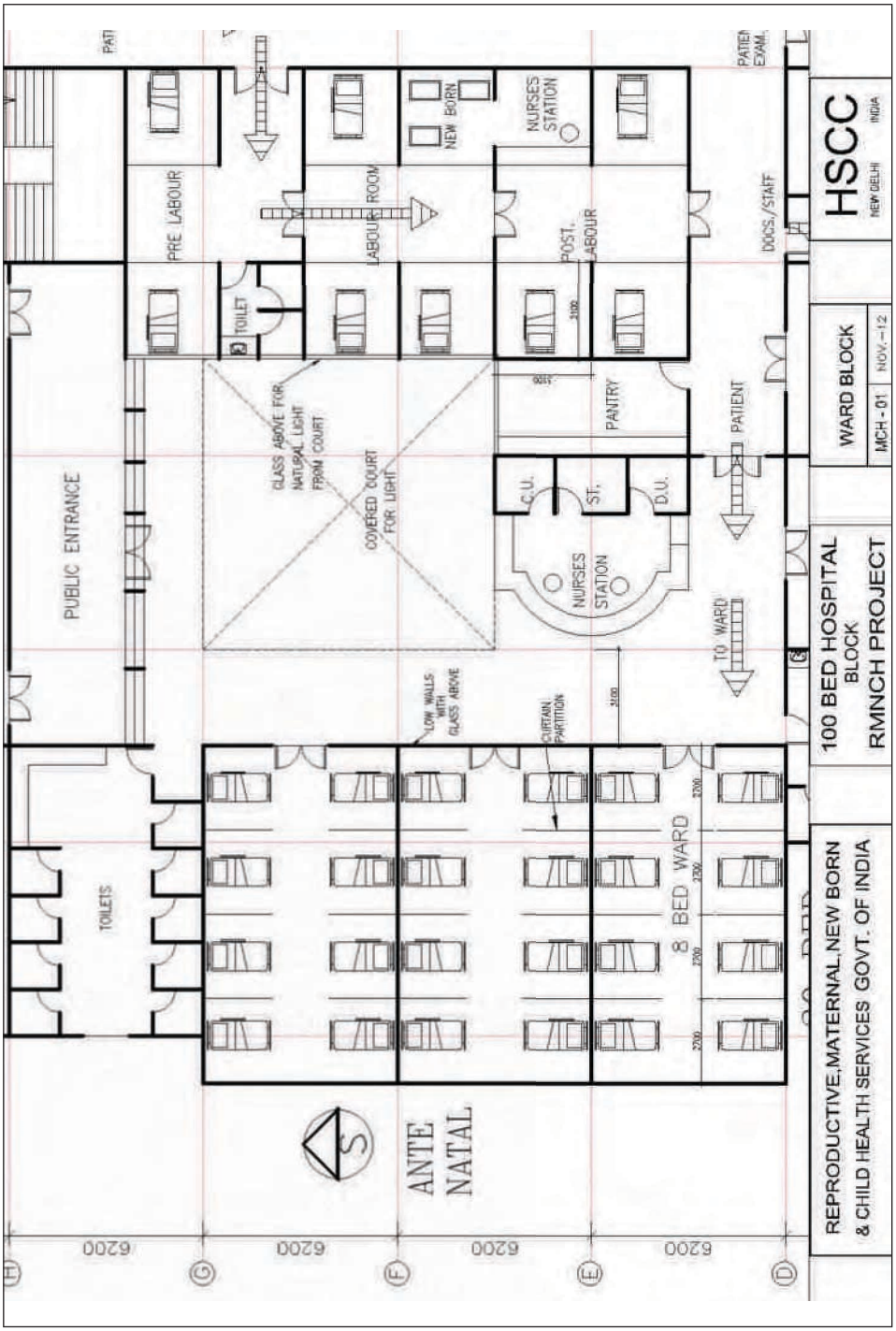


**Figure 12: RMNCH – Ward Plan-II**

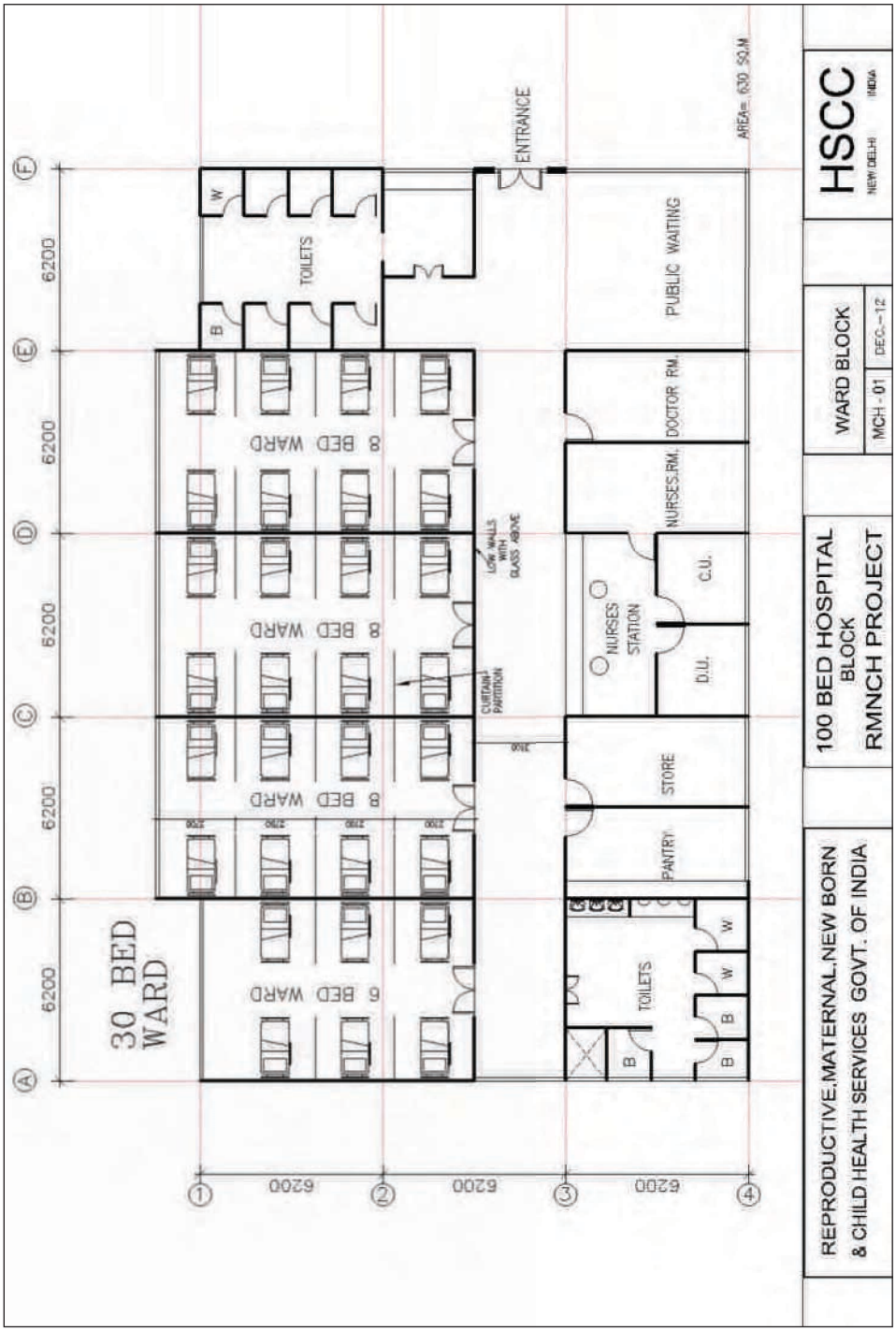
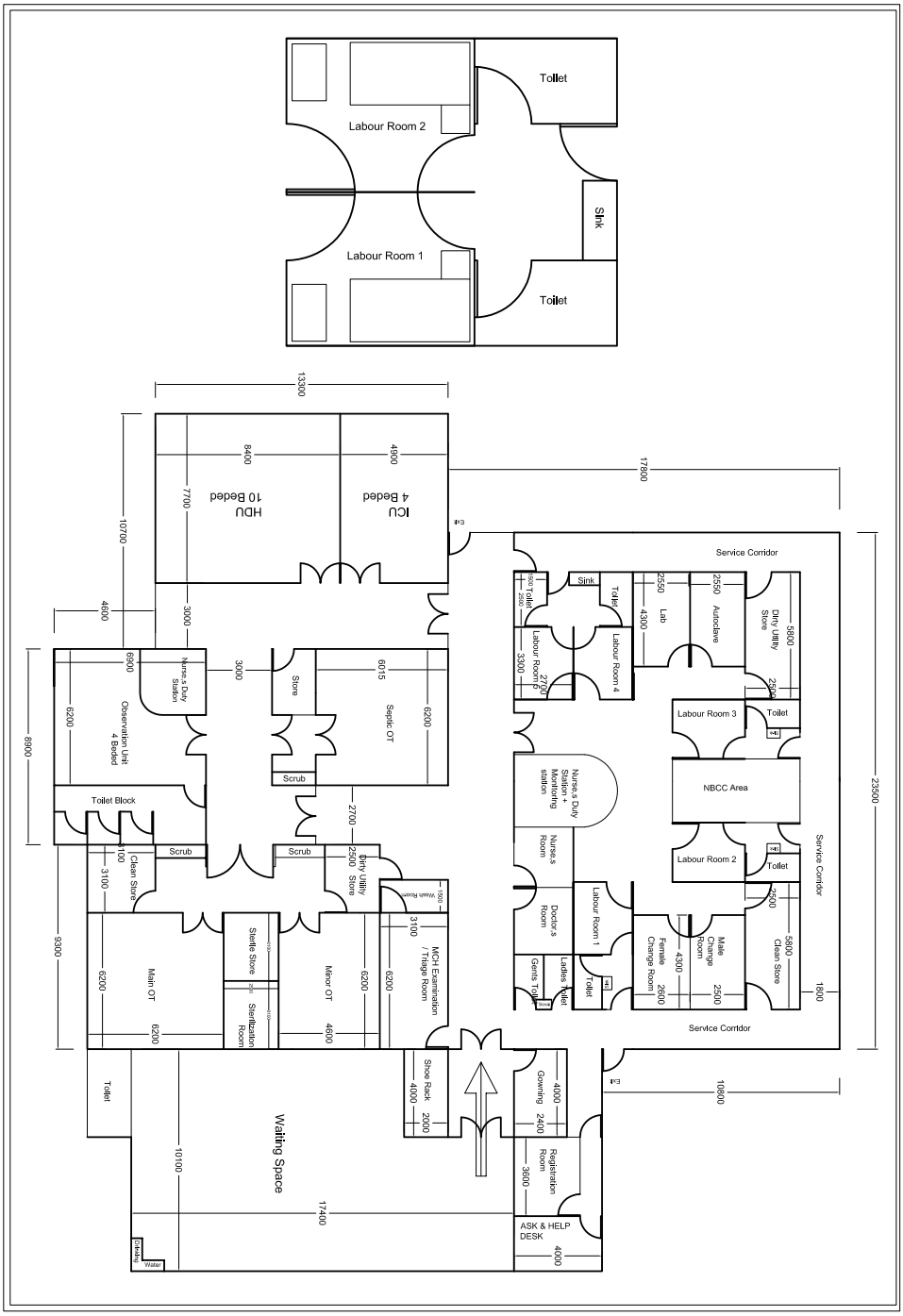


**Figure 13: Alternative design of Labour Room, Operation Theater, High Dependency unit**



| S. No. | Ensuring Protocols |
|---|---|
| 1. | Patient and patient family member will open the shoes and change into the gown before admission. Other members can wait in the waiting space and can be addressed through microphone for any information from the monitoring station. |
| 2. | Examination room or triage room. Will decide whether mother is going to deliver in the next 8-10 hrs or not. In case there is a bad obstetrical history or any high risk factors like any associated medical diseases the patient will be admitted to the HDU that is high dependency unit. If the mother has Eclampsia or cardiac failure, she would be admitted in ICU. |
| 3. | Separate Labour room will be provided for each mother with separate toilet and the facility of having one female family member or birth companion inside the labour room. |
| 4. | Each Labour room will be cleaned before shifting the next patient. |
| 5. | Single Labour room will be alloted for a single mother i.e. from initiation of active stage of Labour (that is 4cm dilatation) to two hour after delivery. The same bed and the same cot are used. |
| 6. | Each Labour room will have a cot, sink, light, Doppler and a kit for delivery. Also a calling bell connected to the monitoring station. |
| 7. | A child after birth will be kept next to the mother and initiate early breast feeding. |
| 8. | There will be two radiant warmers and resuscitative equipments for neonatal resuscitation in the NBCC. |
| 9. | Neonates requiring resuscitation shall be resuscitated at NBCC |
| 10 | If the mother is serious either before or after delivery shift immediately to the ICU. |
| 11. | In house lab will provide critical reports. |
| 12. | Mother requiring LSCS would be immediately shifted to the OT. |
| 13. | One minor OT to be kept for septic cases. |

## Blood storage units[3]

As per GoI Guidelines and Amendments to Drug and Cosmetics Rules aided with support from the National Aids Control Organization (NACO), blood storage units/ blood banks should be established at all CEmOC facilities.

Every high volume L3 'delivery point' conducting CS should have BSU in the Maternity Wing to avoid delay in getting blood.

## Operation theatre

Up to 15% of deliveries or other cases of complications of pregnancy, e.g. incomplete, inevitable, missed abortion, ectopic pregnancy, etc. may need some sort of a surgical intervention; CEmOC facility must have functional OT Services. Although most facilities have an OT complex, placed below are some tips which the OT in-charge and facility manager has to keep in mind.

For ensuring sterility and keeping the OT free of microorganisms and also to ensure smooth functioning, the operation theatre area can be divided into four well defined zones (Fig 13).

[3] *Guidelines for setting up blood storage centres at FRU, MH division, DoHFW. GoI 2003*

**Figure 13: Division of OT into Different Zones**

| Protective | Clean |
|---|---|
| • Waiting area for relatives<br>• Buffer zone<br>• Changing room<br>• Pre-anaesthesia room<br>• Store room<br>• Autoclave room<br>• Trolley bay<br>• Control area for electricity supply<br>• Receiving/pre-operative area | • Preoperative area<br>• Recovery room<br>• Sister's/Doctor's room<br>• Anaesthesia store |
| **Sterile** | **Disposal** |
| • OT<br>• Attached Scrub and hand washing room/area<br>• Anaesthesia room<br>• Instrument sterilization and trolley area<br>• NBCC<br>• Exit bay | • Sluice room<br>• Disposal corridor<br>• Janitor's closet |

## Ensure

- Restricted entry
- Instruments sterilized by autoclaving
- Separate set of instruments for each case
- Access to OT through a 'Buffer Zone'
- Proper occlusive clothing of OT personnel

**OT planning should keep the following general guiding notes in mind:**

- It should be free from contamination and possible cross infection, protected from solar radiation, wind and dust.
- Ambient temperature and humidity at each location to be considered while designing the system.
- Situated close to the labour room, post-operative area, blood bank, blood storage unit and CSSD.
- Arrangements to be made for piped suction and supply of medical gases, electricity supply, heating, air-conditioning, ventilation and efficient lift service, if the theatres are located on upper floors.

- Optimal floor size of an OT should be between 200 square feet and for two tables 400 square feet.
- Complete tiling up to the ceiling must be done. Light coloured mosaic tiles could be used for the purpose for easy cleaning and washing. The flooring, walls and ceiling should be non-porous, smooth, and seamless without corners and should be easily cleanable repeatedly. The material should be chosen accordingly.
- Floor should be easily washable, impervious, stain resistant and moderately electro conductive. Conductive flooring avoids hazards of electrocution and explosion triggered by accumulated anesthetic gases near the floor.
- Doors should be single panel, sliding or double acting (can be opened from both sides) with a glass see-through panel. They must be thermetically sealed and at least 5 ft wide.
- Windows should be 3 feet 4 in above the floor. The opening may be about 16% to 20% of the floor area.
- Operation tables should be positioned on the floor plinth with pipes for anesthetic gases, oxygen, vacuum etc. emanating from the plinth.
- Fire protection measures should be in place at strategic points (eg., a dry fire extinguisher should be on the wall in the OT).
- Window and split A/c should not be used in any type of OT because they are pure re -circulating units and have convenient pockets for microbial growth which cannot be sealed.
- OT should be centrally air-conditioned with air handling unit. The Air handling unit (AHU) of each OT should be dedicated one and should not be linked to air conditioning of any other area.
- During the non-functional hours, AHU blower will be operational round the clock (may be without temperature control). VFD devices may be used to conserve energy.
- Alternatively cross ventilation with exhaust is required if air conditioning not present.
- Glare free natural light is also of particular advantage in an OT.
- All electrical switches should be 1.5 meters above the floor.
- Isolation circuits should be provided for appliances connected to patients.
- All OTs should be connected to the emergency electric generator.
- It is recommended that periodic preventive maintenance be carried out in terms of cleaning of pre filters at the interval of 15 days. Preventive maintenance of all the parts is carried out as per manufacturer recommendations.

## Specific guiding notes:

**I. Air Change per Hour:**

- Minimum total air changes should be 25
- The fresh air component of the air change is required to be minimum 4 air changes out of total minimum 25 air changes.

**II. Air Velocity:** The airflow needs to be unidirectional and downwards on the OT table.

**III. Positive Pressure:** There is a requirement to maintain positive pressure differential between OT and adjoining areas to prevent outside air entry into OT. The minimum positive pressure recommended is 15 Pascal (0.05 inches of water).

**IV. Temperature and Humidity:** The temperature should be maintained at 21 +/- 3 Deg C inside the OT all the time with corresponding relative humidity between 40 to 60% though the ideal Rh is considered to be 55%. Appropriate devices to monitor and display these conditions inside the OT may be installed.

**V. Air Filtration:** The AHU must be an air purification unit and air filtration unit.

**Strict quality control measures must be taken in OT:**

- Microbiological sample should be taken randomly at 2 month intervals by Settle plate method.
- Random microbiological sampling to be done by settle plate/Air sampling method following construction/renovation work or any infectious outbreak.
- Any colony of Fungus/Staph. aureus needs to be reported. If culture is found positive for these, servicing of air handling unit and /or AC duct recommended.
- Clean the floor and sinks with detergent (soap water) and keep floor dry.
- Clean table tops and other surfaces like light shades, almirahs, lockers, trolley, etc with low level disinfectant Phenol (Carbolic acid 2%).
- Clean electric monitors with 70% alcohol.
- In case of spillage of blood, body fluids on floor, absorb with newspaper (discard in yellow bin), soak with bleaching solution for 10 minutes and then mop.
- Discard waste and gloves in proper bins and not on floor.
- Discard soiled linen in laundry basket and not on floor.
- Disinfect these items with bleaching solution followed by washing and autoclaving.
- Mop the floor unidirectional manner every 3 hours with disinfectant solution.

**Table 18: Do's and Don'ts for Operation Theatres**

| Do's | Don'ts |
|---|---|
| • Operating room must be dust-proof and moisture proof | • Do not overhead beam and loose cables/pipes on the floor |
| • A separate FP OT must be planned | • Do not extension boards on the floor in an OT |
| • Only essential furniture and equipment to be used for surgeries should be allowed inside the OT | • Do not unnecessary entry of personnel in OT |
| • Cupboards for instruments and electrical switches should be operated from outside the OT | • Do not staff entering OT without wearing proper protective attire |

## General services required for the Maternity Wing

### (A) Housekeeping, cleaning, dietary and laundry services

a. Wear gloves (preferably thick utility gloves) when cleaning.

b. Areas of daily cleaning and periodic cleaning should be identified and work schedule of the cleaners prepared accordingly.

c. Standard cleaning practices and adequate and timely supply of cleaning materials should be ensured.

d. To reduce the spread of dust and microorganism, use a damp or wet mop or cloth for walls, floors, and surfaces instead of dry-dusting or sweeping.

e. Scrubbing is the most effective way to remove dirt and microorganism. Scrubbing should be a part of every cleaning procedure.

f. Wash surfaces from top to bottom so that debris falls to the floor and is cleaned up last. Clean the highest fixtures first and work downwards- for example, clean ceiling lamps, then shelves, then tables, and then the floor.

g. Change cleaning solutions whenever they appear to be dirty. A solution is less likely to kill infectious microorganism if it is heavily soiled.

h. There should be arrangements for disposal of biomedical and other wastes, which should be in accordance with the national and state regulations.

i. Sterilization service is needed both in OT and LR. It needs sterilizers, autoclave, autoclave drums and disinfectant solutions and powders.

j. The beds in the wards should have clean linen at all times. All facilities should have sufficient bed-sheets (number of beds x 3) pillow covers, blankets, towels, etc. to ensure that the linen is changed at least every alternate day and also if it becomes soil . Blankets should be washed at least once in a fortnight. Depending upon the in-patient load of the facility, the laundry services can be outsourced.

k. Hospital laundry should be provided with necessary facilities for drying, ironing and storage of soiled and cleaned linens.

l. Kitchen should easily be accessible from outside along with vehicular accessibility.

m. A separate room for dietician and special diet. (Provision for those who need special diet in case of high BP/Diabetes, etc.).

n. Kitchen is located away from OT so that the noise and cooking odour do not cause any inconvenience to the patients, but should involve the shortest possible time in delivering food to the wards.

o. Clean utility room measuring 100–120 square feet is used for clean storage, eg. drugs, intravenous sets/solutions, CSSD articles, packing dressings, treatment trolleys/trays for minor procedures. Bulk linen and cleaning materials could also be stocked here.

p. Janitor room is in each ward for keeping mops, brooms, cleaning material and buckets. It should have a large sink for cleaning buckets and other equipment with adequate water supply.

q. Uninterrupted water supply and clean toilet facilities. Approximately 300 litre of water is required per bed. If necessary, this can be outsourced

r. Avoid water storage inside the wards/LR as spillage leads to slippery floors and provides potential sites for mosquito harboring.

## (B) Electricity and power backup

a. All the areas in the facility should be appropriately lit according to the purpose to be served.

b. Use CFLs which are environment-friendly.

c. There should be industry switch for portable X-ray in facilities with high patient load and one each of 15 amps and 5 amps for every two beds.

d. In case of interrupted power supply, back-up arrangements should be made, e.g. inverter, solar panels, genset (strength as per number of beds in facility).

e. Priority areas for electricity back-up are LR, OT (major/minor), sick newborn care unit and cold chain room.

f. Ward, corridors, toilets should be adequately lit.

## (C) Telecommunication

a. The facility should have a telephone connection.

b. A public telephone booth can be outsourced for the clients, family members, and visitors.

c. PA system and microphone in duty station of maternity wing, LR and OT, and speaker in the waiting area.

d. Dedicated phone line for LR.

e. Computer, net connectivity and data entry operator to manage records in Maternity Wing. (Resources available in SNCU and NRC can be utilized)

## (D) Good practices in the Maternity Wing

a. Identify a Maternity Wing in-charge. This should be backed by issuing an administrative order.

b. The Maternity Wing in-charge shall be responsible for preparing a duty roster so as to provide 24x7 cover.

c. Maternity Wing staff should not be transferred to other areas.

d. Display board should have name of the doctors on duty/call with their mobile numbers.

e. If the drugs and the other consumables are under lock and key the handing over of the key should be mandatory along with the stock position between shifts.

f. The duty roster should be displayed either outside of the LR or staff duty room.

g. LR checklist should be maintained by the nurses during every change of shift.

# Chapter 2 Infection Prevention

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# Infection Prevention

## Steps for ensuring infection prevention

For Maternity Wing, all staff including Grade III and IV staff should be given comprehensive orientation on infection prevention practices. The facility in-charge should ensure the availability of all necessary training equipment, etc. Infection prevention practices are based on the following principles:

- Every person (patient or healthcare worker) is considered infectious.
- Every person is considered at risk of infection.
- Hand washing is the most practical procedure to prevent spread of infection.
- Gloves are worn on both hands before touching broken skin, mucous membranes, blood or other body fluids, and before performing an invasive procedure.
- Protective barriers such as goggles, face masks, aprons, etc. are worn.
- Antiseptic agents are used to clean the skin or mucous membranes before certain procedures, or for cleaning wounds.
- All healthcare workers and facility staff follow safe work practices (e.g., not recapping or bending needles, properly processing instruments, and suturing with blunt needles when appropriate).
- The sites for providing care and examination of patients are cleaned regularly and waste is properly disposed.
- Colour coded bins are available as per norms and requirement.

**In a facility, successful implementation of infection prevention system is dependent on:**

- Knowledge and skills of service providers including Grade III and IV staff
- Availability of consumables and equipment
- Adherence to the protocols
- Segregation of waste
- Transportation and disposal of waste

# Infection prevention practices

The following should be in place at all facilities where maternal and newborn care is provided.

## a. Hand washing

This is the most practical procedure to prevent spread of infection. Hands should be washed thoroughly with soap and water:

- Before and after examining a patient/client
- Before putting on gloves
- After contact with blood or other body fluids, or soiled instruments
- After removing gloves


## b. Daily cleaning

- After each delivery, clean table top with Phenol/bleaching solution.
- Clean floor and sinks with detergent (soap water) and keep floor dry.
- Clean table tops and others surfaces such as light shades, almirahs, lockers, trolley, etc with low-level disinfectant Phenol (carbolic acid 2%).
- Clean electrical monitors with 70% alcohol.
- In case of spillage of blood, body fluids on floor, absorb with newspaper (discard in yellow bin), soak with bleaching solution for 10 min and then mop.

## c. Safe handling of sharps

Hypodermic (hollow bore) needles cause the most injuries to healthcare workers at all levels. The following safety guidelines should be followed when handling sharp instruments such as needles and syringes:

- Sharp instruments should never be passed from one hand directly to another person's hand.
- A needle holder should be used when suturing; the needle should never be held with the fingers.

## Table 19: Cleaning schedule for Client-care Areas

| | |
|---|---|
| **At the beginning of each day** | Clean horizontal surfaces – operating/procedure tables, examination couches, chair, trolley tops or Mayo stands, lamps, counter, and office furniture – with a cloth dampened with water; and clean floor with a mop dampened with water to remove dust and lint that have accumulated overnight. |
| **Between Clients** | • Clean operating/procedure tables, examination couches, chair, trolley tops or Mayo stands, lamps, and any other potentially contaminated surfaces in operating theaters and procedure rooms with a cloth dampened with a disinfectant cleaning solution. Alternatively, spray the solution onto the surfaces, using a spray bottle, and wipe with a cloth dampened with water.<br>• Clean spills of blood or other body fluids with a 0.5% chlorine solution immediately.<br>• Clean visible soiled areas of floor; walls, or ceiling with a mop or cloth dampened with a disinfectant cleaning solution.<br>• Put waste in a leak proof container, and empty the container when it is 3/4 full. |
| **At the end of each clinic session or day** | • Wipe down all surfaces – including counters, tables, sinks, lights, doors, handle plates, and walls – with a cloth dampened with a disinfectant cleaning solution or spray the solution on to the surface using a spray bottle and wipe them down. Remember to wipe from top to bottom. Pay particular attention to operating/procedure tables, making sure to clean the sides, base, and legs thoroughly. Rinse sinks with clean water after cleaning.<br>• Clean the floors with a mop soaked in a disinfectant cleaning solution.<br>• Check sharps-disposal containers and remove and replace them if they are 3/4 full.<br>• Remove medical or hazardous chemical waste, making sure to burn or bury it as soon as possible to limit contact with potentially infectious waste.<br>• Wash waste containers with disinfectant cleaning solution and rinse with water. |
| **Each week** | • Clean ceilings with a mop dampened with disinfectant cleaning solution. |

- After use, needles and syringes should be decontaminated by flushing them with a 0.5% chlorine solution three times.
- All needles/sharps/I.V. Cannulae/broken ampoules/blades should be handled properly and disposed in puncture-proof container.
- Needles must be destroyed immediately using hub-cutter.
- Sharps should be disposed immediately in a puncture-resistant container. Needles should not be recapped, bent, broken, or disassembled before disposal.
- In case of needle stick injuries (used needle), please follow the Post Exposure Prophylaxis Protocol (PEP) for prevention of HIV.

## d. Wearing sterile gloves

Gloves are the most important physical barrier that prevents the spread of infection. However, it is important to note that they do not replace hand washing. Gloves should be worn in the following situations:

- When there is a reasonable chance of hand contact with broken skin, mucous membranes, blood, or other body fluids.
- While performing an invasive procedure.
- While handling soiled instruments or contaminated waste items, or when touching contaminated surfaces.
- Sterile gloves should be worn without touching non-sterile surfaces.

## e. Instrument processing

Soiled instruments, used surgical gloves, and other reusable items can transmit disease if infection prevention procedures are not properly followed. These procedures include the following:

- **Decontamination** makes inanimate objects safer to handle before cleaning and involves soaking soiled items in 0.5% chlorine solution for 10 minutes and wiping soiled surfaces such as examination tables with a 0.5% chlorine solution.
- **Cleaning** after instruments and other reusable items have been decontaminated, they need to be cleaned to remove visible dirt and debris, including blood and body fluids. Cleaning is the most effective way to reduce the number of microorganisms on soiled instruments and equipment.

- **Sterilization** destroys all microorganisms, including bacterial endospores, which are present on instruments or equipment. Instruments, surgical gloves, and other items that come in contact with the blood stream or other sterile tissue should be sterilized. Sterilization can be achieved using an autoclave, dry heat, or a chemical.
- **High-Level Disinfection (HLD)** destroys all microorganisms except some bacterial endospores on instruments or objects. It is the only acceptable alternative to sterilization and can be achieved by boiling, steaming, or soaking items in a chemical solution.

## Storage

Sterilized and HLD items must be stored in a clean, dry area. Sterile packs and containers should be dated and rotated, using a "first in, first out" approach. Wrapped packages that remain dry may be used up to one week, and wrapped packages sealed in plastic up to one month. All autoclaved and wrapped instruments should have a tag which will indicate the status of sterilization after autoclaving.


## Bio-medical waste disposal

There are three kinds of waste generally found in health facilities: general waste, medical waste, and hazardous chemical waste. It is important to dispose of all kinds of waste properly, since improper disposal of medical and hazardous chemical waste poses the most immediate health risk to the community.

**General instructions:**

- Most waste (e.g. paper, trash, food, boxes) at health centers and hospitals is not contaminated and poses no risk of infection to people who handle it.
- Some waste, however, is contaminated and, if not disposed properly, can cause infection.
- Contaminated waste must therefore be disposed separately from non-contaminated waste.
- Hospital waste should be segregated at source in colour-coded waste bins as per guidelines.
- All plastic bags should be sealed, labeled and audited before disposal.

- Each facility must have housekeeping and waste management protocols depending upon the caseload, waste generated, available HR, and facility of waste disposal.
- Staff in the facility must be aware of infection prevention practices and protocols.

## Handling and disposal of medical waste

All staff has a responsibility to dispose of waste in a manner that poses minimal hazards to client, visitors, other health care workers, and the community. Anyone who handles contaminated waste – from the time it is thrown out by a service provider to even after it reaches the site of final disposal – is at risk of infection or injury.

## General waste/Non-contaminated waste

Non-hazardous waste that poses no risk of injury or infections. This is similar in nature to household trash. Example includes paper, boxes, packing materials, bottles, plastic container, and food-related trash. It should be stored in black bins/buckets, which will be taken away by municipality.

**Black Bag:** Kitchen waste, Paper bags, Waste paper/thermocol, disposable glasses and plates, leftover food.

## Medical waste/Contaminated waste

Waste generated during examination, immunization, investigations, diagnosis and treatment such as bandages or surgical sponges; which includes blood, blood products (fresh or dried blood) or other body fluids.

**Yellow bag:** Human tissue, placenta, products of conception, used swabs/ gauze/ bandage, other items (surgical waste) contaminated with blood

**Red Bag :** Used mutilated catheters I.V bottles and tubes, disinfected plastic gloves, other plastic material


**Blue bag :** Tubing like I.V. drip sets and different types of Catheters and tubes should be disposed in blue bins.

## Liquid medical waste (LMW)

- Avoid splashing
- Handle used cleaning/ disinfectant solution as LMW
- Pour LMW down a sink/drain/ flushable toilet or bury in a pit
- Rinse sink/drain/ toilet with water after pouring LMW
- Pour disinfectant solution in used sink/drain/ toilet at end of each day
- Decontaminate LMW container with 0.5% bleaching solution for 10 minutes before final washing

## Hazardous chemical waste

Chemical waste that is potentially toxic or poisonous, including cleaning products, disinfectants etc. should be thrown in toilets/drains, cytotoxic drugs and radioactive compounds should be disposed of according to radioactive disposed norms.

**PEP (Post exposure prophylaxis):**

- To be given in case of accidental exposure to blood and body fluid of HIV+ve woman

Proper disposal of sharps needs a special mention -

- Sharps (used or unused), including hypodermic and suture needles, scalpel blades, blood tubes, pipettes, and other glass items that have been in contact with potentially infectious materials (such as glass slides and coverslips)
- All sharps including cut needles should be decontaminated for 10 min. and then put in a puncture proof box before disposal.
- Sharps etc. like needles should be cut by a hub cuter and disposed in puncture proof containers. Once this container 3/4 filled, it should be buried or incinerated.

The four main components for waste disposal plan are:

1. Segregation at source
2. Disinfection
3. Proper storage before transportation
4. Safe disposal

## Creating a waste-management plan

There are four components to a waste-management plan:

**I. Segregation:** separating waste by type at the place where it is generated/at source

a. Always segregate waste into infectious and non-infectious waste at the source of generation.

b. Segregate infectious waste into:

- Sharps: needles, blades, broken ampoules, vials and slides. These should be disposed of in a puncture-proof container.
- Non-sharps: soiled waste, such as syringes, dressings, gloves and masks. These are to be disposed of in the red plastic bin/bag.
- Anatomical waste, such as placenta. This is to be disposed of in the yellow plastic bin/bag.

c. Non-infectious (general) waste such as waste similar to household waste including packaging material, cartons, fruit and vegetable peels, syringe and needle wrappers and medicine covers, should be disposed of in the black plastic bin/bag.

d. Never mix infectious and non-infectious waste at the source of generation or during the collection, storage, transportation or final disposal of waste.

**II. Disinfection**

a. Always collect the waste in covered bins.

b. Fill the bin up to the three-quarter level.

c. Clean the bin regularly with soap and water.

d. Never overfill bins.

e. Never mix infectious and non-infectious waste in the same bin.

f. Never store waste beyond 48 hours.

**III. Proper storage before transportation**

a. When carrying/transporting waste from the source of generation to the site of final disposal, always carry it in closed containers.

b. Use dedicated waste collection bins for transporting waste.

c. Never transport waste in open containers or bags. It may spill and cause spread of infections.

d. Never transport waste with sterile equipment.

**IV. Safe disposal**

a. Always remember to disinfect and shred the waste before its final disposal.

b. Remember the following while treating waste

- Anatomical waste is to be buried deep at the health facility.
- All sharps including cut needles should be decontaminated for 10 min. and then put in a puncture-proof box before disposal.
- All sharps including cut needles should be decontaminated for 10 min. and then put in a puncture-proof box before disposal.
- Syringes are to be cut (with hub cutters) and chemically disinfected at the source of generation before they are finally disposed off in the sharps pit located at the health facility.

c. Never throw infectious waste into general waste without any pre-treatment and shredding.

# Chapter 3 Capacity Development


BLOOD SAVES
ONLY IF IT IS HIV FREE

# Chapter 3
# Capacity Development

Continuous updating of skills and knowledge of staff is mandatory for ensuring provision of quality services. For this purpose, Standard Treatment Protocols must be displayed in the LR as a reminder and job aide. The different training at various levels are listed below:

**Table 20: Training requirements**

| SC /Level 1 | PHC /Level 2 | FRU/Level 3 |
|---|---|---|
| ANM trained in:<br>• SBA<br>• NSSK<br>• IUCD insertion<br>• Contraceptive update<br>• HBNC<br>• RTI/STI<br>• IMEP<br>• IMNCI<br>• NSSK<br>• Immunization | • SBA Trained SN/ANM<br>• MO trained in BEmOC<br>• MO trained in MTP<br>• MO trained in Minilap/ PPS<br>• MO trained in NSV<br>• MO/SN/ANM trained in IUCD insertion<br>• MO/SN/LT/ANM trained in RTI/STI/HIV screening<br>• FIMNCI<br>• NSSK<br>• MO/SN trained in PPTCT | • SBA Trained SN/ANM<br>• MO trained in LSAS<br>• MO trained in EmOC<br>• MO trained in MTP<br>• All MOs working in maternity should be BEmOC trained<br>• MO/SN/LT/ANM trained in RTI/STI/HIV screening Gynecologist/Surgeons trained in lap. sterilization<br>• MO trained in minilap/ PPS<br>• MO trained in NSV<br>• MO/SN trained in PPIUCD insertion<br>• MO/SN/ ANM trained in IUCD insertion<br>• MO/SN trained in PPTCT |

MoHFW has developed skill-based in-service trainings for various healthcare providers (See Table 21).

**Table 21: Capacity development in MNH**

| Standard trainings in Maternal and Newborn health | | | | |
|---|---|---|---|---|
| **Type** | **Trainees** | **Trainers** | **Duration** | **Training site** |
| **SBA** | ANM, LHV, SN | Gynaecologist, Paed, Nurses, ANM tutors | 21 days | DH and select institutions |
| **BEmOC** | MO | Gynaecologist Pediatrician | 10 days | Medical college and identified DH |
| **CEmOC** | MO | Gynaecologist Paediatrician | 16 weeks | Medical college and identified DH |
| **LSAS** | MO | Anesthetist | 18 weeks | Medical college and identified DH |
| **MTP** | MO | Gynaecologist | 2 weeks (extendable to 3) and 25 mandatory cases | Medical College and identified DH |
| **NSSK** | ANM, SN, MO | MO, Pediatrician | 2 days | SDH, CHC, DH |
| **IMNCI** | ANM, LHV, AWW | MO, LHV, ANMTC faculty | 8 days | PHC, CHC, SDH, DH |
| **FIMNCI** | SN, MO of 24x7 PHC/CHC/DH and Paediatrician | Paediatrician, Faculty of Community Medicine department | 11 days | Medical College |
| **IMNCI plus (ASHA module 6 and 7)** | ASHA | ASHA facilitator | 20 days (5days x 4 times) | PHC, CHC, SDH |
| **FBNC** | Paediatrician, MO and SN of SNCU | Paediatrician (neonatologist) | 4 days | SNCU (DH) |
| **Blood storage centre** | MOs and Lab Technicians | Blood bank officer and other staff | 3 days | At blood bank |

*Table 21: Capacity development in MNH...continued*

| Standard trainings in Maternal and Newborn health | | | | |
|---|---|---|---|---|
| **Type** | **Trainees** | **Trainers** | **Duration** | **Training site** |
| | ANM, LHV, SN, MOs | Gynaecologist/ Master Trainers | 6 days | DH, SIHFW/DTC |
| **PPIUCD Insertion** | Gynaecologist/ MO/SN | Gynaecologist | 3 days | Medical College/ DH |
| **Laparoscopic Tubal Ligation** | Gynaecologist and surgeons | Certified master trainer in laparoscopic sterilization | 12 days | Medical college |
| **Tubal Ligation (Conventional/ Minilap)** | MO | Certified master trainer in minilap | 12 days | Medical college and identified DH |
| **NSV** | MO | Certified NSV trainers | 5 days | Medical college |
| **RTI/STI** | ANM, LHV, SN, MO, Lab tech | Gynaecologist/ Dermatologists | 2 days | Identified DH |
| **PPTCT** | MO/SN/Lab Technicians and Counsellors | Staff from Medical Colleges and AIDS Control Societies | Initial training: 5 days<br>Refresher training: 2 days | Medical colleges and identified DH and other suitable sites |

The training site for most skill-based trainings is either the Medical College or the District Hospital. Hence, it is essential that they too routinely practice the training protocols. To ensure this, the training site has to be accredited as per norms.

## Skills lab

A Skills Lab serves as a prototype demonstration and learning area for healthcare providers. Simulation-based learning in Skills Labs is a concept that enables to refine skills of services providers though frequent practice. These Labs will also enable in institutionalizing the use of Standard Operating Procedures (SOPs) so that they become a part of routine practice. The Skills Labs will have an edge over other didactic learning methods by providing the opportunity for repetitive skills practice, simulating clinical variations in a controlled environment.

Based at each district level, the labs are equipped with a number of skills stations as per the skills requirements at various levels and as listed in the recommended client practice under various training programmes. The Labs are open 24x7 for the use of MOs, staff nurses, ANMs, LHVs and other supervisory staff. Each Skills Lab has a number of skills stations for specific skills that include:

1. Antenatal care
2. Intra-natal care
3. Post-natal care
4. Complication Management
5. Newborn care
6. Family Planning
7. Infection prevention (IMEP)
8. Counseling
9. Documentation

(See complete list placed at Annexure 10).


# Chapter 4 Reporting and Recording System


TESTED
AIDS

# Chapter 4
# Recording and Reporting System

To capture MNH services, each facility must maintain the following records in form of registers, log books, case records, etc.

1. Admission Register
2. Labour room Register
3. Antenatal/postnatal Register
4. MTP Register
5. Interval and PPIUCD Register
6. OT Register
7. FP Register
8. Maternal Death Records and Registers
9. Laboratory Register
10. Referral In/Referral Out Register
11. MCP Card
12. Admission Sheets/Bed Head Tickets
13. Discharge Slip
14. Referral slip
15. Partograph

## I. Health information system needs to be established at each facility to:

- Enable case-based tracking
- Assess the coverage of services within the catchment area
- Compare input vs output of a particular service

The MCP card initiated by the GoI is a recording tool that attempts to capture first hand information by a service provider. These registers should ideally be feeding into the reporting formats. The Mother and Child Tracking system enables tracking of each pregnant woman and child for their pregnancy care and immunization. It is also a feedback to ANMs, ASHAs and others to ensure that each pregnant woman receives her ANC and PNC services and children their immunization in time. An online module for name-based tracking has been developed and integrated with the HMIS web portal. The reference date for starting this system is all new pregnancies registered from December 1, 2009 onwards at the first point of contact of the pregnant mother with the health facility/provider, and all children born on or after December 1, 2009. All pregnancies, regardless of place of service delivery, need to be captured in this.

## Table 22: Records to be maintained and output indicators calculated periodically

| Records to be maintained | | |
|---|---|---|
| **Level 1** | **Level 2** | **Level 3** |
| 1. Counter foil of MCP card<br>2. Integrated RCH register<br>3. Partograph<br>4. Delivery register<br>5. FP service delivery Register including IUCD register<br>6. IUCD removal register<br>7. Counterfoil of IUCD Client Card<br>8. Referral slip<br>9. Line listing of Maternal deaths/Infant deaths reported from the area<br>10. Line listing of severely anemic pregnant women<br>11. Referral out register<br>12. Stock register<br>13. Maternal death/infant death record/register | Level 1, plus the following:<br>1. Admission register<br>2. LR sterilization<br>3. MTP Register<br>4. FP service delivery Register including PPIUCD<br>5. Laboratory Register<br>6. Minor OT Register<br>7. OPD register<br>8. Handing over-taking over (applicable for LR and ANC , PNC wards)<br>9. No. of HIV cases detected at the facilities and no. of PW referred to higher facility<br>10. Referral In | Level 2, plus the following:<br>1. OT register<br>2. OT sterilization register<br>3. Blood transfusion register<br>4. RTI/STI register |

| Reports to be generated | | |
|---|---|---|
| **Level 1** | **Level 2** | **Level 3** |
| 1. % of women registered against estimated pregnancies<br>2. % women registered in 1st trimester of pregnancy out of total registered<br>3. % women who received 4+ ANC checkups or more out of total registered<br>4. % women with severe anaemia out of total anaemic women<br>5. % of still birth (fresh and macerated) out of total live births<br>6. % of newborns required resuscitation out of total live births<br>7. % of interval IUCD inserted against ELA | As in Level 1, plus the following:<br>1. % women with complications (ANC,INC,PNC) out of total deliveries<br>2. Malaria, diabetes, Eclampsia, PPH out of total registered pregnant women<br>3. Proportion of complicated cases managed out of total complications<br>3. % of out referrals among total complicated case (ANC,INC,PNC)<br>4. % of samples collected from Labour room showing significant contamination<br>5. No. of MTPs in 1st trimester<br>6. % of pregnant women screened for HIV<br>7. % women with HIV positive out of total screened<br>8. Distribution of maternal deaths as per cause<br>9. Proportion of PPS against total sterilizations<br>10. Proportion of PPIUCD insertions against the number of deliveries | As in Level 2, plus the following:<br>1. C-section rate<br>2. Case fatality rate in SNCU<br>3. Case fatality rate for obstetric complication<br>4. % of samples collected from OT showing any contamination<br>5. % C-section given blood transfusion<br>6. Proportion of 2nd trimester MTP<br>7. In-referral and out-referral rate<br>8. % PPIUCD inserted against total IUCD<br>9. Proportion of PPS against total sterilizations |

# Chapter 5 Referral Transport

LEFT SIDE

# National Ambulance Service (NAS)

NATIONAL HEALTH MISSION
राष्ट्रीय स्वास्थ्य मिशन

**Entitlements**

- Free for pregnant women and sick infants
- "Add others entitlements"

RIGHT SIDE

# National Ambulance Service (NAS)

NATIONAL HEALTH MISSION
राष्ट्रीय स्वास्थ्य मिशन

:102/108 (Toll Free)

" (as applicable)"

A joint Initiative of MOHFW, Govt of India and State of.....

REAR SIDE

# National Ambulance Service (NAS)

**Entitlements**

- Free for pregnant women and sick infants
- "Add others entitlements"

NATIONAL HEALTH MISSION
राष्ट्रीय स्वास्थ्य मिशन

:102/108 (Toll Free)

" (as applicable)"

FRONT

NATIONAL HEALTH MISSION
राष्ट्रीय स्वास्थ्य मिशन

AMBULANCE

# Chapter 5
# Referral Transport

An effective perinatal referral transport service is critical for preventing maternal deaths in India. It enables a pregnant woman and her newborn needing emergency care to reach an adequately resourced facility safely and well in time and condition that provides them a fair chance for survival and to receive appropriate care.

At present, there are a number of systems for emergency or referral transport services operating in rural India, with varying modes of operation and catering to different situations. It is important that every model of referral transport provides a minimum acceptable level of services at an optimal cost. The states must plan for an appropriate mix of ambulances with basic and advanced life support, patient transport systems based on epidemiological conditions, geographical conditions, and actual case load. Every state must ensure adequate coverage by basic ambulances catering to all parts of the districts.

GoI has a mandate to establish a network of basic patient-care transportation ambulances whose objective would be to reach beneficiaries in rural areas within 30 minutes of receiving a call. Under NRHM, states are provided financial assistance for establishing emergency response services and patient transport ambulances. States have the flexibility to transport pregnant mothers and sick infants using any of the different models available, including those implemented as public-private partnership models. It is up to the states how they establish the necessary linkages between home and health facility, between different levels of health facilities, and for drop-back home for pregnant women before and after delivery and sick infants. These services are to be provided free of cost as envisioned under the Janani Shishu Suraksha Karyakaram (JSSK) launched on June 1, 2011.

## Key steps in referral transport

- Referral transport to be linked with a centralized 24x7 call centre having a universal toll free number either district-wise or state-wise as required.

- Vehicles to be GPS fitted for equitable geographical distribution and effective network and utilization.
- A prudent mix of basic level ambulances and emergency response vehicles to be established with focus on adequate coverage by basic-level ambulances.
- Free referral transport to be ensured for all pregnant women and sick neonates accessing public health facilities.
- Response time for the ambulance to reach the beneficiary should be within 30 min and the woman should reach the health facility within the next 30 min.
- Rigorous and regular monitoring of use of vehicles to be done.
- Universal access to referral transport throughout the state, including transport to and from difficult and hard to reach areas, to be ensured.

**Steps to be taken for ensuring assured referral transport**

- During the 1st ANC, the toll free number called for ambulance must be recorded in the MCP card, and the beneficiary and her attendants informed about it.
- All referral vehicles must have information on the functional Delivery Points (DPs) such as PHCs, CHCs, SDH, etc to avoid any delay in seeking treatment.

## National ambulance services

With the fund support of NRHM, States have introduced various models of referral transport services in the country e.g. Mahatari express in Chhattisgarh, Janani Express in Odisha/MP, Samajvadi Seva in UP, Haryana Swasthya Vahan Sewa in Haryana, EMRI models in different States like Andhra Pradesh and Uttarakhand, Mamta Vahan in Jharkhand etc. However it is apparent that there has been poor access and utilisation of these referral vehicles, across the States. This may be due to several factors like lack of uniformity in terms of a single call number, type of vehicles, color coding, design of vehicle, and inadequate IEC etc.

Hence a policy decision has been taken by GoI which states, a standardized display on the patient transport vehicle/ambulances funded under NRHM. It has been named as “National Ambulance Service”, which is simple, apt and understandable across the country without any barrier to the language. Uniformity in terms of name, design, colour and some key conditionalities have been worked out and have been shared with the States.

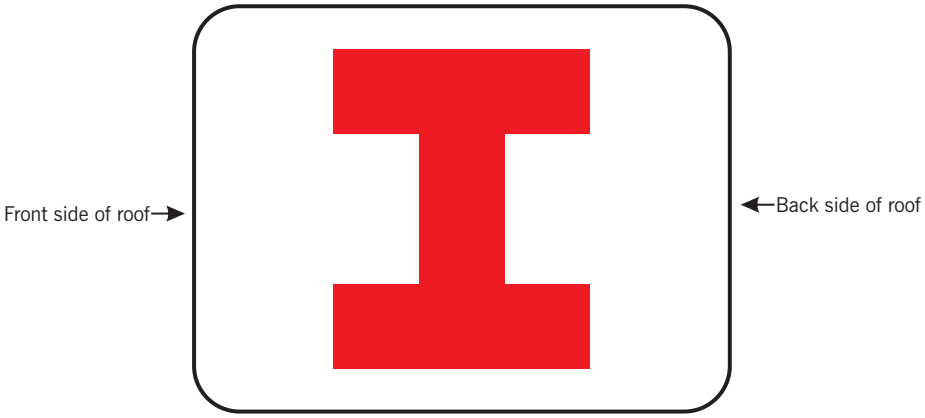
## RIGHT SIDE


## LEFT SIDE (To be in Regional language/Hindi, as applicable)

## REAR SIDE


## FRONT


## TOP



# Chapter 6 Quality Assurance

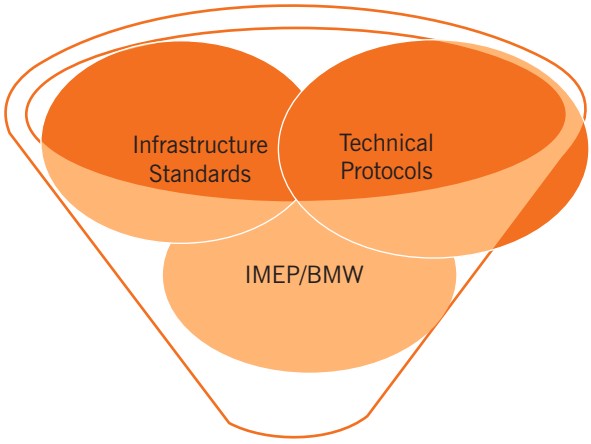
# Chapter 6
# Quality Assurance

Importance of improving quality of health care needs no emphasis. Experience has shown that improved quality has a positive impact on clients' willingness to accept and effectively use services.

## Ensuring quality

- Quality of care is ensured by adhering to professional standards
- Standardized processes and procedures are followed to deliver services
- Improving the service quality by focusing on identified gaps
- Continuously review resolving of identified problems

**Addressing client satisfaction through robust quality of care**




Quality care leading to Client Satisfaction

## Critical steps for ensuring Quality Assurance

- Making a team within the facility responsible for facilitating quality assurance
- Periodic assessment of various services and identification of strengths and gaps, based on standards
- Action plan with time line for addressing the gaps
- Adhering to and practicing established and standard technical protocols
- Continuous handholding and supportive supervision
- Ensuring IMEP practices
- Prescription audits
- Regular interaction with clients
- Putting in place grievance redressal mechanisms
- Maternal Death Review at both facility and community level to ensure that corrective steps are taken to fill systemic gaps, if any
- Convening regular meetings of the district and state quality assurance committees.

Regular review at state and district level is critical for quality outcome of any programme. It is therefore suggested that the state programme officers review programmes every month, and the Principal Secretary/Mission Director every three months. At the district level, the District CMO/District Programme Officer should review implementation of programmes every month.

The state and district programme officers must undertake field visits with checklists before each review to understand field reality and subsequent corrective actions. The checklist should contain both managerial and technical aspects including critical quality issues. Simple bulleted points of action to be taken at different levels should be drawn up within 48 hrs of every review meeting and the action taken should be reviewed by the controlling officers and supervisors.

Detailed Quality Assurance Guidelines by Maternal Health Division, MoHFW will be released soon.

# Annexures

# Annexure 1 | Definitions and Benchmarks

**1. Maternal death** is the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes

**2. Lifetime risk of maternal death** is the probability of dying due to maternal cause during a woman's reproductive lifespan.

**3. Maternal mortality rate** is the number of maternal deaths occuring in a given period per 100,000 women of reproductive age during the same time period.

**4. Maternal mortality ratio** is the ratio of the number of maternal deaths per 100,000 live births.

**5. Case fatality rate** is the ratio of the number of deaths caused by a specified disease to the number of diagnosed cases of that disease.

**6. Crude birth rate** is number of resident live births for a specific geographic area during a specific period divide by mid-year population for that area and multiplied by 1000.

**7. Skilled birth attendant a (SBA):** is a person who can handle common obstetric and neonatal emergencies and is able to timely detect and recognize when a situation reaches a point beyond his/her capability, and refers the woman/newborn to an appropriate facility without delay.

**8. Live birth:** A live birth is complete expulsion or extraction from its mother of a product of conception, irrespective of duration of pregnancy, which after separation, breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movements of voluntary muscles. This is irrespective of whether the umbilical cord has been cut or the placenta is attached. [Include all live births >500 grams birth weight or 22 weeks of gestation or a crown heel length of 25 cm]

**9. Still birth:** Death of a foetus having birth weight >500 g (or gestation 22 weeks or crown heel length 25 cm) or more.

**10. Delivery Points:** These are those health facilities which fulfil the Government of India criteria of minimum benchmark of performance, in terms of numbers of deliveries conducted, from Sub-centre to District Hospital. (except in NE states, hilly areas of states* and UT's of Daman and Diu, Dadar and Nagar Haveli, Andaman and Nicobar island, and Lakshadweep).

The benchmarks set for different levels of health facilities are given below.

**Benchmarks for delivery points**

| Health facility | For all other states | For 8 North-east states including Sikkim |
|---|---|---|
| **Sub-centres** | >3 deliveries per month | > 2 deliveries per month |
| **Primary Health Centres** | >10 deliveries per month | > 6 deliveries per month |
| **Non-first Referral Units (FRU)/ Community Health Centres (CHC)** | >10 deliveries per month | > 6 deliveries per month |
| **FRU-CHC/Sub District Hospital (SDH)** | >20 deliveries per month | > 20 deliveries per month |
| **District Hospital**<br>**District Women** | >50 deliveries per month | > 30 deliveries per month |
| **Hospital**<br>**Medical Colleges** | >50 deliveries per month | > 50 deliveries per month |
| **Accredited PHF** | >10 deliveries per month | > 10 deliveries per month |

**11. Birth weight**

Birth weight is the first weight of a live or dead product of conception, taken after complete expulsion or extraction from its mother. This weight should be measured within 24 hours of birth, preferably within its first hour of life itself before significant postnatal weight loss has occurred.

**Low birth weight (LBW) -** Low birth weight baby 2500 gm.

**Very Low birth weight (VLBW) -** Birth weight of less than 1500 gm.

**Extremely Low birth weight (ELBW) -** Birth weight of less than 1000 gm.

**12. Gestational Age:** The duration of gestation is measured from the first day of the last normal menstrual period. Gestational age is expressed in completed days or completed weeks.

**Preterm** - Gestational age of less than 37 completed weeks (i.e. less than 259 days)

**Term** - Gestational age of 37 to less than 42 completed weeks (i.e. 259 to 293 days)

**Post Term** - Gestational age of 42 completed weeks or more (i.e. 294 days or more).

13. **Neonatal Period:** This refers to the period of less than 28 days after birth.

    **Early neonatal period** refers to the period before 7 days of age.

    **Late neonatal period** refers to the period from completion of 7 days upto 28 days of life.

14. **Perinatal mortality rate** refers to the number of perinatal deaths per 1,000 total births (from 28 weeks of gestation to the 4 week after delivery). It is usually reported on an annual basis.

15. **Neonatal mortality rate** is the number of deaths during the first 28 completed days of life per 1,000 live births in a given year or period. Neonatal deaths may be subdivided into early neonatal deaths, occurring during the first seven days of life, and late neonatal deaths, occurring after the seventh day but before the 28 completed days of life.

16. **Infant mortality rate** is the number of deaths of infants under one year old per 1,000 live births.

17. **In-born:** A baby born in your centre

18. **Out-born:** A baby not born in your centre

19. **Contraceptive prevalence rate** is the proportion of women of reproductive age (15-49 years) who are using (or whose partner is using) a contraceptive method at a given point in time.

20. **Unmet need of contraception:** includes the proportion of currently married women who are neither in menopause or had hysterectomy nor are currently pregnant who want more children after two years or later or do not want any more children and are currently not using any family planning method.

21. **Total fertility rate:** The average number of children that would be born per woman if all women lived to the end of their childbearing years and bore children according to a given fertility rate at each age.

**22. Eligible couple:** An eligible couple refers to a currently married couple wherein the wife is in the reproductive age, that is between the ages of 15-49 years.

**23. Interval Sterilization:** Female sterilization any time 6 weeks or more after childbirth if it is reasonably certain she is not pregnant.

**24. Postpartum sterilization:** Female sterilization immediately or within 7 days after child birth.

**25. PPIUCD – Postpartum IUCD may be inserted:**

- Post placental – Within 10 minutes of the delivery of placenta
- Within 48 hrs. of birth of baby
- Intracaesarean – during caesarean section, after the delivery of placenta.

** JandK, Uttarakhand and HP*

# Annexure 2 | Janani Shishu Suraksha Karyakram (JSSK)

## Entitlements for pregnant mothers

- Free delivery
- Free caesarian section
- Free drugs and consumables
- Free diagnostics (blood, urine test and ultrasonography etc.)
- Free diet (Up to 3 days for normal delivery and up to 7 days for caesarian section)
- Free provision of blood
- Free transport from home to health institutions, between health institutions in case of referral and drop back home
- Exemption from all kinds of user charges

## Entitlements for sick infants till one year after birth

- Free and zero expense treatment
- Free drugs and consumables
- Free diagnostics
- Free provision of blood
- Free transport from home to health institutions, between health institutions in case of referral and drop back home
- Exemption from all kinds of user charges

# Annexure 3 | List of standard practice protocols and their recommended location

| Standard practice protocols should be displayed in LR/ANC/PNC wards as appropriate. Here is an indicative list: | | |
|---|---|---|
| **S.No.** | **Poster theme** | **Recommended location** |
| 1 | Antenatal examination | * ANC clinics, VHND sites |
| 2 | Postnatal check up | PNC clinics, VHND sites, wards, waiting area in OPD |
| 3 | Simplified Partograph | Nursing station, LR, Staff duty room |
| 4 | Vaginal bleeding before 20 weeks | Labour room, OT |
| 5 | Vaginal bleeding after 20 weeks | Labour room, OT |
| 6 | Management of PPH | Labour room, OT |
| 7 | Eclampsia | Labour room, OT |
| 8 | AMTSL | Labour room, OT |
| 9 | Newborn resuscitation | Newborn corner, SCNU, OT |
| 10 | Kangaroo care | PNC ward, SCNU, PNC clinics, VHND sites, waiting area in OPD |
| 11 | Breastfeeding | Labour room, PNC ward, ANC/PNC clinics, waiting area in OPD, VHND sites |
| 12 | Hand washing | Hand washing area in OT/LR/SCNU, ANC clinic, OPD chambers |
| 13 | Preparation of 1 litre bleaching solution | Utility room, sterilization room, nursing station, staff duty room |
| 14 | Infection prevention | OPD, Labour room, wards, laboratory, X-ray room, VHND sites |
| 15 | Processing of used items | Utility room, sterilization room, Nursing station, staff duty room |
| 16 | Pre Eclampsia* | OPD, ANC clinic, ANC ward |
| 17 | LR Sterilization* | LR, nurses duty station |
| 18 | OT Sterilization * | OT, nurses duty station |
| 19 | Management of atonic PPH * | Labour room, OT |
| * Additional in EmOC services | | |

# Annexure 4 | National Immunization Schedule (NIS) For Infants, Children and Pregnant Women

Note: Immunization Registers to be maintained separately, as per RI programme.

| Vaccine | When to give | Dose | Route | Site |
|---|---|---|---|---|
| **For Pregnant Women** | | | | |
| TT-1 | Early in pregnancy | 0.5 ml | Intra-muscular | Upper Arm |
| TT-2 | 4 weeks after TT-1* | 0.5 ml | Intra-muscular | Upper Arm |
| TT- Booster | If received 2 TT doses during in a pregnancy within the last 3 yrs.* | 0.5 ml | Intra-muscular | Upper Arm |
| **For Infants** | | | | |
| BCG | At birth or as early as possible till one year of age | 0.1ml (0.05ml until 1 month age) | Intra-dermal | Left Upper Arm |
| Hepatitis B- Birth Dose | At birth or as early as possible within 24 hours | 0.5 ml | Intra-muscular | Antero-lateral side of mid-thigh |
| OPV-0 | At birth or as early as possible within the first 15 days | 2 drops | Oral | Oral |
| OPV 1,2 and 3 | At 6 weeks, 10 weeks and 14 weeks | 2 drops | Oral | Oral |
| DPT1,2 and 3 | At 6 weeks, 10 weeks and 14 weeks | 0.5 ml | Intra-muscular | Antero-lateral side of mid thigh |
| Hepatitis B 1, 2 and 3 | At 6 weeks, 10 weeks and 14 weeks | 0.5 ml | Intra-muscular | Antero-lateral side of mid-thigh |
| Pentavalent Vaccine** 1,2 and 3 | At 6 weeks, 10 weeks and 14 weeks | 0.5 ml | Intra-muscular | Antero-lateral side of mid-thigh |
| Measles 1 | At 9 completed months to 12 months. | 0.5 ml | Sub-cutaneous | Right upper Arm |
| Vitamin A (1st dose) | At 9 completed months with measles | 1 ml (1 lakh IU) | Oral | Oral |
| Japanese Encephalitis (1st Dose)*** | At 9 completed months | 0.5 ml | Sub-cutaneous | Left Upper Arm |

*4) National Immunization Schedule ...continued*

| Vaccine | When to give | Dose | Route | Site |
|---|---|---|---|---|
| **For Children** | | | | |
| DPT Booster-1 | 16-24 months | 0.5 ml | Intra-muscular | Antero-lateral side of mid-thigh |
| OPV Booster | 16-24 months | 2 drops | Oral | Oral |
| Measles- 2nd Dose | 16-24 months | 0.5 ml | Sub-cutaneous | Right upper Arm |
| Japanese Encephalitis (if applicable)*** | 16-24 months | 0.5 ml | Sub-cutaneous | Left Upper Arm |
| Vitamin A (2nd to 9th dose) | 18 months (2nd dose). Then, one dose each every 6 months up to the age of 5 years. | 2 ml (2 lakh IU) | Oral | Oral |
| DPT Booster-2 | 5-6 years | 0.5 ml. | Intra-muscular | Upper Arm |
| TT | 10 years and 16 years | 0.5 ml | Intra-muscular | Upper Arm |

**Give TT-2 or booster doses before 36 weeks of pregnancy. however, give TT even if more than 36 weeks have passed. give TT to a woman in labour, if she has not previously received TT.*
*** Pentavalent vaccineis introduced in place of DPT and Hepatitis b 1,2 and 3 in select states.*
**** JE vaccine, in select endemic districts.*

**Register for cases referred from other health facility (to be maintained at receiving facility)**

Name of the Receiving Health Facility :

| S. No. | Name of patient | Address and contact number of patient | Date and time of arrival | If referred case is a pregnant women/ child, ID No. (MCTS*) | Name of the health facility referred from | Name and designation of referring Health Official/ Functionary | Whether the patient came with a referral slip (Y/N) | Whether advanced information received from referring facility (Y/N) | Reason for referral | Condition of patient at time of receiving | Name and designation of Health Official attending the case on receiving /arrival | Mode of referred transport – (Govt. ambulance /PPP/ vehicle arranged by patient) | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| | | | | | | | | | | | | | |
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# Annexure 6 | Referring Facility Register (Prototype Only)

| Register for referral to other/higher health facility (to be maintained at referring facility) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Name of the referring health facility : | | | | | | | |
| S.No. | Name of patient | Address and contact number of patient | Date of admission | Reason for admission | Reason for referral | Condition of patient at time of referral | Date and time of referral |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| | | | | | | | |
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| Register for referral to other/higher health facility (to be maintained at referring facility) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Name of the referring health facility : | | | | | | | |
| Name of the health facility referred to | Name and designation of referring Health Official/ Functionary | Name of the accompanying person (official or relative) | Whether prior information sent to referral facility (Y/N) | If Yes, name of the person spoken to and contact number | Mode of referral Transport – (Govt. ambulance/PPP / vehicle arranged by the patient) | Mode of referral transport – (Govt. ambulance/PPP/ vehicle arranged by the patient) | Remarks |
| 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| | | | | | | | |
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# Annexure 7 | Referral slip

## Referral slip

Name of the referring facility:
Address:
Telephone:

Name of the patient: _____Age: _____Yrs: _____

Father's/Husband's Name: _____

Address: _____ Contact no. _____

Referred on ____/____/____ (d/m/yr) at _____ (time) to _____

_____ (Name of the facility) for management.

Provisional Diagnosis:

Admitted in the referring facility on ___/___/___ (d/m/yr) at _____ (time) with chief complaints of:

- _____
- _____
- _____

Summary of management (Procedures, Critical interventions, drugs given for management):

- Blood group:
- Hb:
- Urine R/E:
- Others

Condition at time of referral:

Consciousness: Temp: Pulse: BP:

Others (specify): _____

Information on referral provided to the institution referred to: Yes/No

If yes, then name of the person spoken to: _____

Mode of transport for referral: Govt./PPP/Vehicle arranged by patient:

Signature of Referring physician/Health functionary
(Name/Designation/Stamp)

# Annexure 8 | Sample Duty Roster: MO, nursing staff and support staff

| Duty Roster | | | | | | | |
|---|---|---|---|---|---|---|---|
| Name of facility_____ | | | | Roster duration_____ | | | |
| Date/Day | Staff on duty | 8 am–2 pm (morning) | | 2 pm–8 pm (afternoon) | | 8 pm–8 am (night) | |
| | | Labour Room | Wards | Labour Room | Wards | Labour Room | Wards |
| Monday | MO<br>SN<br>Support staff | | | | | | |
| Tuesday | MO<br>SN<br>Support staff | | | | | | |
| Wednesday | MO<br>SN<br>Support staff | | | | | | |
| Thursday | MO<br>SN<br>Support staff | | | | | | |
| Friday | MO<br>SN<br>Support staff | | | | | | |
| Saturday | MO<br>SN<br>Support staff | | | | | | |
| Sunday | MO<br>SN<br>Support staff | | | | | | |

**Note:**

- Duties will be changed only with prior permission
- Being absent from the duty without sanctioned leave shall be considered as absent
- Duties can be swapped mutually only with prior intimation to the M/wing in-charge
- Implementation of duty roster is the responsibility of Maternity wing in-charge

Signed

CS/BMO
Maternity wing in-charge

# Annexure 9 | Sample of handing/taking over register

| Date: | | | | | | |
|---|---|---|---|---|---|---|
| Shifts | 7.30 am–2 pm/ morning | | 1.30 pm–8 pm/ afternoon | | 7.30 pm–8 pm/ night | |
| Supplies | Available | Functional | Available | Functional | Available | Functional |
| BP apparatus | | | | | | |
| Stethoscope | | | | | | |
| Foetoscope | | | | | | |
| Thermometer | | | | | | |
| Torch | | | | | | |
| Bag and mask | | | | | | |
| Baby weighing scale | | | | | | |
| 6 trays | | | | | | |
| Warmer | | | | | | |
| Suction apparatus | | | | | | |
| Laryngoscope | | | | | | |
| Oxygen cylinder | | | | | | |
| Checked and found functional | | | | | | |
| Information about complicated cases and women in labour | | | | | | |
| Referrals | | | | | | |
| Remarks | | | | | | |
| Sign: | | | | | | |

**Note:**

I. During change of shifts, the LR staff should properly hand-over the details of patients admitted in maternity wing. Status of drugs, consumable and instrument should also be included in the handing over/taking over process.

ii. Leaving staff should have 30 minutes handover with the new staff.

iii. In-charge should also be responsible to maintain a "handing over/taking over" register in the Labour room. A sample is shown here.

iv. Replenish the drugs and consumables during each shift change.

# Annexure 10 | Skill stations

| Sl. No. | The Me | Basic Skills | Add-on Skills |
|---|---|---|---|
| 1 | Antenatal Care | • Calculation of EDD<br>• Recording BP and weight<br>• Abdominal examination and auscultation of Foetal Heart Sounds (FHS)<br>• Laboratory Investigations- Haemoglobin estimation- Sahli's and Hb Color strips<br>• Urine test for albumin and sugar by uristix<br>• Urine pregnancy detection by using kit<br>• Rapid Diagnostic Test for malaria<br>• Testing blood sugar | |
| 2 | Intra-natal Care | • Preparation of labour room (organise a LR, trays, delivery (instrument) kit, privacy and dignity, NBCC )<br>Plotting and Interpreting partograph<br>• Cervical Dilatation Normal<br>• Delivery<br>• AMTSL<br>• Providing initial dose of MgSO4 for severe pre- eclampsia / eclampsia management<br>Initial Management of atonic PPH | • Management of Incomplete abortion (MVA)<br>• Episiotomy repair<br>• Complicated delivery<br>• (Twin, breech)<br>• Assisted delivery (forceps, ventouse)<br>• Cord Prolapse<br>• Manual Removal of Placenta |
| 3 | Post-natal Care | • Post-natal care of mother and newborn<br>• Breast feeding and KMC | |
| 4 | Complication Management (MNH) | • CAB approach<br>• Identification and management of shock (IV line and Blood transfusion, catheterization) | |

| Sl. No. | The Me | Basic Skills | Add-on Skills |
|---|---|---|---|
| 5 | New Born Care | • Essential Newborn Care<br>• New Born resuscitation<br>• Breast Feeding and KMC<br>• Temperature Recording<br>• Radiant warmer<br>• Use of Suction machine<br>• Counting respiratory rate<br>• Oxygen administration<br>• Using Glucometer<br>• Setting up an IV line on child arm<br>• Using Pulse oximeter<br>• Using Nebulizer and Multi dose inhaler with spacer | • Chest compression and medication- New Born Resuscitation<br>• Use of Phototherapy<br>• machine for new-borns with<br>• Jaundice<br>• Inserting feeding tube in a baby |
| 6 | Family Planning | • Interval IUCD | PPIUCD |
| 7 | Infection Prevention | • Hand washing<br>• Personal Protective attires<br>• Preparation of 0.5% chlorine solution and Decontamination<br>• Processing of equipment's – cleaning, steam sterilization or HLD (High Level Disinfection), Chemical sterilization of instruments, Autoclaving b) disinfection and disposal of sharps and needles<br>• Segregation of bio medical waste<br>• Labour room/Operation<br>• Theatre sterilization | |
| 8 | Counseling | • Plenary* | |
| 9 | Documentation | • Plenary* | |

# Annexure 11 | Consumables needed for 100 delivery/ month delivery*

| Consumable | Approximate quantity/delivery/day | Approximate quantity for 100 deliveries |
|---|---|---|
| Pair of gloves | No. of deliveries x 4 | 400 |
| Disposable syringe with needle (2 ml) | equal (=) to no. of deliveries | 100 |
| Disposable syringe with needle (5 ml) | equal (=) to no. of deliveries | 100 |
| Draw sheets | No of deliveries x 2 | 200 |
| Plastic apron (Disposable) | equal (=) to no. of deliveries | 100 |
| Cord clamp | equal (=) to no. of deliveries | 100 |
| Disposable mucus extractor | equal (=) to no. of deliveries | 100 |
| Baby wrapping sheets | No. of deliveries x 2 | 200 |
| Disposable nasogastric tube | equal (=) to no. of deliveries | 100 |
| Sanitary pads | No. deliveries x 6 | 600 (100 packs containing 6 each) |
| Sterile urinary catheter (Foley's) | No. of deliveries/10 | 10 |
| Chromic catgut “0” | No. of deliveries/2 | 50 |
| Disposable syringe with needle (10 ml) (+ 20 ml at DH) | No. of deliveries/10 | 10 |
| Povidone iodine solution (500 ml) | No. of deliveries/10 | 10 |
| Cetrimide solution (500 ml) | No. of deliveries/10 | 10 |
| Thread for suture | No. of deliveries/10 | 10 |
| Cotton rolls (big) (for swabs) | No. of deliveries/8 | 12 |
| Gauze than 10 meter (gauze piece) | No. of deliveries / 10 | 10 |
| Identification tag | equal (=) to no. of deliveries | 100 |
| Gown for laboring woman | equal (=) to no. of deliveries | 100 |

*While calculating please take into account 10% wastage factor

# Annexure 12 | 100 bedded MCH wing for providing comprehensive RMNCH Services

## 100 bedded MCH Wing for providing comprehensive RMNCH (Reproductive, Maternal, Newborn and Child Health) Services

100 bedded MCH wing at DH /DWHs, while 50 bedded at sub district hospitals and 30 bedded at CHC levels. The MCH wing will be created within the premises of the existing District Hospital/District women's Hospital/SDH/CHC. Simultaneous step and advanced planning shall be done by the State Govt. for provision of manpower and other ancillary services so that the centre becomes functional within the timeline.

**For the 100 bedded MCH Wing at existing DH / DWH, requirements will be: (Reference maps for guidance are given on page 52 to 59)**

**Ground Floor:** OPD, LR, ANC Ward, OT Complex and Obstetric ICU etc.

**First Floor:** SNCU, PNC Ward, Private Ward etc.

**Second Floor:** Faculty Rooms, Academic Wing, Skills Lab, Seminar Room, Library etc.

- **OPD clinic for MCH wing –**

**Consultancy rooms –MH, CH, FP, Comprehensive counseling rooms** including HIV counseling with space for examinations and privacy, IEC material/TV

**ARSH clinic**

Sufficient waiting and sitting area

**Computerized registration area** with facility for direct registration in LR also as per need

- **Immunization room**
- **Labor rooms** with facility for direct entry as well as Internal entry from Ward
- **Pre-delivery waiting beds – 5 bedded**

  Normal (Aseptic) LR – 8 table

  Septic LR – 2 table

**Post delivery Observation Room – 5–10 bedded**

- **2 ANC Wards – 30 bedded**

  Beds, lockers, side tables, space for attendant, stool with attendant's cot
- **Pre-delivery waiting beds – 5 bedded**
- **1 Pediatric Ward –15 bedded**
- **Eclampsia room/High dependency unit-2 bedded**

- **Obstetric ICU – 6 bedded**
- **Private Ward – 10 beds**
- **SNCU –** In-born, out-born and step down – **12 bedded**
- New Born Care Corner in Labour Room and OTs
- Blood Storage Unit – **1 Small Room** – linkage with facility for emergency cross-matching (Blood Bank in main Hospital ) –Blood Bank Refrigerator
- **USG Room**
- **Lab Facility with sample collection area**
- **1 OT Complex including scrubbing, changing, sterilization, pre and post op room**
  - **Major OT – 2 Tables**
  - **Minor OT – 2 Tables**
- **1 Surgical post operative room – 10 bedded**
- **Post-partum ward/room – 5 bedded (for family planning operations)**
- 2 Doctors Duty Room – For night duty – 2 beds each for male and female doctors
- Nursing Stations
- **Academic Section: Trainings Halls /Seminar Room and Lecture Hall** with all latest AV Aids – 30 seater
- **Library cum seminar room**
- **Skill Station/Lab of about 1,000 sq. Feet-30 tables** (of 3x2 feet each)
- Toilets in wards, OPD, LR, OT, Waiting area for pregnant women and attendants
- Stores
- Drinking water coolers, water supply
- Waiting area for attendants, TV
- Pantry
- **Can be ground floor +1 or G + 2**; Space for trolley movement/ramps /lifts staircases
- **Ambulance drivers room**
- **Help Desk/Sahiya Help Desk (in OPD wing /or near entrance)**

- **ASHA *griha*/room with 6 beds** (Dormitory with Bathroom)
- **Chamber for 4 Sr. Consultants**–Single person
- **Staff room rne** (For other staff–6-8 seating capacity)
- **Record room and office** (Two)

Air Cooling/Air-conditioned rooms/central air conditioning (OT, Post–operative rooms, LR, SNCU etc.)

Oxygen supply in the OTs/Labour Rooms and ICUs/Oxygen concentrator in LR and OTs

- Flow of staff, patients and attendants to be channelized to minimize contamination

Sufficient lighting designs for electricity conservation

Provision of uninterrupted power supply/Generator Room with supply to all essential areas

Public Address System

Disabled friendly, Fire–fighting aids, emergency evacuation plans

- **Equipment** for above designated areas

# Annexure 13 | Safe Birthing Checklist: Before Birth

Registration No. .....

## Check 1 On Admission

Record temperature of mother:.....
Record BP of mother:.....
Record Fetal Heart Rate (FHS): .....

**Does Mother need referral?**
- ☐ No
- ☐ Yes, organized

Refer to FRU/higher centre if any of following danger signs are present and state reason on transfer note:
- ☐ Vaginal bleeding
- ☐ High fever
- ☐ Severe headache and blurred vision
- ☐ Convulsions
- ☐ Severe abdominal pain
- ☐ History of heart disease or other major illnesses
- ☐ Difficulty in breathing

**Partograph started?**
- ☐ No, will start at ≥ 4cm
- ☐ Yes

Start when cervix ≥ 4 cm then cervix should dilate ≥1 cm/hr
- ☐ Every 30 min plot contractions, FHR, and maternal pulse, colour of amniotic fluid
- ☐ Every 4 hours: plot temperature, blood pressure, and cervical dilation in cm

**Does Mother need:**
*Antibiotics*?
- ☐ No
- ☐ Yes, given

Give antibiotics to Mother if:
- ☐ Mother's temperature > 380c (>100.50F)
- ☐ Foul-smelling Vaginal discharge
- ☐ Rupture of membranes >12 hrs without labor or >18 hrs with labour
- ☐ Labor > 24 hrs on obstructed labor
- ☐ Rupture of membranes <37 wks gestation

*Magnesium sulfate*?
- ☐ No
- ☐ Yes, given

If mother has systolic BP ≥140 or diastolic ≥90 along with proteinuria upto 2+ **AND** has any one of the following, give magnesium sulfate — manage as per the level of facility
- ☐ Convulsions
- ☐ Increase in BP with proteinuria with systolic ≥160 or diastolic ≥110 along with proteinuria 3+ or more
- ☐ Presence of any symptom like:
  - Severe headache
  - Pain in upper abdomen
  - Blurring of vision
  - Oliguria (passing <400 ml urine in 24 hrs)

**Corticosteroid**
- ☐ No
- ☐ Yes, given

If there is premature onset of labor (between 23 to 34 weeks), ensure corticosteriods are given to mother for fetal lung maturity

**HIV status of Mother:**
- ☐ Positive
- ☐ Negative
- ☐ Not known

If HIV+ and in labour:
- ☐ Give Nevirapine
- ☐ If not available, refer the patient immediately after birth
- ☐ Advise testing

☐ **Encourage birth companion to be present at birth**

**Are soap, water and gloves available?**

☐ No ☐ Yes, I will wash hands and wear gloves for each vaginal exam

☐ **Confirmed that Mother or companion will call for help during labour if needed**

Call for help if any of
- Bleeding
- Severe abdominal pain
- Difficulty in breathing
- Severe headache and blurred vision
- Urge to push
- Cannot empty bladder frequently

Completed by .....Date.....

## Check 2 Just Before Pushing (or Before Caesarean)

**Does Mother need:**

*Antibiotics*?

- ☐ No
- ☐ Yes, given

Give antibiotics to Mother if any of:

- ☐ Mother's temperature > 380c (>100.50F)
- ☐ Foul-smelling vaginal discharge
- ☐ Rupture of membranes >18 hrs with labor
- ☐ Labor > 24 hrs on obstructed labor now
- ☐ Cesarean section

*Magnesium sulfate*?

- ☐ No
- ☐ Yes, given

If mother has systolic BP ≥140 or diastolic ≥90 along with proteinuria upto 2+ AND has any one of the following, give first dose of magnesium sulfate and refer immediately to FRU/ higher centre:

- ☐ Convulsions
- ☐ Increase in BP with proteinuria with systolic ≥160 or diastolic 110 along with proteinuria 3+ or more
- ☐ Presence of any symptom like:
  - Severe headache
  - Blurring of vision
  - Pain in upper abdomen
  - Oligouria (passing <400 ml urine in 24 hrs)

**Confirm essential supplies are at bedside:**

*For Mother*

- ☐ Gloves
- ☐ Soap and clean water
- ☐ Oxytocin 10 units in syringe
- ☐ Pads for Mother

Prepare to care for Mother immediately after birth

- ☐ Confirm single baby only (not multiple birth)
- ☐ Give oxytocin IM within 1 minute
- ☐ Controlled cord traction to deliver placenta
- ☐ Massage uterus after placenta is delivered

*For Baby*

- ☐ Clean towel
- ☐ Sterile scissors/blade to cut cord
- ☐ Cord ligature
- ☐ Mucus extractor
- ☐ Bag-and-mask

Prepare to care for Baby immediately after birth

- ☐ Dry baby, wrap, and keep warm, give vit. K
- ☐ If not breathing: stimulate and clear airway
- ☐ If still not breathing:
  - ☐ Cut cord
  - ☐ Ventilate with bag-and-mask
  - ☐ Shout for help (pediatrician/F-IMCI doctor if available).

☐ **Skilled assistant identified and ready to help at birth if needed?**

Name of Provider: .....Date: ..... Signature: .....

# After Birth - Safe Childbirth Checklist

Registration No. .....

## Check 3 — Soon After birth (within 1 hour)

Record temperature of mother:.....
Record BP of mother:.....
Record temperature of baby:.....
Record respiratory rate of baby:.....

**Is Mother bleeding too much?**
- ☐ No
- ☐ yes, shout for help

If bleeding is > 500ml, or 1 pad soacked in <5 min:
- Massage uterus
- Start I/V fluids
- Treat cause
- If placenta not delivered or completely retained: give IM or IV Oxytocin, stabilize, and refer to FRU/higher centre
- If placenta is incomplete: remove if any visible pieces, and refer immediately to FRU/higher centre

**Does Mother need:**
*Antibiotics*?
- ☐ No
- ☐ Yes, given

Give antibiotics to Mother if manual removal of placenta performed, or if Mother's temperature ≥ 38°c (>100.5° F) and any of:
- ☐ Chills
- ☐ Foul-smelling Vaginal discharge
- ☐ Lower abdominal tenderness
- ☐ Rupture of membranes >18 hrs. now
- ☐ Labor >24 hours now

*Megneslum sulfate*?
- ☐ No
- ☐ Yes, given

If mother has systolic BP ≥140 or diastolic ≥90 along with proteinuria upto 2+ **AND** has any one of the following, give first dose of magnesium sulfate and refer immediately to FRU/ higher centre:
- ☐ Convulsions
- ☐ Increase in BP with proteinuria with systolic ³160 or diastolic ≥110 along with proteinuria 3+ or more
- ☐ Presence of any symptom like:
  - Severe headache
  - Blurring of vision
  - Pain in upper abdomen
  - Oligouria (passing <400 ml urine in 24 hrs

**Does Baby need:**
*Antibiotics*?
- ☐ No
- ☐ Yes, given

Give Baby antibiotics if antibiotics were given to Mother, or if Baby has any of:
- ☐ Breathing too fast (>60/min) or too slow (<30/min)
- ☐ Chest in-drawing, grunting, or convulsions
- ☐ Looks sick (lethargic or irritable)
- ☐ Too cold (Baby's temp <36°C and not rising after warming) or too hot (Baby's temp>38°c)

**Referral?**
- ☐ No
- ☐ Yes, organized

Refer baby to FRU/higher centre if:
- ☐ Any of the above (antibiotics indications)
- ☐ Baby looks yellow, pale or blush

**Special Care and monitoring?**
- ☐ No
- ☐ Yes, organized

Arrange special care/monitoring for Baby if any of:
- ☐ Preterm baby
- ☐ Birth wight <2500 gms
- ☐ Needs antibiotics
- ☐ Required resuscitation

**Zidovudine?**
- ☐ No
- ☐ Yes, given

Give if mother is HIV+

- ☐ **Started breastfeeding and skin-to-skin contact (if mother and baby well). Explain that colostrum feeding is important for baby**
- ☐ **Explain the danger signs and confirm mother/companion will call for help if danger signs present**

Name of Provider: .....Date: ..... Signature: .....

# After Birth - Safe Childbirth Checklist

Registration No. .....

## Check 4 Before Discharge

**Is Mothers bleeding controlled ?**

- ☐ No, treat, observe and refer to FRU/higher centre if needed
- ☐ Yes: .....

Record temperature of mother:.....
Record BP of mother:.....
Record temperature of baby:.....
Record respiratory rate of baby:.....

**Does Mother need antibiotics?**

- ☐ No
- ☐ Yes: Give antibiotics and delay discharge

Give antibiotics to mother if mother has any of:

- ☐ Mother's temperature >38°C or >100.5°F
- ☐ Chills
- ☐ Foul-smelling vaginal discharge
- ☐ Lower abdomen tenderness

**Does Baby need antibiotics?**

- ☐ No
- ☐ Yes, give, delay discharge and refer to FRU/higher centre

Give Baby antibiotics if baby has any of:

- ☐ Breathing too fast (>60/min) or too slow (<30/min)
- ☐ Chest in-drawing, grunting, or convulsions
- ☐ Looks sick (lethargic or irritable)
- ☐ Too cold (baby's temp <36°C and not rising after warming) or too hot (baby's temp >38°C
- ☐ Stopped breastfeeding
- ☐ Umbilicus redness extending to skin or draining pus/any other discharge

**Is Baby feeding well?**

- ☐ No, help, delay discharge, refer to FRU/higher centre if needed
- ☐ Yes, teach mother exclusive breastfeeding

☐ **Arrange transport home and follow-up for mother and baby**

☐ **Discuss and offer family planning options to mother**

☐ **Explain the danger signs and confirm mother/companion will seek help if danger signs are present after discharge**

## Danger Signs

***Mother*** *has any of:*

- ☐ Bleeding
- ☐ Severe abdominal pain
- ☐ Severe headache or visual disturbance
- ☐ Breathing difficulty
- ☐ Fever or chills
- ☐ Difficulty emptying bladder

***Baby*** *has any of:*

- ☐ Fast/difficulty breathing
- ☐ Fever
- ☐ Unusually cold
- ☐ Stops feeding well
- ☐ Less activity than normal
- ☐ Whole body becomes yellow

Name of Provider: .....Date: ..... Signature: .....

# Annexure 14 | Confidential

## Patient Satisfaction Feedback Form

Dear Friend

You have spent your valuable time in the hospital in connection with your family/relative/friend's treatment. Your feedback is valuable for improving quality of the services at the health facility. Kindly share your opinion on the service attributes of this hospital, as enumerated in the tables below.

The information shared with us would be kept confidential.

**Instructions to fill the format**

**Please mention the number in the score box given below starting from 1-5**

**Poor, 2 – Average , 3 – Good, 4 – Very Good , 5 – Excellent**

| S. No | Questions | Yes | No |
|---|---|---|---|
| 1. | Have you been referred to this facility - from other facility /Family or self/Private doctor | | |
| 2. | Did you get a free transport to reach the facility (from home/another health facility to this facility/hospital? | | |
| 3. | Time taken to reach the facility (in hrs.) - | | |
| 4. | Are you getting drop back facility from the hospital to your home or for travel to another hospital (if you have been referred)? | | |

| S.No. | Attitude/Behaviour of the staff | Scale (1-5) | Remark, if any (Time in mins./hrs.) |
|---|---|---|---|
| 1. | Attitude and behavior of the staff, at the reception, when you reached the facility | | |
| 2. | Adequacy of Information displayed at the reception/ registration counter | | |
| 3. | Promptness of the registration process | | |
| 4. | Did somebody attend to your patient immediately | | |
| 5. | | | |
| 6. | Did nursing staff attended promptly to all jobs assigned to him/her by the treating doctor | | |
| 7. | Time taken by the doctor to attend to you after your arrival in the facility | | |

| S.No. | Cleanliness of waiting area, wards, toilets and bed sheets | Scale (1-5) | Remark, if any |
|---|---|---|---|
| 8. | General cleanliness/hygiene of the building, corridor and premises | | |
| 9. | Cleanliness of Patient Wards/rooms | | |
| 10. | Cleanliness and daily changing of bed-Sheets* | | |
| 11. | Cleanliness of Labor Ward/room | | |
| 12. | Availability of running water, functional WC, and hand-washing facilities in Toilets | | |

| S.No. | Space, water, Food and electricity in the ward | Scale (1-5) | Remark |
|---|---|---|---|
| 13. | Satisfaction on privacy and confidentiality that you got in the OPD/wards/labour room | | |
| 14. | Availability of 24/7 safe and clean supply of water | | |
| 15. | | | |
| 16. | Whether free diet was provided during the stay in hospital? | | |
| 17. | Was the quality andquantity of food adequate – Satisfied (if food is provided by the health facility) | | |

| S.No. | Out of Pocket expenses | Scale (1-5) | Remark |
|---|---|---|---|
| 18. | Did you have to make any unofficial/informal payments | | |
| 19. | Did you have to pay for any medications/ diagnostic facilities/any other out of pocket expenses (Pl. specify) | | |

***for admitted patients only***

| S.No. | Out of Pocket expenses | Scale (1-5) | Remark |
|---|---|---|---|
| 20. | Expenditure of diagnostic facilities (Laboratory, Radiology, Ultrasound and specialized investigation, etc.) | | |
| 21. | Expenditure on Transport | | |

| S.No. | Quality of service delivery at the facility | Scale (1-5) | Remark/suggestion |
|---|---|---|---|
| 22. | Whether shelter for night stay with cooking facilities available within the premises? | | |
| 23. | Frequency of your patient, seen by the doctor and nurses | | |
| 24. | Time spent by the doctor with patient | | |
| 25. | Clarity of instructions during consultation and discharge | | |
| 26. | Behaviour of doctors and nurses with the patient | | |
| 27. | Would you like to return to the same health facility for your subsequent health needs | | |
| 28. | Would you like to recommend this hospital to others? | | |
| 29. | Were you satisfied by the care and treatment given at the health facility | | |

**Your suggestions for improving the hospital services ( if any )**

1.

2.

3.

Date:_____ IPD Ticket no.:_____ Name: _____

**Description and uses of assessment tool: The tool has 23 performance standards and is divided into 3 areas:**

| 1. Normal Labour and Delivery including Immediate Newborn Care | 2. Management of Complications during Labour and Delivery | 3. Postnatal Care for the Mother and the Neonate-Inpatient |
|---|---|---|

**How to score the assessment tool:** Each standard is worth one point and for each standard to be met, all of the verification criteria should be "Yes" or "Not Applicable."

**How to summarize the results:** Summarize the results using the summary table at the end of each area and fill the details in the summary sheet.

## Area 1: Normal Labour and Delivery including Immediate Newborn Care

| Standard | Verification Criteria | Score (Y/NA=1; N=0) |
|---|---|---|
| 1: Preparation of equipment and supplies | Checks and looks for critical supplies and equipment as per the QAC guidelines (in addition the common IP supplies) to conduct clean normal deliveries every day for the expected number of deliveries | |
| 2: Rapid initial assessment to identify complications and prioritize care | Asks the pregnant woman about following danger signs and assures immediate attention if present: Vaginal bleeding, difficulty in breathing, fever, severe abdominal pain, convulsions or unconsciousness, severe headache or blurred vision | |
| | Assesses for preterm labor and gives corticosteroids (Injection Betamethasone 12 mg IM 2 doses 24 hours apart OR Injection Dexamethasone 6 mg IM 4 doses 12 hours apart): | |
| 3: Respectful and supportive care | Treats woman and her companions cordially and respectfully, ensures privacy and confidentiality for the woman throughout her stay | |
| | Encourages the presence of a birth companion throughout the duration of her stay in the facility. Explains danger signs and important care activities with woman and companion | |
| 4: Recording and reporting clinical history | Checks last menstrual period (LMP) and estimated date of delivery (EDD) | |
| | Records the woman's obstetric history (parity, gravid status, h/o CS, live births, still births etc.), medical (TB, heart diseases, STD etc.) and surgical history | |
| | Asks and records about her current labour (time of start and frequency of contractions, time of bag of water breaking, colour and smell of fluid, and baby's movements) | |
| | Ascertains HIV status and ensures PPTCT measures | |
| 5: Lab and physical examination | Tests urine for albumin, haemoglobin, and blood grouping and cross matching | |
| | Takes vital signs; details Temperature Pulse rate, blood pressure, respiratory rate, | |
| | Shape and size of abdomen, presence of scars etc. Determines fetal lie and presentation. | |
| | Evaluates uterine contractions (frequency and duration over a 10-minute period) and FHS | |

| Standard | Verification Criteria | Score (Y/NA=1; N=0) |
|---|---|---|
| 6: Proper vaginal examination | Performs hand hygiene and puts sterile examination gloves on both hands, cleanses perineum using non-examining hand, cleans perineum using downward and backwards action, uses non-exam hand to separate the labia | |
| | Informs woman and then sensitively conducts a vaginal exam, assesses cervical dilation, effacement, and position of presenting part | |
| 7: Use of partograph to monitor labour | Complete all the steps on the Partograph in a timely manner and records findings. | ` |
| | Adjusts care according to the parameters encountered: (If parameters are not normal, identifies complications, records the diagnosis and makes adjustments to care) | |
| 8: Assistance to the woman to have a safe and clean birth | Allows the woman to give birth in the position she wants/desires and in the same bed where she has laboured (if possible) and encourages her to empty her bladder | |
| | Monitors, or has assistant monitor, foetal heart rate every 5 minutes during second stage | |
| | Puts on personal protective equipment, | |
| | Performs an episiotomy only if necessary (Breech, shoulder dystocia, instrumental delivery, foetal distress or perineal stretching) | |
| | Allows spontaneous delivery of head, gives perineal support, and assists in delivering the baby ( manages cord around neck), delivers shoulders and trunk | |
| 9: Rapid initial assessment and immediate newborn care | Receives and dries the baby with a clean dry towel from head to feet, discards the used towel and covers the baby including the head with a clean dry towel. | |
| | Determines whether the baby is breathing | |
| | If the baby does not begin breathing or is breathing with difficulty, asks assistance, rapidly ties and cuts the cord, and initiates resuscitation | |
| | If the baby is breathing normally, places the baby in skin-to-skin contact on the mother's chest or abdomen ; weighs the baby and starts immediate breastfeeding | |
| | Palpate abdomen to rule out presence of other baby and gives IM oxytocin 10 IU | |
| | Delayed cord clamping: Clamps and cuts cord by sterile instruments within 1-3 minutes of birth | |
| | Gives vitamin K to all newborns (1.0 mg, IM in >=1500 gms and 0.5 mg in <1500 gm. | |
| | Cleans baby's eyes with separate sterile gauze/ cotton balls (medial to lateral side) | |
| | Apply identification band on baby's wrist or ankle | |

| Standard | Verification Criteria | Score (Y/NA=1; N=0) |
|---|---|---|
| 10: Appropriate resuscitation of the newborn | Places the newborn face up on a clean, dry, hard surface under a heat source or warmer, covered appropriately except for the face and the upper portion of the chest | |
| | Positions the head of the baby with the neck slightly extended (uses shoulder roll) | |
| | Gently sucks the baby's mouth and then nose if meconium present and the baby is not crying | |
| | If still baby is not breathing stimulate by rubbing back or tickling soles of baby | |
| | After the above steps of resuscitation, if the baby does not breathe, initiates bag and mark ventilation as per the NSSK algorithms | |
| 11: Active management of the third stage of labour | Palpates the mother's abdomen to rule out the presence of a second baby | |
| | Administers 10 IU of oxytocin IM within 1 minute of birth | |
| | Performs controlled cord traction to remove placenta (only during contractions) | |
| | Does uterine massage after placenta expulsion, checks placenta and membranes for completeness | |
| 12: Disposal of the used instruments and medical waste | Puts on gloves while disposing off used instruments and medical waste | |
| | Discards wastes according to guidelines; immerses all used instruments in 0.5% chlorine solution for 10 minutes before cleaning and sterilization/HLD; wipes out all surfaces with 0.5% ch sol. | |
| 13: Monitoring the mother and newborn in immediate postpartum period | Checks that the baby is warm, ensures cap and socks for baby, ensures skin to skin contact or places under a heat source if temperature not appropriate | |
| | Monitors specific indicators in the woman every 15 minutes in the first hour and every 30 minutes in the second hour: vaginal bleeding, uterine tone, BP and pulse | |
| | Encourage frequent emptying of bladder and breastfeeding on demand | |
| | Total standards observed:<br>Total standards met:<br>Percentage score: (total standards met/total standards observed X 100) | |

## Area 2: Management of Complications during Labour and Delivery

| Standard | Score | Verification Criteria | Score (Y/NA=1; N=0) |
|---|---|---|---|
| 1: General management and follow up of primary and secondary PPH | | Assesses bleeding (PPH if >500 ml or >1 pad soaked in 5 minutes), if shock present*, manages shock** through IV fluids and monitoring | |
| | | Performs bladder catheterization and measures for urine output every hour | |
| | | Administers 20 IU of oxytocin in 500 ml Normal Saline or R/L at 40-60 drops per minute. Performs Bimanual compression of the uterus | |
| 2: Specific management of the cause of the PPH | | If bleeding is due to retained placenta or placental fragments : Administer another dose of oxytocin 20 IU in 5oo ml of R/L at 40-60 drops/ min and attempt to deliver placenta with repeat controlled cord traction; If this manoeuvre fails, performs manual removal of placenta | |
| | | Uterine atony: Performs vigorous uterine massage, gives oxytocin 20 IU in 500 ml of R/L, 40-60 drops/minute (continue to administer oxytocin up to a maximum of 3 litres of solution with oxytocin) if still bleeding, perform bi-manual uterine compression, if that fails, apply abdominal aorta compression with palpation of femoral pulse | |
| | | Perineal or cervical tears: Immediately suture the tears | |
| 3: Management and follows up severe pre-eclampsia and/or eclampsia | | Monitors BP in every case, and tests for proteinuria if BP is >140/90 mmHg | |
| | | If BP is 140/90 mmHg or more with proteinuria 2+ along with any two of the following danger signs: severe headache, blurring of vision, severe pain abdomen or reduced urine output, BP > 160/110 or more with proteinuria 3+; OR in cases of eclampsia—administers loading dose of Magnesium Sulphate (MgSO4) and refers/ calls for specialist attention; continues maintenance dose of MgSO4- 5 g of MgSO4 IM in alternate buttocks every four hours, for 24 hours after birth/last convulsion, whichever is later. | |
| | | If BP is >160/110 mmHg or more, give appropriate anti-hypertensive (Hydralazine/Methyl Dopa/ Nifedipine) | |
| 4: Management of obstructed labour | | Diagnoses obstructed labour based on data registered from the partograph | |
| | | Re-hydrates the patient to maintain normal plasma volume, check vitals, gives broad spectrum antibiotics, perform bladder catheterization and takes blood for Hb and grouping | |
| | | Decides on the mode of delivery as per the condition of mother and the baby | |
| 5: Management of puerperal sepsis | | Diagnosis puerperal sepsis based on clinical criteria: continuous fever for at least 24 hours or recurring within the first 10 days after delivery, increased pulse rate, increased respiration, offensive/foul smelling lochia, sub involution of the uterus, headache and general malaise, pelvic pain, pain, swelling and pus discharge from laceration or episiotomy or incision. Conduct appropriate lab. investigations | |
| | | Prescribes IV fluids and broad spectrum antibiotics for seven days and advises perineal care | |
| Total standards observed:<br>Total standards met:<br>Percentage score: (total standards met/total standards observed X 100) | | | |

## Area 3: Postnatal Care for the Mother and Neonate—Inpatient

| Standard | Verification Criteria | Score (Y/NA=1; N=0) |
|---|---|---|
| 1. Routine physical examination of the woman | Assesses general condition, including: vital signs, conjunctiva for pallor and jaundice, and bladder and bowel function, conducts breast examinations | |
| | Palpates the abdomen for involution of uterus, tenderness and distension | |
| | Examines the perineum for inflammation, status of episiotomy/tears, lochia for colour, amount, consistency and odour | |
| | Checks calf tenderness, redness or swelling | |
| 2: Education and counseling of mother about proper care during the puerperium | Advises the mother to report to the health facility when any danger sign is observed in mother and baby and gives date for her next routine postpartum visit, Danger signs for mother: Excessive PV bleeding, convulsions, breathing difficulty, severe headache, severe abdominal pains, foul smelling lochia, fever, palpitations/excessive tiredness, urine dribbling or pain on micturition, perineal pain or draining pus, painful or redness in breasts | |
| | Advises the mother on healthy dietary practices, hygiene, adequate rest and kegels exercises | |
| | Gives analgesics, vitamin A, IFA , calcium and other prescribed medicines | |
| 3: Neonatal assessment and care | Maintains hand hygiene, keeps the baby wrapped (maintains temperature) | |
| | Checks weight, temperature, respiration, heart rate, colour of skin and cord stump | |
| | Gives immunization (BCG, Polio 0, Hepatitis B 0) | |
| | Checks and discusses with the mother on breastfeeding pattern, emphasising exclusive and on demand feeding. Demonstrates the proper positioning and attachment of the baby | |
| 4: Counseling of mother on baby care | In the event of danger sign/illness or serious abnormality, refers to special clinic with proper referral note. The Danger signs of the baby: Poor sucking/ feeding, persistent/ abnormal crying, lethargy, failure to pass stool or urine, skin pustules, breathing difficulties, not feeding at all, diarrhoea, purulent eye or cord discharge, yellow discoloration of eyes, skin, or mucous membranes, bleeding, convulsions, fever or feels cold. | |
| | Counsels on the importance of keeping the baby warm, proper positioning of the baby to avoid suffocating, and keeping the baby in a safe environment | |
| | Advises on the importance of completion of immunization, hand washing and personal hygiene, appropriate care of the cord and baby bathing/skin hygiene | |

| Standard | Verification Criteria | Score (Y/NA=1; N=0) |
|---|---|---|
| 5: All low birth weight (LBW) and premature babies are recorded and followed up according to their condition | Premature and LBW babies are identified: Weight less than 2500 g for low birth weight babies, gestation of less than 37 weeks for prematurity | |
| | Kangaroo Mother Care (KMC) is implemented for Low Birth Weight/Prematurity and assisted feeding arranged, if required. | |
| Total standards observed:<br>Total standards met:<br>Percentage score: (total standards met/total standards observed X 100) | | |

*Suspect shock if weak, fast pulse (>=110/minute), systolic BP<90mmHG, pallor, cold and perspiring skin, rapid breathing, confusion, or unconsciousness

**If shock present, starts oxygen at 6-8L/min by mask, starts two IV lines using wide bore needle/cannula with saline or RL or plasma expanders, 1 ltr in each line over 15-20 mins, administers at least 2 additional litres of solution during the first hour if required as per the blood loss, and continues to replace volume IV according to blood loss and measures intake every hour; arranges for Blood Transfusion (BT) as required/refers to a CEmOC Center; measures Haemoglobin (Hb) after 24 hours- if Hb <8.5 g/dl, gives oral IFA; IF Hb <5g/dl-give BT.

## Summary Sheet and Action Plan

**Date of assessment:** **Assessment type: Baseline/ Internal/ Endline (Circle the appropriate response)**

**Facility:** **District:** **State:**

**Type of Facility: MC/ DH/ SDH/ RH/ PHC/ SC (Circle the appropriate response)** **Assessors:**

| S.NO. | Areas | Number of Standards | Number of Standards Observed | Standards Achieved | |
|---|---|---|---|---|---|
| | | | | Number | % |
| 1. | | | | | |
| 2. | | | | | |
| 3. | | | | | |
| 4. | | | | | |
| | **General Total** | | | | |

**Note: At least three deliveries in a month, one each in different shift, need to be observed before scoring of the standards of a particular facility.**

How to fill out the assessment tool:
Register 'Y' if the procedure is performed or item exists as it is described
Register 'NA' if the required condition does not exist or when the criteria cannot be assessed
Register 'N' if the procedure is not performed appropriately or item does not exists as it is described

**Action Plan made on ...../...../.....**

| Standard/Gap | Cause | Intervention | Responsible Person | Support Required | Timeline |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |

# Bed-Head Ticket
# (Maternity ward)

# Bed-Head Ticket (Maternity ward)

| |
|---|
| S. No. |
| MCTS No* |
| Facility registration number ( OPD/IPD) |
| Aadhar number |
| Whether JSY beneficiary ( Y/N ) |
| Name |
| Age |
| W/o or D/o |
| Address |
| Mobile number ( Family /others) |
| Religion |
| Caste SC/ST/Others |
| Date of admission: |
| Date of discharge: |
| Reason for admission: |
| Date and time of delivery/any other obstetric procedure: |
| Type of Delivery: Normal/Assisted/LSCS: |
| Outcome of delivery (live birth/still birth/abortion): |
| Sex of baby: (M/F) |
| Weight of baby: in gms./Kgs.) |
| OPV: |
| Hepatitis B: |
| Date on which birth-day dose administered: |
| PPIUCD inserted on: |
| Name of unit in charge: |
| Name of assisting doctor: |
| Name of ASHA: |
| If referred out: Referral Note, indicating reason and place of referral: |

*It MCTS number is not generated, then the MCTS no. is to be generated by the treating health facility

## Admission Notes

**Whether came by referral, if yes please specify the facility and indication of referral:**

**Complaints at the time of admission:**

**LMP and EDD:**

**Obstetric complication in previous pregnancy: If yes, then Please tick ( ✔ )**

- ☐ APH
- ☐ Eclampsia
- ☐ PIH
- ☐ Anaemia
- ☐ Obstructed labour
- ☐ PPH
- ☐ Abortion/still births/congenital anomaly
- ☐ Any other, please specify

**Past History: If yes, then Please tick ( ✔ )**

- ☐ TB
- ☐ Hypertension
- ☐ Heart disease
- ☐ Diabetes
- ☐ Asthma
- ☐ Any other, please specify

**History of:**

- ☐ Infertility/C- Section/Twins/Breach/Blood transfusion
- ☐ Please also specify other significant history:

**Family history (if significant) Ask for DM, HT, Asthma etc.:.....**

**Allergies/adverse reactions, if any:**.....

**Treatment prescribed/taken before admission:**.....

**Report of Investigations done before admission:**.....

- Hb.....
- Urine Albumin.....
- Urine Sugar.....
- Blood Sugar.....
- Any other (Pregnancy test/Blood Group and Rh Typing/HIV/Syphilis/HBsAg etc.).....

**Vital Parameters/General Examination at the time of admission:**

- Temperature.....
- BP .....
- Pulse .....
- Respiration.....
- Weight.....
- Pallor.....
- Jaundice.....
- Pedal Oedema .....

**Systemic Examination:**

- Heart.....
- Lungs.....
- Breast.....

**Abdominal Examination:**

- Fundal height (gestational period):.....
- Lie/presentation:.....
- Foetal movement: Normal/Increased/Decreased/Absent .....
- Foetal Heart Rate/minute.....

**P/V Examination:**.....

**If in labour, date and time of onset of labour**

**Provisional diagnosis:**.....

**Investigation advised:**.....

**Treatment advised:**.....

**Remarks:** .....

## Continuation Sheet

## Delivery Note

- Outcome of delivery (FT Live birth/ /Still birth/ Abortion)
- Date and time of delivery/Abortion
- Gestation age in weeks at the time of delivery/abortion
- Delivery conducted by (name and designation)/ abortion
- Type of delivery : normal / assisted (specify)/ LSCS/others
- Complications if any during delivery
- Any Medical/surgical Interventions (e.g Injectable drugs, ARM etc) given
- Indication for the intervention
- Date and time of transfer to post natal ward
- Condition at transfer to post natal ward.
- If referred, reason and place for referral (both for mother and baby)
- Incase of death pl specify Maternal or Neonatal (other than stillbirth),
- Cause of death and time
- Remarks, if any

## Baby Note

- Did the baby cry immediately after birth? (Y/N)
- Temperature maintained (Y/N)
- Breast feeding initiated (Y/N)
- Did the baby require resuscitation? (Y/N)
- Sex (M/F)
- Weight (in grams)
- Time of initiation of Breastfeeding
- Birth doses:
- BCG (Y/N)
- OPV (Y/N)
- Vitamin K (Y/N)
- Hepatitis B (Y/N)
- Any Congenital Anomaly, please specify
- Any other complication, please specify

## Operation/Obstetric Procedure Note

**Indication for the procedure**

**Whether Patient/Guardian explained about the procedure and probable consequences:**

**Consent of patient/ Guardian: (Y/N)**

**Elective / emergency**

**Type of anesthesia**

**Time at. Procedure started ------- b. Procedure ended--------**

**Operation Note:**

**Condition at transfer to ward**

**Treatment advised:**

**Signature of doctor conducted the procedure**

## Investigation Report Sheet

## Note on Pre Anesthetic Check up

## Continuation Sheet

## Notes of Post-Partum Care of the mother

**Note:** Please Tick, where ever applicable or write remark

| | Day 1 | | Day 2 | |
|---|---|---|---|---|
| | Morning | Evening | Morning | Evening |
| Any complaints | | | | |
| Pulse Rate | | | | |
| Blood Pressure | | | | |
| Temperature | | | | |
| Pallor | | | | |
| Breasts-Soft/Engorged | | | | |
| Nipples-Cracked/Normal | | | | |
| Uterus tenderness-Present/absent | | | | |
| Bleeding P/V-Excessive/normal | | | | |
| Lochia-Healthy/foul smelling | | | | |
| Episiotomy/Tear-Healthy/Infected | | | | |
| Family Planning counselling | | | | |
| Counselling on Breast milk expression | | | | |
| Complications, if any, please specify | | | | |
| Referral if required | | | | |
| Treatment given(Y/N), give detail | | | | |
| **Signature of attending nurse** | | | | |
| **Signature of treating doctor** | | | | |

## Care of baby*

| | Day 1 | | Day 2 | |
|---|---|---|---|---|
| | Morning | Evening | Morning | Evening |
| Urine passed* | | | | |
| Stool passed* | | | | |
| Diarrhea* | | | | |
| Vomiting* | | | | |
| Convulsions* | | | | |
| Activity (good/lethargic/no response on stimulation) | | | | |
| Sucking (good/poor) | | | | |
| Breathing (fast/difficult) | | | | |
| Chest indrawing (Present/absent) | | | | |
| Temperature | | | | |
| Jaundice* | | | | |
| Condition of umbilical stump (Dry/Infected) | | | | |
| Skin pustules * | | | | |
| Any – complications( Y/N), if yes, write details | | | | |
| **Signature of attending nurse** | | | | |

***- Please Tick***

## Treatment Sheet

*to be maintained by the nurses*

Day 1 and Date:

| Medication Name | Dosage | Instructions (Frequency/Route) | Time of administration | Signature |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |

Day 2 and Date:

| Medication Name | Dosage | Instructions (Frequency/Route) | Time of administration | Signature |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |

Day 3 and Date:

| Medication Name | Dosage | Instructions (Frequency/Route) | Time of administration | Signature |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |

## Recording Sheet for Vital Parameters (Mother)

(Nurses notes)

| Date and time | Vital parameters | | | Urine output | Any other observation | Remarks |
|---|---|---|---|---|---|---|
| | Temp | Pulse | BP | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
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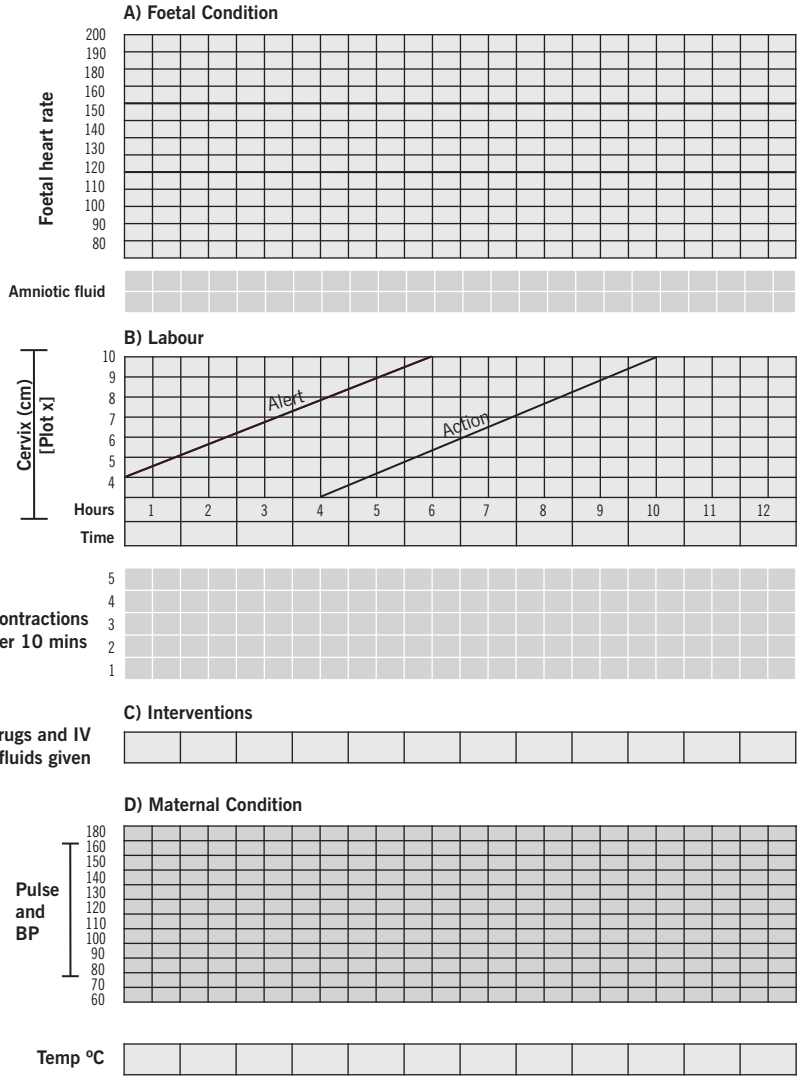
| | | | | | | |

# The Simplified Partograph

**Identification Data**

**Name** **W/O** **Age** **Parity** **Reg. No.**

**Date and Time of admission:** **Date and Time of ROM:**



## Discharge Slip

1. S. No.
2. MCTS No*
3. Facility registration number ( OPD/IPD)
4. Aadhar number
5. Whether JSY beneficiary ( Y/N )
6. Name
7. Age
8. W/o or D/o
9. Address
10. Mobile number (Family /others)
11. Religion
12. Caste SC/ST/Others

Name of the SC/PHC/CHC/FRU/DH:

**OPD/Emer. Reg. No.:**_____

**Name of the Mother:** _____

**Age:** _____ yrs

**Address:** _____

_____

**Admission:** Date _____/___/_____ Time: _____

**Delivery:** Date _____/___/_____ Time: _____

**Discharge:** Date _____/___/_____ Time: _____

**Mode of Delivery:**

☐ Normal ☐ Assisted ☐ LSCS

**Indication for:**

Assisted / LSCSI: _____

**Delivery Outcome:**

| | | | |
|---|---|---|---|
| ☐ | FTND | ☐ | Preterm |
| ☐ | Stillbirth | | |
| ☐ | Abortion | ☐ | Any other |

**Number of Births:**

| | | | |
|---|---|---|---|
| ☐ | Single | ☐ | Multiple/Twin pregnancy |

**Details of the baby:**

Sex: ☐ Male ☐ Female Weight: _____ Kgs _____ gms

BF initiation within 1 hr of birth: ☐ Yes ☐ No

Pre-term – (in weeks):

Still birth- Y/N

Danger signs explained Y/N

Follow Up date given Y/N

Any history of complications:

| Mother Complications | Y | N | Baby Complications | Y | N |
|---|---|---|---|---|---|
| PPH | | | Apnea/breathing difficulties | | |
| Eclampsia | | | Cyanosis | | |
| Heart disease | | | Hypothermia | | |
| Stroke | | | Hyperthermia | | |
| Epilepsy/seizure | | | Failure to cry | | |
| Anaemia | | | Lethargy | | |
| Any other | | | Any other | | |

Investigation done:

| Investigations done | Results | |
|---|---|---|
| | **Mother** | **Baby** (if any, suggested by doctor) |
| Hb | | |
| Blood group | | |
| Urine analysis | | |
| Blood tests for HIV | | |
| Blood sugar | | |
| Serum Bilirubin | | |
| Any other | | |

Ultrasound- (If conducted, reason and finding)

**Referral for mother and/or baby:**

Mother: ☐ Yes ☐ No

Baby: ☐ Yes ☐ No

Referral facility: _____ PHC/CHC/DH/Pvt Hosp

Reasons for referral: _____

At discharge time condition of:

Mother: ☐ Stable ☐ Not stable

Baby: ☐ Stable ☐ Not stable

**Postnatal Care Provided**

Birth Dose: ☐ OPV ☐ BCG

☐ HEP B ☐ VIT K

Family Planning counseling provided: ☐ Yes ☐ No

PPIUCD Insertion done on----------

Additional advice given at time of discharge:

_____

Next follow-up: Date _____/____/_____ Place: _____

Discharging Health Care Provider:

Name: _____

Signature: _____

Designation: _____

Phone number: _____

Date _____/____/_____ Time: _____

# Samples of Various Registers

(States are requested to print all these registers in the attached prescribed format and size)

### 1) ANC Register

Every pregnant woman should be issued MCP card and data entry in registers should be done regularly. This register is to be kept at PHC and level above. For level below PHC, village-wise register needs to be maintained.

### 2) Monthly Abstract – ANC Register

### 3) Labour Room Register

### 4) Monthly Abstract – Labour Room Register

### 5) PNC Register: Mother and Newborn

This register is to be kept at PHC and level above. For level below PHC, village-wise register needs to be maintained.

### 6) Monthly abstract – PNC register

### 7) Receiving Facility Register

### 8) Referring Facility Register

# ANC (Ante-natal Care) Register

**MCTS No* :**

| | | | | | |
|---|---|---|---|---|---|
| 01 | **Name:** | 08 | **Aadhaar Number:** | 15 | **LMP & EDD:** |
| 02 | **Age:** | 09 | **Facility Registration Number ( OPD/IPD):** | 16 | **Diagnosis (High risk cause if any)[3]:** |
| 03 | **W/o or D/o:** | 10 | **Date of Registration:** | a. | **Anaemia/Severe Anaemia (Y/N):** |
| 04 | **Address:** | 11 | **Whether JSY Beneficiary (Y/N):** | b. | **Hypertension (Y/N):** |
| 05 | **Mobile Number (Family/Others):** | 12 | **Parity (GPLA):** | c. | **Haemorrhage<20 weeks (Y/N):** |
| 06 | **Religion:** | 13 | **Past History, if any, Specify[1]:** | d. | **Haemorrhage>20 weeks (Y/N):** |
| 07 | **Caste SC/ST/Others:** | 14 | **Obstetric History[2]:** | e. | **Any other illness/complications (Y/N):** |

| | | | ANC 1 | ANC 2 | ANC 3 | ANC 4 |
|---|---|---|---|---|---|---|
| | 17 | Gestational age in weeks | | | | |
| | 18 | Weight (in Kg) | | | | |
| General Examination | 19 | Pallor | | | | |
| | 20 | Oedema | | | | |
| | 21 | Jaundice | | | | |
| | 22 | BP- Systolic/Diastolic | | | | |
| Abdominal Examination | 23 | Fundal height | | | | |
| | 24 | Lie/presentation | | | | |
| | 25 | Feotal Movement(Normal/reduced absent) | | | | |
| | 26 | Foetal heart rate per minute | | | | |
| | 27 | PV, if done | | | | |
| | 28 | Complications, if any specify | | | | |
| Lab. Investigations | 29 | Urine – Albumin & Sugar | | | | |
| | 30 | Blood sugar – Fasting /PP | | | | |
| | 31 | VDRL | | | | |
| | 32 | HIV ( tested/not tested) | | | | |
| | 33 | Blood group ( ABO & RH) | | | | |
| | 34 | Injection Tetanus (1st/2nd dose)–mention (with date) | | | | |

| | | | ANC 1 | ANC 2 | ANC 3 | ANC 4 |
|---|---|---|---|---|---|---|
| Treatment | 35 | Number of Tab.Folic acid given during the 1st trimester | | | | |
| | 36 | Number of Tab. IFA given | | | | |
| | 37 | Treatment provided for complication | | | | |
| | 38 | Any other investigation, if required[4] | | | | |
| | 39 | Comprehensive counseling (Nutrition, Family planning, breast feeding etc.) provided (Y/N) | | | | |
| | 40 | If, any complication/high risk detected, Pl. specify | | | | |
| | 41 | Date & time of referral( If required) | | | | |
| | 42 | Name of referred facility (Referred out) | | | | |
| | 43 | No. of PW received as referral ( Referred in) | | | | |
| | 44 | Maternal/Foetal death ( In case of death, mention date & cause of death) | | | | |

* If MCTS number is not generated, then the MCTS number is to be generated by the treating health facility. Findings of the ANC are to be uploaded in MCTS portal by the treating facility.

[1] Past History - Tuberculosis, Diabetes, Hypertension, heart disease, epileptic (convulsion), STI/RTI HIV & Hepatitis B), asthma, any other specify

[2] Obstetric history - surgery, H/O of any surgery / previous LSCS, repeated abortion, Infertility treatment, H/o Still birth, any other ( specify))

[3] High risk noted: High BP, Convulsans Vaginal bleeding, foul smelling discharge, Anaemia (<7gms%), Diabetes, Any other/none.

[4] Any other investigations – USG,LFT, KFT etc.

# Labour Room Register

**MCTS No* :**

| | | | | | |
|---|---|---|---|---|---|
| 01 | **Name:** | 08 | **Aadhaar Number:** | 16 | **Delivery:** |
| 02 | **Age:** | 09 | **Facility Registration Number ( OPD/IPD):** | 17 | **Normal (mention gestation in weeks)/Assisted/C- Section** |
| 03 | **W/o or D/o:** | 10 | **Date of Registration:** | 18 | **Live birth/Still Births/Abortions (mention gestation in weeks)** |
| 04 | **Address:** | 11 | **Whether JSY Beneficiary (Y/N):** | 19 | **If any complication during delivery** |
| 05 | **Mobile Number (Family/Others):** | 12 | **Parity (GPLA):** | 20 | **Maternal conditions[3]** |
| 06 | **Religion:** | 13 | **LMP & EDD:** | 21 | **Foetal conditions[4]** |
| 07 | **Caste SC/ST/Others:** | 14 | **Past History, if any, Specify[1]:** | 22 | **PPIUCD inserted (Y/N)** |
| | | 15 | **Past Obstetric History[2]:** | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Present obstetric history** | | | | | | | |
| 23 | Any identified Complication/ high risk during ANC, specify[5] | | | | | | |
| 24 | If diagnosed with Pre-term labour, Pl. give reason | | | | | | |
| 25 | Ante natal corticosteroid given or not | Given (Y/N) | | I Dose (Time) | | II Dose (Time) | |
| 26 | Complication during present pregnancy, specify | | | | | | |
| **Pregnancy outcome** | | | | | | | |
| 27 | Date and time of delivery | | | | | | |
| 28 | Outcome (LB/Still birth/ Abortion) | | | | | | |
| 29 | Gestation age in weeks at the time of delivery | | | | | | |
| 30 | Delivery conducted by (write name and designation) | | | | | | |
| 31 | Type of delivery: normal/ assisted (specify)/ LSCS/others | | | | | | |
| 32 | Any Medical/ surgical Interventions (e.g. injectable drugs, ARM etc.) given Specify | | | | | | |
| 33 | Indication for the intervention | | | | | | |
| 34 | Post –delivery identification tag no. of newborn & mother | | | | | | |
| 35 | Sex (M/F) | | | | | | |
| 36 | Weight (in grams) | | | | | | |
| **Essential newborn care or Routine care of the newborn** | | | | | | | |
| 37 | Did the baby cry immediately after birth? | | | | | | |
| 38 | Did the baby require resuscitation? (Y/N) | | | | | | |
| 39 | Essential Newborn Care (ENBC) provided: (Y/N) | | | | | | |
| 40 | Time of initiation of Breastfeeding | | | | | | |
| 41 | Birth doses (BCG/OPV/ Hep.B/Vit.K), Pl. specify | | | | | | |
| 42 | If any congenital anomaly, specify | | | | | | |
| 43 | PPTCT drugs given (Yes/ No/ Not applicable) | | | | | | |
| 44 | PPIUCD inserted (if applicable) (Yes/ No/) | | | | | | |
| 45 | If referred, reason and place for referral, along with time of referral | | | | | | |
| 46 | Death of the mother or new born – please specify | | | | | | |

*If MCTS number is not generated, then the MCTS number is to be generated by the treating health facility.
Findings of the ANC are to be uploaded in MCTS portal by the treating facility.

[1] Tuberculosis, Diabetes, Hypertension, heart disease, epileptic or any convulsion, STI/RTI( HIV & Hepatitis B), asthma, any other specify

[2] Past Obstetric history - H/O of any past surgery / previous LSCS, repeated abortions, infertility treatment, H/o Still birth, any other ( specify), H/o Eclampsia, Hemorrhage, Obstructed labour, Prolonged labour, other (specify)

[3] Maternal in the beginning Hemorrhage (APH/PPH), Infection, Eclampsia, Others

[4] Neonatal- Low birth weight babies/Pre-term babies, Sepsis, Asphyxia, Any other complications

[5] Hypertension, Diabetes, convulsions, severe headache, oedema, APH, any other pl. specify


**ANC – Monthly Abstract Register** Month and Year:.....

| | | | |
|---|---|---|---|
| 1 | Total No. of PW registered | | |
| 2 | No. of PW registered within1st Trimester | | |
| 3 | No. PW completed 3 + ANC | | |
| 4 | No. of PW received TT1 | | |
| 5 | No. of PW received TT2 | | |
| 6 | No. of PW received IFA tablets | | |
| 7 | Total no. of PW identified with complications/high risk | | |
| 8 | Management of complications | No. of cases identified | No.of cases managed |
| a. | No. of anaemia cases | | |
| b. | No. of severe anaemia cases | | |
| c. | No. of hypertensive cases | | |
| d. | No. of cases with haemorrhage < 20 weeks | | |
| e. | No. of cases with haemorrhage >20 weeks | | |
| f. | No. of cases with any other illness/complications | | |
| g. | Total no. of cases referred in | | |
| h. | Total no. of cases referred out | | |
| 9 | Number of deaths (Maternal/Foetal) | | |

# PNC (Post-natal Check up) Register–Mother

**MCTS No* :**

| | | | | | |
|---|---|---|---|---|---|
| 01 | **Name:** | 08 | **Aadhaar Number:** | 14 | **Stayed for <48 hrs. or >48 hrs.** |
| 02 | **Age:** | 09 | **Facility Registration Number ( OPD/IPD):** | 15 | **Complications, if any** |
| 03 | **W/o or D/o:** | 10 | **Date and Time of Admission:** | a | **Mothers[1]** |
| 04 | **Address:** | 11 | **Whether JSY Beneficiary (Y/N):** | b | **Neonates[2]** |
| 05 | **Mobile Number (Family/Others):** | 12 | **Parity (GPLA):** | 16 | **Referral case – (Y/N)** |
| 06 | **Religion:** | 13 | **LMP & EDD:** | 17 | **PPIUCD inserted (Y/N)** |
| 07 | **Caste SC/ST/Others:** | | | | |

| | Mother | PNC 1 | PNC 2 | PNC 3 | PNC 4 |
|---|---|---|---|---|---|
| 18 | Hb | | | | |
| 19 | Pulse Rate | | | | |
| 20 | Blood Pressure | | | | |
| 21 | Temperature | | | | |
| 22 | Breastfeeding initiated or not, if not, specify | | | | |
| 23 | Breasts-Soft/Engorged | | | | |
| 24 | Nipples-Cracked/Normal | | | | |
| 25 | Uterus tenderness-Present/absent | | | | |
| 26 | Bleeding P/V Excessive/normal | | | | |
| 27 | Lochia-Healthy/foul smelling | | | | |
| 28 | Episiotomy/Tear-Healthy/Infected | | | | |
| 29 | No. of IFA tabs given | | | | |
| 30 | PPS[3] provided within 7 days (Y/N) | | | | |
| 31 | PPIUCD[3] provided within 48 hrs (Y/N) | | | | |
| 32 | Findings of follow up visit (PPS/PPIUCD) | | | | |
| 33 | Any other FP method adopted | | | | |
| 34 | Comprehensive counseling provided (Y/N) | | | | |
| 35 | Any other complications, pl. specify[4] | | | | |
| 36 | Referred/ admitted, reason and place | | | | |
| 37 | If discharge, next date for visit | | | | |

* If MCTS number is not generated, then the MCTS number is to be generated by the treating health facility. Findings of the ANC is to be uploaded in MCTS portal by the treating facility

[1] Mothers in the beginning Severe anaemia, Hypertensive, Bleeding PV/haemorrhage, Fever/Infections at the episiotomy site/suture site

[2] Neonates Fever, Jaundice, Diarrhoea, Pneumonia, Others

[3] The method is not to be provided after the mentioned duration till 6 weeks

[4] Complications- Hypothermia, RDS ( If Pre-term), Haematoma scalp (due to birth injury or forceps injury)

# PNC (Post-natal Check up) Register–Newborn

**MCTS No* :**

| | | | | | |
|---|---|---|---|---|---|
| 01 | **Name:** | 08 | **Aadhaar Number:** | 14 | **Stayed for <48 hrs. or >48 hrs.** |
| 02 | **Age:** | 09 | **Facility Registration Number ( OPD/IPD):** | 15 | **Complications, if any** |
| 03 | **W/o or D/o:** | 10 | **Date and Time of Admission:** | a | **Mothers[1]** |
| 04 | **Address:** | 11 | **Whether JSY Beneficiary (Y/N):** | b | **Neonates[2]** |
| 05 | **Mobile Number (Family/Others):** | 12 | **Parity (GPLA):** | 16 | **Referral case – (Y/N)** |
| 06 | **Religion:** | 13 | **LMP & EDD:** | | |
| 07 | **Caste SC/ST/Others:** | | | | |

| | Newborn | PNC 1 | PNC 2 | PNC 3 | PNC 4 |
|---|---|---|---|---|---|
| 17 | Urine passed | | | | |
| 18 | Stool passed | | | | |
| 19 | Diarrhea | | | | |
| 20 | Vomiting | | | | |
| 21 | Convulsions | | | | |
| 22 | Activity (good/lethargic) | | | | |
| 23 | Sucking (good/ poor) | | | | |
| 24 | Breathing (fast/ difficult) | | | | |
| 25 | Chest in drawing Present/absent | | | | |
| 26 | Temperature | | | | |
| 27 | Jaundice | | | | |
| 28 | Condition of umbilical stump | | | | |
| 29 | Skin pustules Present/absent | | | | |
| 30 | Any other complications[3] | | | | |
| 31 | Treatment provided for complication | | | | |
| 32 | Referred/admitte, reason and place | | | | |
| 33 | If discharged, next date for visit | | | | |

* If MCTS number is not generated, then the MCTS number is to be generated by the treating health facility.
Findings of the ANC is to be uploaded in MCTS portal by the treating facility

[1] Mothers In the beginning Severe anaemia, Hypertensive, Bleeding PV/haemorrhage, Fever/infections at the episiotomy site/suture site

[2] Neonates Fever, Jaundice, Diarrhoea, Pneumonia, Others

[3] Complications- Hypothermia, RDS ( If Pre-term), Haematoma scalp (due to birth Injury or forceps Injury)


**Labour Room – Monthly Abstract Register** Month and Year:.....

| | | |
|---|---|---|
| 1 | Total no. of deliveries | |
| a | Normal | |
| b | Assisted | |
| c | C- Section | |
| 2 | Total no. of Abortions | |
| 3 | No. of Still Births | |
| 4 | No. of live Births | |
| 5 | No. of deliveries less than 37 weeks | |
| 6 | No. of Low Birth Weight Babies (<2500 gms.) | |
| 7 | No. of PW recd. Antenatal cortico-steroids | |
| 8 | No. of babies resuscitated | |
| 9 | No. of babies born with congenital anomalies | |
| 10 | No. of PPIUCD insertions | |

| 11 | Total no. delivered women identified as complicated/high risks | Identified | Managed | Deaths |
|---|---|---|---|---|
| a | **Maternal conditions** | | | |
| b | Hemorrhage ( APH/PPH) | | | |
| c | Infection | | | |
| d | Eclampsia | | | |
| e | Others | | | |
| f | **Neonatal** | | | |
| g | Low birth weight babies/Preterm babies | | | |
| h | Sepsis | | | |
| i | Asphyxia | | | |
| j | Any other complications | | | |

| 12 | Referral, Specify the reason | In referral | Out referral |
|---|---|---|---|
| a | Total no. of mothers referred | | |
| b | Total no. of newborns referred | | |
| 13 | Death of mother or new born, Please specify the cause | | |


**PNC – Monthly Abstract Register** Month and Year:.....

| | | | |
|---|---|---|---|
| 1 | Total received PNC care | | |
| 2 | No. stayed for 48 hrs. | | |
| 3 | No. of complications managed | Identified | Managed |
| 4 | **Mothers** | | |
| a | No. of anaemia cases | | |
| b | No. of severe anaemia cases | | |
| c | No. of hypertensive cases | | |
| d | No. of cases recorded with bleeding PV /haemorrhage | | |
| e | No. of cases recorded with infections at the episiotomy site/suture site | | |
| f | No. of cases with any other complications[7] | | |
| 5 | **Neonates** | | |
| a | Fever | | |
| b | Jaundice | | |
| c | Diarrhoea | | |
| d | Pneumonia | | |
| e | Others | | |
| 6 | Referral cases (Mothers/Neonates) | In referral | Out referral |
| 7 | No. of women using PPIUCD as a method of contraception | | |
| 8 | No of women using PPS as a method of contraception | | |
| 9 | No. of PPIUCDs discontinued | | |

# Receiving Facility Register

**MCTS No* :**

| Register for cases referred from other health facility (to be maintained at receiving facility) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name of the Receiving Health Facility: | | | | | | | | | | | | | |
| S. No. | Name of patient | Address and contact number of patient | Date and time of arrival | If referred case is a pregnant women/ child, ID No. (MCTS*) | Name of the health facility referred from | Name and designation of referring Health Official/ Functionary | Whether the patient came with a referral slip (Y/N) | Whether advanced information received from referring facility (Y/N) | Reason for referral | Condition of patient at time of receiving | Name and designation of Health Official attending the case on receiving /arrival | Mode of referred transport – (Govt. ambulance/PPP/ vehicle arranged by patient) | Remarks |
| 1 | | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | | |
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# Referring Facility Register

**MCTS No* :**

| Register for referral to other/higher health facility (to be maintained at referring facility) | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Name of the referring health facility : | | | | | | | | | | | | | | | |
| S.No. | Name of patient | Address and contact number of patient | Date of admission | Reason for admission | Reason for referral | Condition of patient at time of referral | Date and time of referral | Name of the health facility referred to | Name and designation of referring Health Official/ Functionary | Name of the accompanying person (official or relative) | Whether prior information sent to referral facility (Y/N) | If Yes, name of the person spoken to and contact number | Mode of referral Transport – (Govt. ambulance/PPP/ vehicle arranged by the patient) | Mode of referral transport – (Govt. ambulance/PPP/ vehicle arranged by the patient) | Remarks |
| 1 | | | | | | | | | | | | | | | |
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| 20 | | | | | | | | | | | | | | | |

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