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NATIONAL HEALTH MISSION
राष्ट्रीय स्वास्थ्य मिशन

Operational Guidelines

Life Saving Anaesthesia Skills (LSAS) & Comprehensive Emergency Obstetric and Newborn Care (CEmONC)

Ministry of Health and Family Welfare
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प्रीति सूदन, आईएएस
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Secretary

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भारत सरकार
स्वास्थ्य एवं परिवार कल्याण विभाग
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
Government of India
Department of Health and Family Welfare
Ministry of Health and Family Welfare

Dated : 21st February, 2020

PREFACE

India has made significant progress in reduction of maternal and child mortality over last few years. While MMR has declined by 77% IMR declined by 66% the decline being faster than the global decline. With this, the country achieved MDGs goals for maternal health but has to further scale up the efforts aimed at reduction of MMR & IMR to achieve SDGs.

Government of India has introduced several new interventions such as SUMAN, Midwifery, PMSMA and LaQshya in order to further improve the key maternal and newborn health indicators. These initiatives focus on improving the Quality of Care during ante-partum, intra-partum & post-partum period.

Assured availability of comprehensive emergency obstetric and newborn care service is a globally acknowledged strategy for saving the lives of mothers and newborns. However, availability of skilled human resource the remains one of the key requirements for operationalizing CEmONC service at identified FRUs.

In. view of this, training programs for MBBS doctors in Comprehensive emergency obstetric and newborn care and Life Saving Anaesthesia Skills were rolled out in 2003 to ensure provision of assured emergency obstetric care services at these facilities. To strengthen the programs further, the course curricula have been revised by MOHFW with support from National experts, development partners and NHSRC.

I hope that the states would utilize the guideline and operationalize their FRUs, thereby ensuring provision of comprehensive obstetric care to improve the health of mothers and children in India.

(Preeti Sudan)

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FOREWORD

Timely identification and management of obstetric complications is the key to the survival of mothers and new-born. To achieve this, Government of India envisages that all the FRUs should be operationalized as 24-hour delivery centres with availability of basic and emergency obstetric and newborn services. EmOC and LSAS programs were launched with the aim of skilling medical officers posted at FRUs to achieve the same.

Utilising the provision of multi-skilling MBBS doctors, many states could operationalize their First Referral Units (FRUs) and provide comprehensive obstetric care and improve maternal health outcomes. With launched of initiatives like SUMAN, public health facilities need to deliver assured maternal and child health services. So, it is important to ensure availability of skilled human resource along with necessary infrastructure for meeting the commitments made under SUMAN.

A review to the EmOC & LSAS programs indicated the need to revise the curriculum and make it more skill-oriented. So the guidelines on Comprehensive Emergency Obstetric & Newborn Care Services (CEmONC) and Life Saving Anaesthesia Skills (LSAS) have now been revised through extensive deliberations with the experts in the field. I am sure this would facilitate in ensuring availability of trained doctors for operationalizing the FRUs & expanding the number of SUMAN facilitate in ensuring availability of trained doctors for operationalizing the FRUs & expanding the number of SUMAN facilities in the states. The latest protocols and extended duration of training will further enhance the quality of the programs.

I firmly believe that the Mission Director, State & District program officers and Training institutes will utilize the updated guideline in identifying the FRUs for running the courses and further improve the quality of obstetric and newborn services in the states.

I compliment Maternal Health and Child Health division, NHSRC & all the experts who worked together in bringing this guideline.

(Vandana Gurnani)

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FOREWORD

Initiatives such as the Janani Suraksha Yojana, Janani Shishu Suraksha Karyakram, Pradhan Mantri Surakshit Matritva Abhiyan and LaQshya launched under NHM and other systemic and program interventions have helped in strengthening public health care service delivery and accelerating the pace of decline of MMR and U5MR in India.

To consolidate these gains, Government of India has recently launched the Midwifery Initiative and the Surakshit Matritva Aashwasan (SUMAN) with a focus on improving quality of care and providing assured services. It is known fact that early identification of high-risk pregnancies (HRPs), access to emergency obstetric care and prompt referral support can avoid a significant number of maternal deaths. To achieve this, it is prudent for the MBBS doctors posted at public health facilities, especially at First Referral Units (FRUs), to be equipped in managing the common obstetric and neonatal emergencies and thus avoiding untimely deaths.

Short-term (16 weeks) training course in Emergency Obstetric Care Service (EmOC) and (18 weeks) training course in Life Saving Anaesthesia Skills (LSAS) were launched by GOI in 2003 to train the MBBS doctors in dealing with common obstetric emergencies. The programs have now been revised by incorporating latest evidences and technical updates.

I take this opportunity to thank AIIMS, New Delhi and KGMU, Lucknow for supporting MOHFW in framing the revised CEmONC & LSAS guidelines. This wouldn't have been possible without active support and guidance of Ms. Preeti Sudan, Secretary H&FW, Mr. Manoj Jhalani, former SS & MD and Ms. Vandana Gurnani, AS&MD NHM.

The contribution and efforts of Maternal Health division of MoHFW, NHSRC & development partners like UNICEF, WHO, UNFPA, Jhpeigo and other experts are noteworthy in drafting these guidelines. I hope that the States & Training institutes will find these guideline useful in delivering Comprehensive Emergency Obstetric & Newborn Care.

21/02/2020

(Dr. Manohar Agnani)

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ACKNOWLEDGEMENT

The EmOC and LSAS training programs were initiated in 2003 to operationalize emergency obstetric care services, so that first referral units (FRUs) become functional. Getting assured emergency obstetric care near to the community helps in reducing morbidities and mortality. States were supported to create necessary infrastructure, place equipment's, establish blood bank/ blood storage centers, but placing skilled HR to conduct C-sections and manage complications still remains a challenge.

I am grateful to Ms. Preeti sudan, Secretary (Health & Family Welfare) and Mr. Manoj Jhalani (former SS & MD) for their visionary leadership in supporting the revision of existing EmOC and LSAS training program. I am also grateful to Ms. Vandana Gurnani, Additional Secretary & Mission Director (NHM) for spearheading this critical initiative. My special thanks to Dr. Manohar Agnani, Joint Secretary (RCH) for his regular guidance and administrative support in completing the process of revising the guidelines. I would also like to thank my colleagues Dr. Ajay Khera, Dr. Sumita Ghosh and Dr. Dinesh Baswal for their constant guidance and support.

My personal thanks to Dr. Randeep Guleria, Director AIIMS and Chairperson of expert group, Dr. R K Batra HoD Anesthesia AIIMS for LSAS and Dr Vinita Das HoD Obs & Gynae KGMU Lucknow for EmOC, for their continued support in framing and finalizing the technical content of the guidelines.

I acknowledge the support provided by UNICEF, UNFPA, WHO, Jhpiego, US-AID,I PAS, BMGF, IHAT, IPE Global and other experts for their contribution and inputs. My special thanks to Dr. Amita Pandey from KGMU and Dr. Dheeraj Bhandari

from MGIMS for their meticulous work in putting together the latest technical updates and framing the curriculum through proper mix of knowledge and skills.

Contribution from center of excellences like PGI Chandigarh, RIMS Ranchi, AIIMS Jodhpur, New Delhi, Bhopal, Bhubaneshwar, Patna, Raipur, KEMS Mumbai, MGIMS Wardha, BMC Bangalore, BHU Varanasi, RMC Raipur, GMC Guwahati, JIPMER Puducherry and other experts is highly appreciated.

Finally I must acknowledge that the guideline would not have been completed without active support from NHSRC particularly Dr Rajni Ved, Dr. Himanshu Bhushan, Dr. Vinay Bothra, Dr. Neha Jain, Dr. Kalpana and Dr. Ashima for their contribution for finalizing these guidelines.

Last but not the least, I sincerely thank Dr. Bhumika Talwar, Senior Consultant in the Maternal Health Division for the excellent support provided while revising these guidelines.

Finally I am acknowledging the inputs of all the experts who have contributed but inadvertently might have missed mentioning their names.

I am sure by utilizing the provision of this guideline, states and districts will be able to identify more number of SUMAN certified facilities for delivering assured emergency CEmONC services.

(Dr. Teja Ram)

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Table of Abbreviations

AMTSL	–	Active Management Of Third Stage Labour
ANC	–	Anti Natal Check Up
ARDS	–	Acute Respiratory Distress Syndrome
ART	–	Anti-Retroviral Therapy
BCLS	–	Basic Cardiac Life Support
BMW	–	Bio Medical Waste
CAC	–	Comprehensive Abortion Care
CEmONC	–	Comprehensive Emergency Obstetric And Newborn Care
CHC	–	Community Health Centre
CME	–	Continuing Medical Education
CPR	–	Cardiopulmonary Resuscitation
CPT	–	Co-Trimoxazole Prophylactic Therapy
CSSD	–	Central Sterile Services Department
CTIs	–	Central Training Institutes
DBT	–	Direct Bank Transfer
DH	–	District Hospital
DNB	–	Diplomat Of National Board
EID	–	Early Infant Diagnosis
EmOC	–	Emergency Obstetric Care
ENBC	–	Essential Newborn Care
FOGSI	–	Federation Of Obstetric & Gynaecological Societies Of India
FRU	–	First Referral Units
GDM	–	Gestational Diabetes Mellitus
GoI	–	Government Of India
HDU	–	High Dependency Unit
HEI	–	HIV-Exposed Infants

HIV	–	Human Immunodeficiency Virus
HLD	–	High Level Disinfectant
HR	–	Human Resource
ICU	–	Intensive Care Unit
IMEP	–	Infection Management And Environment Plan
IMR	–	Infant Mortality Rate
IUCD	–	Intra Uterine Contraceptive Device
JIPMER	–	Jawaharlal Institute Of Postgraduate Medical Education & Research
KGMU	–	King George's Medical University
LAM	–	Lactational Amenorrhea Method
LR	–	Labour Room
LDR	-	Labour Delivery and Recovery Room
LSAS	–	Life Saving Anaesthesia Skills
LSCS	–	Lower Segment Caesarean Section
MC	–	Medical College
MCI	–	Medical Council Of India
MCTS	–	Mother And Child Tracking System
MD	–	Doctor Of Medicine.
MDG	–	Millennium Development Goal
MDSR	–	Maternal Death Surveillance And Response
MGIMS	–	Mahatma Gandhi Institute Of Medical Sciences
MMR	–	Maternal Mortality Rate
MNM	–	Maternal Near Miss
MOHFW	–	Ministry Of Health And Family Welfare
MoU	–	Memorandum Of Understanding
MTP	–	Medical Termination Of Pregnancy
MVA	–	Manual Vacuum Aspiration
NHM	–	National Health Mission

NHSRC	–	National Health System Resource Centre
OBGY	–	Obstetrics & Gynaecology
OPD	–	Outdoor Patients
OSCE	–	Objective Structured Clinical Examination
PIP	–	Program Implementation Plans
PPE	–	Personal Protective Equipment
PPH	–	Postpartum Haemorrhage
PPIUCD	–	Postpartum Intra Uterine Contraceptive Device
PPTCT	–	Prevention Of Parent To Child Transmission
RCH	–	Reproductive And Child Health
RIA	–	Rapid Initial Assessment
RTI	–	Reproductive Tract Infection
SBA	–	Skilled Birth Attendant
SDGs	–	Sustainable Development Goals
SIHFW	–	State Institute Of Health And Family Welfare
STI	–	Sexually Transmitted Infection
TOT	–	Training Of Trainers
TSSU	–	Theatre Sterile Supply Unit
UNFPA	–	United Nations Fund For Population Activities
UNICEF	–	United Nations International Children's Emergency Fund
USG	–	Ultrasonography
UTI	–	Urinary Tract Infection
WASH	–	Water, Sanitation And Hygiene
WHO	–	World Health Organization

Introduction

With the launch of National Health Mission(NHM) in 2005-06, there has been a remarkable reduction in maternal mortality ratio and infant mortality rates in India. The country has achieved Millennium Development Goal(MDG) in 2015 by reducing maternal mortality from 556 per 100000 live births in 1990 to 122 maternal deaths per 100000 live births in 2015(SRS 2015-17).Similarly, Infant Mortality Rate (IMR) has also reduced from 86 infant deaths per 1000 live births in 1990 to 33 infant deaths per 1000 live births in 2017. The average annual rate of reduction (ARR) in global MMR during the 2000–2017 period was 2.9% while India's MMR declined by 6.15% in 2015-17, which is higher than the global rate of decline.

Government of India has introduced several key interventions in order to further improve the key maternal and newborn health indicators. Some of the important key initiatives are- Surakshit Matritva Aashwasan (SUMAN), Midwifery, PMSMA and LaQshya. These initiatives focus on delivering quality care with dignity and respect during ante-partum, intra-partum & post-partum period, making respectful care a core tenet of the initiatives.

Despite one third reduction in MMR, India still contributes 12% to global maternal deaths. Pregnancy related mortality and morbidity continues to have huge impact on the lives of Indian women and their newborns. Reducing maternal and child mortality is a key priority for improving population health outcomes, the provision of Universal Health Coverage and for achieving health related targets of the Sustainable Development Goals (SDGs).

A key challenge that remains is to overcome the lack of comprehensive, high quality obstetric care services across public health facilities, especially chronic shortage of specialists (including Obstetricians and Anaesthesiologists).

To address this challenge, short term training for medical and paramedical staff was introduced in Tenth and Eleventh Five Year Plans i.e. to create a pool of trained health professionals capable and equipped to provide quality maternal and newborn healthcare. These short term trainings included Skilled Birth Attendant (SBA), Emergency Obstetric Care (EmOC), Life Saving Anaesthesia Skills (LSAS) and Comprehensive Abortion Care (CAC).

While the government is committed to work towards reducing the shortfall of specialists in rural areas, innovative methods to expand the pool of trained health professionals to provide high quality care during obstetric emergencies is paramount to mitigate maternal deaths in complicated pregnancies. The CEmONC (earlier EmOC/CEmOC) and LSAS initiatives are steps in this direction.

Multiskilling of MBBS doctors along with LAQSHYA and Midwifery initiatives will help the states in operationalizing their First Referral Units (FRUs) and increasing the number of SUMAN certified facilities in the country.

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Outline of the CEmONC & LSAS-training

Based on the recommendations of an expert group constituted under the Tenth Five Year Plan, an 18-week training module in Life Saving Anaesthesia Skillsanda16-weektraining module for Emergency Obstetric Care was developed for MBBS doctors in 2002-03 and LSAS training was rolled out accordingly. Mc Arthur Foundation conducted a pilot with FOGSI to train MBBS doctors in Emergency Obstetric Care including Caes are an section. Based on the positive outcome of this pilot, FOGSI in partnership with Government of India initiated EmOC training for MBBS doctors. This helped to operationalize First Referral Units (FRUs) across many states by providing specialized and high quality maternal and child care and has saved many lives during obstetric emergencies.

An independent, external evaluation of these initiatives was then conducted at the behest of MoHFW. Evaluation indicated that wherever quality of training was good and trained personnel were immediately utilized; the training served its purpose. However, certain programmatic gaps were also identified to improve implementation. Among others, the recommendations of this evaluation include increasing the duration of training, revision of the curriculum, strengthening of FRUs, rationalizing the posting of LSAS and CEmONC trained doctors at public facilities, improved workforce management (including the introduction of financial and non-financial incentives) and more robust indemnity and medico-legal cover for LSAS and CEmONC trained doctors.

In light of these recommendations, an expert group was formed to revise the curriculum and operational guidelines. Some of the major decisions taken by the expert group are as under-

1. The care after birth including ENBC & Resuscitation needs to be emphasized and thus the name of the training was changed from Emergency Obstetric Care (EmOC) to Comprehensive Emergency Obstetric and Newborn Care (CEmONC).

2. To build in confidence & quality in training, the duration of the training has been increased from 16 to 24 weeks for CEmONC & from 18 to 24 weeks for LSAS.

3. Earlier, the knowledge part of the training was given at medical college & practical at district hospital. Now, both will be imparted at the medical college & thereafter the hands-on training for providing practical experience, 6 weeks training at District Hospital will be given.

4. The curriculum also has been made comprehensive with focus on skills practice through video, Mannequins, case-studies & working with consultants in LR, OT, OPD & Obstetric HDU.

5. The curriculum has been updated to include latest evidence based practices and skills.

6. An undertaking by the state government has been added.

7. Criteria for selection and checklists for monitoring of the training sites have been designed and added into the operational guideline. While selection of training sites, special focus is required on ensuring that the training site is a SUMAN notified and LaQshya certified facility following the core tenets of respectful maternity care.

8. The CEmONC technical guideline has been synchronized with the latest other training guidelines of GOI.

Scope of practice

This training has been developed as an in-service training program for MBBS doctors working in government public health facilities. The LSAS & CEmONC training program will be restricted to the provision of Emergency Obstetric Care at FRUs and government approved hospitals and facilities. Since this is an in-service training, it does not impart any degree or diploma to the MBBS doctors trained in it. The scope of practice can be reviewed and extended to other emergency situations if a Fellowship or Certificate program for CEmONC/ LSAS is developed at a later stage.

As emergencies often cannot be predicted, management of the cases will be decided by the CEmONC/LSAS trained doctor as per the clinical condition of the pregnant woman. However, some cases will be deemed as emergencies due to their critical nature i.e. potentially high risk pregnancies based on availability of local clinical services. Examples include cases presenting with hypertension or pre-eclampsia, diabetes, severe anaemia, twins, threatened labour, abnormal bleeding during pregnancy, prolonged or obstructed labour, bad obstetric history etc.

Essential pre-requisites for successful implementation of LSAS/ CEmONC initiatives in the states

In order to successfully implement LSAS or CEmONC training, it is imperative for the states to have willingness and commitment to undertake the training program by ensuring the following key pre requisites:

1. Willingness and commitment of the state for utilization of trained doctors and posting them only at FRUs, which are otherwise functional or become functional after posting of the trained doctor. Preferably the trainee should be selected from the FRUs identified for operationalization. Willingness of the applicant to serve in the designated FRU should be taken into consideration.

2. An undertaking by the state to strengthen and operationalize FRUs and public health facilities where LSAS or CEmONC doctors will be posted and to provide indemnity cove r for LSAS or CEmONC trained doctors.

3. FRUs where LSAS and CEmONC doctors will be placed:

   - It is important to conduct a gap analysis of the FRUs that need to be operationalized for provision of assured emergency obstetric services.
   - Action plan for operationalization of FRUs based on the gap analysis should ensure availability of necessary infra-structure (OT, emergency facility, ward, blood bank/storage etc.), equipment and drugs to provide high quality maternal and child care services.
   - Necessary HR to support the Anaesthetist or LSAS trained doctor and the Obstetrician or CEmONC trained doctor is a must at the FRU.

4. High quality accredited training sites at Medical College (MC) and District Hospital (DH) with requisite faculty, facilities and supervision.

Training Program

1. Duration of training

Duration of the training programme will be for 24 weeks. In practical terms this translates to a residential six-month training programme.

The first 16 weeks (4 months) training will be in the Department of Obstetrics and Gynaecology (OBGY) for CEmONC training and in the Department of Anaesthesia for LSAS training at a Medical college for acquiring basic skills and knowledge (with a Tier I and Tier II exam), followed by 6 weeks and 4 weeks training for CEmONC and LSAS respectively at an CEmONC/LSAS accredited DH, for learning hands-on practicing skills at a secondary level of health facility i.e. in a less supportive situation than that of a Medical College. The final 2 weeks training for CEmONC and 4 weeks training for LSAS will be done again at the Medical College to strengthen skills and address challenges faced at the DH. The last week of this period will be used to conduct the Final Tier III exam at the Medical College.

It will be mandatory for the first 16 weeks to be spent at the Medical College. States will have the flexibility to conduct the entire 24-week training at the Medical College itself if they so wish, after obtaining prior GoI approval.

2. Training sites

The LSAS & CEmONC training will be conducted at Medical Colleges and District Hospitals identified by the states and accredited by MOHFW. NHSRC would act as the focal body for accreditation of training centres (Medical Colleges) along with MOHFW. NHSRC will also develop regional centres for the accreditation of training institutes in consultation with MOHFW. A pool of experts needs to be created to support accreditation process.

States should be cautious in selecting Medical Colleges as training sites. Only those Medical Colleges that are performing well, recognized/ functioning as Centres of Excellence and fulfilling the accreditation criteria should be selected. Ideally the medical colleges should be a

notified SUMAN facility and have LaQshya certification for both Labour Rooms and Operation Theatres. It should also follow the core tenets of the respectful maternity care as per the attached RMC checklist and Beneficiary exit interview for RMC (Annexure 15 and 16). Government hospitals and hospitals under Central Government undertaking will be eligible to provide this training provided they meet the eligibility criteria of training centres. This would also apply to selecting District Hospitals for the required hands-on training.

Essential pre-requisites for training sites (MC & DH)

1. Willingness of the faculty and readiness of the training site for conducting training as per checklist.

2. The requisite training plan, infrastructure, faculty, equipment, examination system and supervision mechanism must be in place to provide a conducive environment for training. This includes availability and access to functional operation theatres, intensive care facilities, wards, blood bank/storage, necessary equipment and drugs. Availability of accommodation facilities at the training site is also desirable. Without these facilities the state should not recommend or select institutions for conducting training. The criteria for selection of MC and DHs as training sites for CEmONC and LSAS are presented in Annexure 1.A checklist regarding accreditation of training sites is attached in Annexure 2 & Annexure 3for MC and DH respectively. A list of standard equipment and drugs is provided both in the curriculum and also in the monitoring checklists in the annexure of this guideline.

3. Coordination between the identified training sites i.e. the Medical College and District Hospital is desirable for effective implementation of the training plan. A visit from the Medical College to the DH during the duration of DH training is envisaged to see the quality of training and facilities available for skill practice..

*For smaller states and UTs-

- Keeping in view the needs of smaller States/ UTs which do not have a medical college, the possibility of having regional medical colleges / institutes as centres for the training should be explored.

- Neighbouring states can be tied up with to provide the LSAS or CEmONC training at one institute and MoU for collaboration can be drawn up accordingly.
- The number of trainees required can be relaxed, e.g.- only 1-2 trainees can be engaged for training if only 2-4 faculty is available at the college.

3. Trainers

Trainers will be specialists (MD/DNB) from the Department of Anaesthesia for the LSAS training and Obstetricians (MS/MD/DNB) from the Department of Obstetrics & Gynaecology for the CEmONC training at the Medical College, with experience in teaching and training. Similarly, the hands-on training at the DH will be under the supervision of similarly qualified Anaesthesiologists (LSAS training) or OBGY (CEmONC training) Specialists. While each trainee will have a named Trainer for supportive supervision and teaching, all members of the faculty should provide training and support. These members of the faculty should be remunerated on a pro-rata basis depending on the session/time they have contributed to training. The honorarium for this should be in accordance with the latest GoI norms for training developed by the National Health Mission. In addition, Rs. 10,000 per month for Head of the Department, Anaesthesia or OBG at the Medical College and Rs. 5000 per month for nodal persons at Medical College and District Hospital can be provided for the duration of training.

Rs.500 per day is also to be provisioned for any existing administrative staff for secretarial assistance during training both at Medical College and District Hospital.

Criteria for Selection of trainer

- The trainers should be Anaesthesiologists (for LSAS) and OBG specialists (for CEmONC) selected from Medical Colleges and District Hospitals under state/central government.
- These trainers should possess MD/DNB in Anaesthesia (for LSAS)and MS/MD/DNB in OBG (for CEmONC), with experience in teaching and training.

- The trainers can be selected only from state/central government Institutes.
- The minimum level to qualify as a named trainer is Lecturer/ Assistant Professor.
- Ability to use different methods to facilitate training e.g. Theory teaching, Skills practice, Role play and Scenarios, Simulation exercises and Critical review of the latest evidence and recent advances.
- Willingness to provide hands-on training and mentoring support during and/or after the training is essential.
- Leave during the training duration should not be taken, unless critical and must be taken with prior permission of the HOD/Coordinator.
- Regular attendance & adherence to training timings will be of key importance during training.

4. Batch size and trainer-trainee ratio

The batch size should be limited to 4 trainees at one Medical College with a Trainer-Trainee ratio of 1:1. For calculating the number of trainees at any training site, only 50% of the faculty should be considered to be eligible as trainers (as others would have additional administrative, teaching and training responsibilities).

For e.g. if a department has 8 faculty members (including all levels – Lecturer, Assistant Professor, Associate Professor and Professor), it can enrol a maximum of four candidates for the training. Even if the numbers of faculty members are more, the batch size should be restricted to 4-6 trainees per batch.

5. Trainee selection

Criteria:

- The trainees should be MBBS doctors selected only from state/central government services.
- Potential trainees should have worked for at least 3 years and should

have not less than 10 years of service left after completion of LSAS or CEmONC training.

- States will have the discretion for selecting regular and contractual doctors.
- Doctors possessing any specialist qualification (Degree/Diploma) are not eligible; including those who have taken CEmONC training will not be eligible for LSAS training and vice versa.

Process of selection:

- Candidates should be selected after a detailed and thorough counselling about the purpose of the training, their roles and responsibilities following the training, scope of practice, place of posting, expected duration of posting, financial and non-financial incentives etc. They should also be explained that this is an in-service training for capacity building of the trainees to operationalize FRUs and its scope of practice is limited to government health facilities only. This will help the trainees in ensuring their willingness and only interested candidates will opt to join. To enable potential trainees, make an informed decision, an orientation to provide relevant information about the LSAS program should be conducted by the state for potential candidates prior to their selection.
- Posting order upon completion of the training should be given by the competent authority in advance i.e. at the time of opting for the training programme.
- Duration of the posting should be clearly indicated in the posting order which should not be more than three years unless the candidate is willing to stay on.

6. Training of Trainers

National level Training of trainers (To create master trainers in the state):

- Since this is an ongoing training, only those states that need to expand their pool of master trainer will need to send a request

to GoI for National ToT. GoI can then arrange to send their master trainers for conducting a 3 days ToT at the state or invite the master trainers at central level for ToT, as per the agenda attached at **Annexure4**.

- The HOD (Department of Anaesthesia or Department of OBG) from the selected medical college along with at least one senior faculty from each Unit of the Department and Anaesthesiologist or OBG specialist from selected District Hospital will need to be oriented and trained on various aspects of the training programme.
- States who already have Master Trainers and therefore do not need to expand their pool of master trainers can, if required, organize a reorientation ToT for potential trainers at the Medical College and District Hospital on need basis as per the agenda mentioned at Annexure4.
- A half day orientation also needs to be organized for the state and district programme officers, faculty of State Institutes of Health & Family Welfare (SIHFWs)/ Central Training Institutes (CTIs)about LSAS and CEmONC training and its operationalization. Medical college can also conduct similar orientation for the rest of faculties or other staff in their departments of OBG and Anaesthesia.

7. Method of teaching and training

The focus and emphasis of the training will be skill building through hands-on practice both at the Medical College and the District Hospital. Theory classes will be delivered with the support of presentations and modules prepared in accordance with the revised and updated LSAS or CEmONC curriculum. Various teaching modalities are recommended to make the training interactive and improve the learning process. These include role play, clinical simulations, case studies etc. A suggestive list of various teaching modalities for CEmONC training is placed at **Annexure 5**. Theory classes should be followed by hands on practice. The District part of the training is for acquaintance of the candidate in a setting with a lower level of support than a tertiary institution so that they understand the realties and constraints while being posted at an FRU. They should first work under supervision and then independently. The

trainees will be first trained on Mannequins, after which they will observe and support skills under the guidance of a trainer before independently practicing these skills.

All the essential procedures and skills observed, assisted and independently conducted will be recorded in the prescribed log-book.

8. Infra-structure

Infrastructural requirement will be of three types: -

1. Facilities for teaching and training (seminar room, audio-visuals etc.)
2. For practicing skills (that include OT, Emergency, HDU/ ICU, wards, equipment, drugs etc.)
3. Residential facility for trainees.

Availability of infrastructure is an essential pre requisite. All identified and selected training institutes must have in-house facilities for teaching, training, audio-visuals, seminar room, library, mannequins etc. However, if needed, support for upgrading teaching and training facilities as specified here can be provided by sanctioning additional need based funds for either building new teaching and training facilities or upgrading existing facilities. The list of kind of mannequins and other necessary equipment required at training sites is mentioned in Annexure6 & 7for LSAS and CEmONC training respectively.

This is a residential training program. Accordingly, facilities for appropriate accommodation of trainees should be arranged by the state either in-house or as hired accommodation in the vicinity of the training institute. Since most of the trainees are in-service doctors, a separate room with attached bathroom and common dining facilities should be provided.

9. Schedule of 24-week training

The theoretical teaching and practical training needs to be conducted simultaneously so that there is better understanding and synchronization between theoretical learning and skill building. Practicing of skills on

mannequins should be essential, before any hands on procedures are permitted on patients.

The schedule for theoretical teaching for the first 24 weeks for both the LSAS & CEmONC trainings is placed at Annexure 8 & Annexure 9 respectively. The skill practice will be undertaken simultaneously every day depending upon the area and place of posting. Access to mannequins should be near the seminar room where theory classes are being conducted.

At the medical college, posting will be ensured in different areas like Emergency/Casualty, OT, Obstetric HDU/ICU, LDR/Labour room etc. as per the departmental schedule of posting.

At the DH, the trainee will be posted at various work areas and support the Anaesthesiologists (for LSAS training)and OBG specialists (for CEmONC training) and will undertake activities under supervision and independently as well.

The duties shall be performed according to the schedule and policy of the Senior and/or Junior Resident at the Medical College and at the DH the same will be as per the advice of the District Anaesthesiologist (for LSAS training) and OBG specialist (for CEmONC training).

It is important that trainees are posted round the clock, including night shifts so that they are adept and skilled in handling and managing every type of cases, including emergencies. As indicated above, the respective institute will decide their schedule of posting.

The LSAS or CEmONC doctor during training should not be included in the regular posting roster of the hospital. His position should be apart from the already existing staff at the health facility. He should be added only for postings where he can learn his/ her skills.

Training will be provided in line with the revised curriculum. Module and week wise presentations have also been prepared for imparting quality teaching and training.

All skills performed shall be noted and recorded as per the protocols defined under 'Record keeping'.

10. Assessment and examinations

For LSAS

The over-all assessment of LSAS trainees will be in three Tiers:

Tier I Internal Assessment- by trainers at the medical college. This will be in two parts (Ia and Ib) of 100 marks each with equal weightage to theory and practicals (50% marks for each). These exams will contribute 20% to the final assessment.

The syllabus for **Tier 1a** exam will consist of Week 1 to Week 6 of the curriculum and the assessment should be held between Weeks 6 to 8. The syllabus for **Tier 1b** exam will consist of Week 7 to Week 12 of the curriculum and the assessment should be held between Weeks 12 to 14.

T**ier II Internal Assessment-** by the HOD Anaesthesia at the State Medical College. This will comprise of 100 marks and the weightage for theory and practical will be 20% and 80% respectively. This assessment will contribute 20% towards the final assessment and should be held in between week 16-18.

Tier III Final assessment- will be held at the State Medical College/ Certifying Institute and will be of 200 marks with equal weightage of 100 marks for both theory and practical. Of note, out of the 100 marks in theory here, 10 marks will be for the workbook, 10 marks for the logbook and 80 marks for the theory question paper. The Tier III exam will contribute 60% towards the final assessment and will be conducted by 3-4 examiners (to include one or two internal and two external experts). Tier III should be conducted in Weeks 23-24.

The structure of the exams is presented in the table below:

S. No.	Tier		Syllabus	Exam Time	Theory marks	Practical marks	Weightage
1	Tier I	a	Week 1-6	Between weeks 6-8	50	50	20
		b	Week 7-12	Between weeks 12-14	50	50	
2	Tier II		Week 1-16	Between weeks 16-18	20	80	20
3	Tier III		Full syllabus	Between Weeks 23-24	100*	100	60

* (Of the 100 marks here, 10 marks are for workbook, 10 for logbook and 80 for the theory paper)

For CEmONC

The over-all assessment of CEMONC trainees will be in three Tiers:

Tier I Internal Assessment- by trainers at the medical college. The theory and practicals will be of 100 marks each. These exams will contribute 30% to the final assessment.

The syllabus for Tier 1 exam will consist of Week 1 to Week 6 of the curriculum and the assessment should be done at 6 Weeks.

Tier II Internal Assessment- by the HOD OBG at the State Medical College. This will comprise of 200 marks practical. This assessment will contribute 30% towards the final assessment and should be held in Week 16.

Tier III Final assessment- will be held at the State Medical College/ Certifying Institute and will be of 300 marks with 100 marks for theory and 200 marks for practical (100 each for skill checklist and OSCE). Of note, out of the 100 marks in theory here, 10 marks will be for the workbook, 10 marks for the logbook and 80 marks for the theory question paper. The Tier III exam will contribute 40% towards the final assessment and will be conducted by 3-4 examiners (to include one or two internal and two external experts). Tier III should be conducted in Week24.

The structure of the exams is presented in the table below:

S. No.	Assessment	Week of training	Pattern of assessment	Max marks	Weight age
1	Tier I	6th weeks	MCQ(Theory) Skill checklist(Practical)	100 100	30%
2	Tier II	16th weeks	Skill checklist	200	30%
3	Tier III	24th weeks	MCQs* Skill checklist OSCE	100 100 100	40%

*(Of the 100 marks here, 10 marks are for workbook, 10 for logbook and 80 for the theory paper)

The break-up for the Theory paper should include short notes (40%), MCQs (40%) and problem based clinical scenario questions (20%) for LSAS examinations, and mainly MCQs for CEmONC examinations.

The skills given below need to be assessed through the practical exam including OSCE stations, mannequins &corresponding viva on the following:

LSAS	CEmONC
Anaesthesia machines	Adult Resuscitation(including BCLS)
Airway management/ intubation	Newborn Examination & Newborn Resuscitation
Spinal anaesthesia	Ante-partum assessment
Drugs	Clinical Pelvimetry
Equipment	Counselling for Nutrition in Pregnancy(including oral iron/ calcium)
Cardiopulmonary resuscitation (CPR)/management of shock	Manual Vacuum Aspiration [MVA] & Post-abortion Care
Neonatal Resuscitation	Post-abortion Family Planning Counselling
	IUCD insertion(Post Abortion, Postpartum)
	Preparation & administration of MgSO4
	Conducting a Childbirth
	Episiotomy and Repair
	Vaccum extraction
	Outlet Forceps delivery
	Intra cervical Foley insertion
	PGE2 Gel insertion
	Management of PPH- Bimanual Compression of Uterus& Compression of Abdominal Aorta
	Manual Removal of Placenta
	Repair of Cervical Tears
	Uterine Balloon Tamponade
	Basic Postpartum Assessment & Care(including Family planning)

One or more skills from this list may be used for OSCE. Different skills may be assessed in different batches.

- The pass percentage of the exam is 70% combined (theory & practical). However, minimum 50% marks in theory are essential to pass the examination.
- If a candidate does not pass in the first attempt, they are allowed a second attempt with the next batch; are-orientation for 4-6 weeks before this exam should be arranged for the candidate in conjunction with the lead trainer at the training site.

- In this case, there will not be any additional remuneration provided to the trainer or trainee besides food, accommodation and travel expenses.

11. Record keeping

Systematic and meticulous record keeping will be essential to track the progress, quality and completeness of training. It will be a useful tool for internal assessment. This is especially critical for the hands-on training component. A work-book for recording activities (e.g. recording cases seen, assisted/operated, PAC done, theory, practical classes, presentations, seminars, meetings attended etc.) and a log-book to record the 'observed, assisted and independently performed' necessary LSAS or CEmONC skills is provided for both LSAS and CEmONC.

In addition, there should be a record of educational/training activities:

1. Case presentations– Trainees should present at least 1 obstetric case and attend four obstetric cases
2. Seminar/ workshop– Trainees should provide a presentation (e.g. either about an anaesthesia machine or an anaesthesia drug for LSAS training or about an emergency obstetric condition for CEmONC training) and attend at least five seminars/workshop.
3. Record of other training activities as appropriate e.g. clinical simulations, role plays and drills etc.
4. Provide evidence of completing CPR certification and Neonatal resuscitation (at least BLS or BCLS)

12. Certification

A certificate will be provided to trainees on successful completion of the LSAS training programme. To be eligible for certification, candidates must have performed a minimum number of skills and passed the three-tier examination system by over-all marking of 70%.

The minimum set of skills (either performed, actively assisted or simulated) to be eligible for certification include:

For LSAS

Key Skills for Medical Officer being trained in LSAS		
S. No.	**Procedure**	**Number**
1	Pre-anesthetic checkup and documentation	100
2	Intra-venous cannulation	100
3	Lumbar puncture and Spinal Anesthesia	50
4	Laryngeal mask airway insertion	20
5	Endo-tracheal intubation and extubation	20
6	Resuscitation (for hypo-volumic shock)	10
7	CPR	10
8	Neonatal Resuscitation	10

Note- Some of the above cases like CPR and Neonatal Resuscitation can be practiced on mannequins.

For CEmONC

Skills for Medical Officer being trained inCEmONC				
S. No.	**Skills**	**Observed**	**Assisted**	**Performed**
1	Antenatal Examination	10	10	20
2	Clinical Pelvimetry	5		10
3	Conduct Normal Labour & delivery	10	10	20
4	Conduct AMTSL	10	10	25
5	Episiotomy & its repair	5	5	10
6	Plotting of Partograph	2		20
7	Caesarean Section	10	10	20
8	Wound Dressing	10	10	20
9	Stitch Removal	10	10	20
10	Putting an IV line	2		10
11	IV iron administration	2	2	10
12	Blood Transfusion	5	5	5
13	Repair of perineal tear (Desirable)	2	2	2
14	Forceps application outlet	2	2	2

15	Ventouse application	2	2	2
16	Conduct Breech Delivery (Desirable)	2	2	2
17	Management of Shoulder dystocia (Desirable)	1	1	1
18	Repair of cervical & vaginal tear (Desirable)	2	2	2
19	Management of Shock	5	10	5
20	PPH Management (Desirable)	5	5	5
21	Eclampsia Management (Desirable)	5	5	5
22	CPR	10		
23	Neonatal Resuscitation	5	5	5
24	Examination of Newborn ENBC	5	5	15
25	MVA	2	2	5
26	Hand Washing	5		20
27	Segregation & Disposal of Waste	5		20
28	Processing of Instruments	5		20
29	Postpartum Sterilization / Minilap tubal ligation (Desirable)	2	2	2
30	PPIUCD Insertion	2	2	5
31	Post Abortal IUCD	2	2	5
32	Post-Partum Contraception-Counselling	5	5	5
33	Breast feeding Techniques Counselling	5	5	5
34	USG images	10		

Note- Some of the above cases like CPR and Neonatal Resuscitation can be practiced on mannequins.

A template of the certificate to be issued by the state is provided in **Annexure 10 and 11** for LSAS and CEmONC respectively.

13. Provision of incentives to LSAS/ CEmONC doctors.

State may consider provision of award or acknowledgement for well performing LSAS/ CEmONC trained doctors. These trainings can be linked to incentives, increments, career progression and promotion, and other provisions like:

1. Award of performance based incentives (as decided by the state for every emergency obstetric case for which the LSAS or CEmONC doctor provided services like spinal anesthesia or C section respectively) through Direct Bank Transfer(DBT).
2. Award and Recognition to the good performing doctors on days of National importance like Independence day, Republic day and Doctor's day
3. Preferential allotment of staff quarters (or provision of house rent allowance)
4. Extra hardship allowance for LSAS or CEmONC doctors willing to work in remote, hard-to-reach FRUs.
5. Provision of personal incentives for the family (for example support with admission in central/locally reputed schools; job opportunities for spouse)
6. Allowances to attend relevant conferences/ CMEs, pertaining to the training received.
7. Provision of Medical insurance cover.
8. Provision of indemnity cover to the LSAS/ CEmONC trained doctor. Guidance on this is provided at **Annexure 12**.
9. Additional increment/ weightage in PG admission etc. after completion of 3 years of service post LSAS or CEmONC training, above the usual reservation which they gain by serving at the rural health facilities.

Leaves

Since this is an in-house on job training, there will not be any leave granted within the duration of training. One break (leave) of 7 days is permissible at the end of 3 months training. The leaves can be availed as per the local needs. No travel support or honorarium will be paid during this break. This break should be pre decided and all the trainees have to avail it simultaneously to avoid break in teaching and training schedule.

The EL or CL of the in service candidate shall accumulate in their leave account as per the state's norms.

Leave due to any other exigencies shall be dealt at state level by the state training in charge and administrative head. Additional training days have to be completed in such exigencies.

14. Supportive supervision and follow up

As this is short-term training, immediate practicing of skills is required. Constant and concurrent review and follow up of the trainee is important to ensure adequate practice of learnt skills. It is important to identify following individuals for the training :

- **Trainer:** Can be anybody who is involved in training of MBBS doctors
- **Mentor:** A person assigned to each trainee for one to one interaction, problem solving and also giving post training support while they are posted at the FRU. Ideally a faculty of the department should be assigned as a mentor besides being a trainer of such courses.

  Each trainee should have a named mentor both during training and also after training. These mentors will provide supportive supervision once LSAS or CEmONC doctors start practicing at FRUs. This support should include both telephonic support as well as site visits, where appropriate. The latter would be more feasible if mentors are chosen in such a way that they are located close to FRUs where LSAS or CEmONC doctors are practicing.

Another option is to use technology to provide mentoring support, e.g. ECHO platform; Skype; Video conference.

The mentor will not have any medico-legal responsibility for cases being performed by the LSAS or CEmONC trained doctor; the mentor is there to provide supportive supervision and guidance.

In addition, the possibility of identifying and nominating a Co-Mentor from the Govt. sector should also be considered.

The states need to provide adequate budgetary support for the field visit of such mentors. In addition, trainers from the Medical College should conduct three mentoring visits to the FRUs where trainees have been posted. First visit within the first month of posting of the trainee to ensure conducive environment for working at a functional FRU; the next visit can be between 4- 6 months and third visit at 12 months of posting to review performance, issues and challenges being faced by these LSAS or CEmONC trained doctors.

- **Monitor:** For monitoring, the state needs to identify a Monitor, who will visit the training sites and the practicing sites (i.e. where the trained doctors are posted). A systematic mechanism for monitoring will help to identify gaps and enable corrective measures to strengthen the delivery of training.

  After completion of accreditation of the Medical College as a training site for CEmONC/ LSAS, visit by external and internal evaluators should be provisioned to monitor the quality of training.

  It is important to undertake two follow-ups during the training, one at the Medical College by the state programme manager or an official nominated by him/her and another at the District level preferably by a faculty from the Medical College.

  However, all the monitors going to field should provide support, so that they are not perceived as third party for fault finding.

Post training, mentoring and follow-up should be at a defined interval - preferably every six months - jointly by the identified mentor and an official nominated by the programme officer.

There should be a six-monthly state review of the implementation of the LSAS and CEmONC program to discuss issues such as training, post training deployment and performance of LSAS and CEmONC doctors. An annual review should also be conducted at the national level.

The Director Health Services/Mission Director (NHM) at the state level shall undertake the review. SIHFW/CTI should be accountable and responsible for maintaining quality of the training.

At the national level, Joint Secretary (RCH)/National Programme Officer will organize the review.

Independent teams from the centre and state level can be sent periodically to observe the quality and review the implementation and performance under LSAS and CEmONC.

Tools and checklists for the quality monitoring of the training programme at different levels are presented in **Annexure 13**.

15. Refresher training

All the certified candidates should be authorized to get five days on-duty leave annually for attending seminars, workshops for enhancing and updating their skills in this field.

In addition, skill upgradation/refresher training will be conducted for two weeks after every two years (with an emphasis on skills practice). The state nodal officer in consultation with the training Medical College will coordinate this.

The state government needs to promote and facilitate organization of such workshops and meetings for continuous professional development.

Post training, practicing of skills and performance needs to be monitored and LSAS or CEmONC doctors showing good performance can be given travel and accommodation support for participating in seminars and workshops outside the state.

16. Undertaking by the state government

An undertaking by the state to strengthen and operationalize FRUs and public health facilities where LSAS or CEmONC doctors will be posted and to provide indemnity cover for LSAS or CEmONC trained doctors is a pre-requisite for the success of this initiative. A draft undertaking is placed at **Annexure 14**.

A conditionality under PIP will be included that the funds for the LSAS/ CEmONC training will be released to the states only if an undertaking (as in Annexure) for the LSAS/CEmONC training is signed by the Principal Secretary(Health) and/or MD- NHM of the concerned state.

17. Legal Framework for LSAS & CEmONC trained doctors

The legal framework governing the practice of MBBS doctors trained for LSAS and CEmONC is based on the principles of statutory law, common law and judgment of the Supreme Court and High Courts:

1. In the case of Urvashi Popli v. UOI &Ors., the validity of LSAS trained MBBS doctors handling CEMONC cases was challenged. The Delhi High Court held that LSAS is a training programme formulated in the national interest and limited to the requirement of tackling emergency obstetric situations at FRUs/CHCs only.

2. The Court also observed that the LSAS training does not constitute an additional medical qualification/specialization and nor does it entitle an MBBS doctor to practice anaesthesiology generally. In this judgment, the Court also referred to the CEmONC training.

3. For MBBS doctors to avoid liability for medical negligence (whether civil or criminal), the following must be ensured (Jacob Matthews v. State of Punjab &Anr.):

    - An MBBS doctor must possess 'requisite skill 'and should administer anaesthesia or conduct C-sections in 'emergency' obstetric situations only and not for non-emergency and/or elective surgical procedures, where there was time to refer the

patient to health centers with anaesthesiologists and obstetricians;

- An MBBS doctor must adhere to Standard Treatment Guidelines/ Standard Operating Procedures/ Protocols, to ensure that they exercise their skill with 'reasonable competence';
- An MBBS doctor must follow the legal requirements of taking informed consent, maintaining confidentiality and privacy, and not discriminating against patients (denial of service, inordinate delay or disrespectful service) on grounds of race, religion, caste, gender, HIV status, sexual orientation etc.
- There should be proper documentation (signed informed consent forms, comprehensive case/procedure notes, and treatment notes, discharge papers, blood transfusion records where applicable etc.) that will establish that good clinical practice and legal procedures were followed and the case was handled with reasonable competence. The discharge summary of the case should be given to the patient/family at the time of discharge. There should be no tampering of documents or case records under any circumstances.
- The health facility should ensure that all requirements related to essential infrastructure (such as a functional operation theatre, labour room, emergency services etc.), equipment, complementary and support staff, availability of blood, drugs, etc. are fulfilled.

18. Budget

A suggestive estimate of the budget has been prepared and while proposing in the PIP or through any other source of funding, this information can be utilized. A separate account for this needs to be opened under the joint signatory of the institutional head or as authorized.

A separate financial record and account shall be maintained for this in the office of HOD or as per institutional norms. Periodic reporting of the expenditure and audited account has to be kept and submitted to the state as and when required.

A brief summary of the budget is given below and details are given at **Annexure 17**.

CEmONC BUDGET		
S. No	**MEDICAL COLLEGE**	**Total cost (Rs.)**
1	**Budget for strengthening & up-gradation of Medical College Training Centre (Cost per Centre)**	12,00,000
	One time cost	12,00,000
2	**Cost of Training at each Medical College training centre**	13,77,200
	4 Trainees/batch for 126 days (16+2 weeks) 4 Trainers /day for 108 working days	
3	**Centre running cost of Medical College Training centre**	1,44,000
4	**Monitoring visit to DH(by Faculty MC)**	60,000
	1 Expert visits each training site for 2 days	
5	**Budget for conducting examination(4 examiners- 2 internal, 2 external)**	90,200
	Recurring cost for CEmONC training for each batch (4 participants/batch)at Medical College	**16,71,400**
	DISTRICT HOSPITAL	
6	**Budget for strengthening & up-gradation of District Hospital Training Centre (Cost for 4 DHs)**	10,00,000
	One Time cost	10,00,000
7	**Cost of Training at DH training centre**	**5,39,000**
	4 Trainees/ batch for 42 days and 1 trainer for 36 working days	
	Recurring cost for each batch (4 participants/batch)at District Hospital	5,39,000
	STATE	
8	**Budget for training of Medical College Master trainers(ToT)**	4,44,000
	20 Trainees/ batch for 2 days	
	4 Trainers each day for 2 days	
	One time cost for ToT at State level	**4,44,000**
9	**Mentoring/Post training Follow up visit(post course completion, 2 visits at 3 months & 1 year)**	40,000
	1 Expert visits each trainee at FRU for 1 day	
10	**Budget for CME, 1 time grant annually to state**	**2,00,000**

	Recurring cost for mentoring visit and CME at state level	**2,40,000**
	Total estimated budget	**50,94,400**
	One time cost	**26,44,000**
	Recurrent cost	**24,50,400**
LSAS BUDGET		
S. No.	**MEDICAL COLLEGE**	**Total cost (Rs.)**
1	**Budget for strengthening & up-gradation of Medical College Training Centre (Cost per centre)**	12,00,000
	One time cost	**12,00,000**
2	**Cost of Training at each Medical College training centre**	15,26,800
	4 Trainees/ batch for 140 days 4 Trainers / day for 120 working days	
3	**Centre running cost of Medical College Training centre**	1,50,000
4	**Monitoring visit to DH(by Faculty MC)**	60,000
	1 Expert visits each training site for 2 days	
5	**Budget for conducting examination(4 examiners- 2 internal, 2 external)**	90,200
	Recurring cost for each batch(4 participants/batch) at Medical College	**18,27,000**
	DISTRICT HOSPITAL	
6	**Budget for strengthening & up-gradation of District Hospital Training Centre (Cost for 4 DHs)**	10,00,000
	One time cost	**10,00,000**
7	**Cost of Training at DH training centre**	3,63,000
	4 Trainees/ batch for 28 days	
	Recurring cost for each batch(4 participants/batch) at District Hospital	**3,63,000**
	STATE	
8	**Budget for training of Medical College Master trainers(ToT)**	4,44,000
	20 Trainees/ batch for 2 days 4 Trainers each day for 2 days	
	One time cost	**4,44,000**
9	**Mentoring/Post training Follow up visit(post training completion, 2 visits at 3 months & 1 year)**	**40,000**

	1 Expert visits each trainee at FRU for 1 day,	
10	**Budget for CME, 1 time grant annually to state**	**2,00,000**
	Recurring cost for Mentoring visit and CME at state level	**2,40,000**
	Total estimated budget	**50,74,000**
	One time cost	**26,44,000**
	Recurrent cost	**24,30,000**

ANNEXURES

Annexure 1:

Criteria for selection of LSAS & CEmONC training sites

(Medical Colleges and District Hospitals)

A. Selection criteria for Medical Colleges

1. Willingness of the institute to collaborate with GoI and the State to strengthen the teaching/ training facility (if needed) and nominate it as a high quality training centre for LSAS or CEmONC.
2. A committed Department of Anaesthesia and Obstetrics/ Gynaecology.
3. The department is recognized by Medical Council of India (MCI) / Diplomate of National Boards (DNB) for PG training in Anaesthesia and OBG.
4. Faculty: A minimum of 4–6 Anaesthesiologists (for LSAS) and OBG specialists (for CEmONC) in the respective departments.
5. Delivery load: There should be at least 6000 deliveries annually at the training site.
6. OPD load for obstetrics: an average of 100 patients per working day
7. Number of beds in the entire hospital: at least 400 beds
8. Bed occupancy: more than 60%
9. Departments to be functional: Emergency Department, operation theatres, HDU / ICU (preferably for obstetrics), round the clock lab services (especially emergency lab services), functional blood bank (with blood component separation unit preferably)
10. Total surgical cases: minimum major surgeries should be at least 200-300 per month out of which LSCS should be at least 100

per month (some procedures and skills can be practised in the surgical OT too). However, for CEmONC training, only criteria of 100 LSCS per month may be considered.

11. Faculty of Medicine / Surgery / Paediatrics / OBGY / Anaesthesia /Microbiology should be available. Departments of Orthopaedics /Cardiology / Pulmonology / Nephrology are desirable for LSAS training. Maternal and Child institutions which are Centres of Excellence can also be chosen as training sites if they satisfy other eligibility criteria.

12. **Training facilities:** Training/seminar room; Library facilities with access to Anaesthesia and OBG books/journals; appropriate audio-visual aids for teaching; laptop/computer access; internet access; Mannequins for anaesthesia and OBG training, access to a skills lab for hands-on practice is desirable.

13. **Residential facilities:** Availability or linkages of accommodation for trainees as this is a residential training programme. In addition, there should be facilities for trainees to stay near the concerned department / OT complex for night duties.

14. **Practices and protocols:** Adherence to national guidelines for OTs -

    a. Adherence to IMEP, BMW, WASH :

    b. Zoning in OT

    c. Patients and HR flow

    d. Autoclaving

    e. Single surgical set for single patient

    f. CSSD / TSSU

15. Continuous piped central supply of oxygen should be available along with availability of vaccum, suction, medical air.

16. Maternity OT, LR should preferably be LaQshya certified

B. Selection criteria for District Hospitals

1. Willingness of the DH to collaborate as a site for hands-on practical training for the LSAS or CEmONC programme.
2. A full time Anaesthesiologist and Obstetrician (essential). It would be desirable to have two Anaesthesiologists and Obstetricians.
3. Delivery load: At least 1500 deliveries annually.
4. OT complex for conducting OBGY procedures, including Lower Section Caesarean Section. A minimum of two functional OTs is desirable.
5. Functional department of Anaesthesia/OBG/Surgery/Paediatrics/ Orthopaedics (for practicing spinal anaesthesia during LSAS training).
6. Facility for blood bank/storage.
7. Availability of functional Emergency
8. Availability of functional HDU/ ICU preferably Obstetric HDU/ ICU is desirable.

Annexure 2:

Checklist for Accreditation of Medical College

Name of Medical College		
Assessment Of Training site		
Willingness of the MC to collaborate as a site for hands-on practical training for the CEmONC/LSAS programme.		
MCI/DNB Recognition for PG training in Anaesthesia and OBG (Yes/ No)		
Number of beds in the entire hospital		
Bed occupancy		
Daily OPD load for obstetrics		
Total surgical cases(major surgeries) annually		
Delivery load annually.		
No. of OT complex for conducting OBGY procedures, including Lower Section Caesarean Section.		
Faculty of Surgery available (Yes / No);	If Yes, Number :	
Faculty of Paediatrics available (Yes / No);	If Yes, Number. :	
Faculty of OBGY available (Yes / No);	If Yes, Number. :	
Faculty of Anaesthesia available (Yes / No);	If Yes, Number. :	
Facility for blood storage (Yes / No)		
No. of trainers identified		
Whether all trainers are MD/ DNB Anaesthesia (for LSAS)or MD/ MS/ DNB OBG (for CEmONC) with experience of training		
Status of Maternity OT, LR under LaQshya certification		
FACILITIES		Yes/ No
Training facilities:		
Practices and protocols: Adherence to national guidelines for OTs -		
• **Adherence to IMEP, BMW, WASH : Yes/ Partial/ No**		
• **Zoning in OT: Yes/ Partial/ No**		
• **Patients and HR flow: Yes/ Partial/ No**		
• **Autoclaving: Yes/ Partial/ No**		
• **Single surgical set for single patient: Yes/ Partial/ No**		
• **CSSD / TSSU: Yes/ Partial/ No**		
Teaching and other supportive material: Mandatory:		
• **Computer (Desktop / Laptop preferable) with DVD :1**		
Residential facilities:		
Availability of accommodation for trainees (Yes / No). In House/Hired		
Facility for trainees to stay near the concerned department / OT complex for night duties (Yes / No).		
Other remarks		

Annexure 3:

Checklist for Accreditation of District Hospital

Name of District Hospital		
Assessment Of Training site		
Willingness of the DH to collaborate as a site for hands-on prac-tical training for the CEmONC/LSAS programme.		
A full time Anaesthesiologist		
A full time Obstetrician		
Delivery load annually.		
No. of OT complex for conducting OBGY procedures, including Lower Section Caesarean Section.		
Faculty of Surgery available (Yes / No);	If Yes, Number :	
Faculty of Paediatrics available (Yes / No);	If Yes, Number. :	
Faculty of OBGY available (Yes / No);	If Yes, Number. :	
Faculty of Anaesthesia available (Yes / No);	If Yes, Number. :	
Facility for blood storage (Yes / No)		
No. of trainers identified		
Whether all trainers are MD/ DNB Anaesthesia (for LSAS)or MD/ MS/ DNB OBG (for CEmONC) with experience of training		
FACILITIES		**Yes/No**
Training facilities:		
Practices and protocols: Adherence to national guidelines for OTs -		
• **Adherence to IMEP, BMW, WASH : Yes/ Partial/ No**		
• **Zoning in OT: Yes/ Partial/ No**		
• **Patients and HR flow: Yes/ Partial/ No**		
• **Autoclaving: Yes/ Partial/ No**		
• **Single surgical set for single patient: Yes/ Partial/ No**		
• **CSSD / TSSU: Yes/ Partial/ No**		
Teaching and other supportive material: Mandatory:		
• **Computer (Desktop / Laptop preferable) with DVD :1**		
Residential facilities:		
Availability of accommodation for trainees (Yes / No). In House/Hired		
Facility for trainees to stay near the concerned department / OT complex for night duties (Yes / No).		
Other remarks		

Annexure 4:

Agenda for LSAS/ CEmONC TOT Programme

Day 1: Implementation strategy:

Time	Topic	Speaker
11-00 to 11-30	Introduction to CEmONC/ LSAS training programme– Context setting	
11-30 to 12-00	Overview of the Operational Guidelines for CEmONC/ LSAS training	
12-00 to 12-30	Certification process, supportive supervision/mentoring, monitoring and follow up of CEmONC/LSAS Training program	
12-30 to 13-00	Completion of trainee work book	
13-00 to 14-00	Lunch break	
14-00 to 14-30	Approach to Teaching Methodologies (Theory & Practical, including use of mannequins)	
14-30 to 15-30	Group work on teaching methods (Role play (e.g. for Rapid Initial As-sessment), clinical simulations, case studies and OSCE)	
15-30 to 15-45	Tea break	
15-45 to 16-30	Overview of week wise curriculum	
16-30 to 16-45	Concluding remarks for the day	

Day 2: Operationalizing CEmONC/ LSAS training

Time	Topic	Speaker
10-00 to 10-30	Mechanism of Evaluation of candidates, examination system and certifi-cation	
10-30 to 11-15	Group work: Drafting Questions for CEmONC/ LSAS (prepare sample MCQs, short notes, long questions, OSCE)	
11-15 to 11-30	Tea break	
11-30 to 12-30	Presentation of group work	
12-30 to 13-00	Details of Funding and remuneration	
13-00 to 14-00	Lunch	
14-00 to 15-00	Visit to labour room	
15-00 to 16-00	Visit to OT(to observe adherence to protocols)	
16-00 to 16-15	Tea Break	
16-15 to 17-00	Discussion on organizing OT and LR at FRUs	
17-15 to 17-30	Concluding remarks for the day	

Day 3: Technical sessions for LSAS/CEmONC training

Time	Topic		Speaker
10-00 to 11-00	CME on Recent advances (relevant to LSAS/ CEmONC training)		
10-00 to 10-30	**LSAS**	**CEmONC**	
	Limitations and pit falls of Spinal An-aesthesia	Limitations and pit falls of C- section	
	Limitations and pit falls of General An-aesthesia	Approach to training on Adult and Neonatal resus-citation	
	Approach to training on Adult and Neo-natal resuscitation	Approach to training on management of PPH/ shock	
	Approach to training on Organizing OT/ using Anaesthesia machine	Approach to training on management of Eclampsia	
		Approach to training on management of Obstruct-ed cas	
13-00 to 14-00	Lunch		
14-00 to 15-00	Visit to skill lab		
15-00 to 15-30	Discussion on Challenges faced in previous LSAS/ CEmONC training program		
15-30 to 16-00	Way forward for program (Group work & presentation by partici-pants)		
16-00 to 16-15	Distribution of certificates & Concluding remarks		

Annexure 5:

Teaching Modalities for various topics

S. No.	Topic	Group Work	PPT	Skill/ Checklist	Case study	Clinical simulation	Role play/ drill	Video
1	Maternal mortality- overview		1.1 Maternal Mortality: An Overview					
2	Infection prevention 2.1 Universal precautions for Infection prevention 2.2 instrument processing & sterilization 2.3 Housekeeping & waste disposal	V	2.1 Infection Prevention Practices					2.2 Infection prevention- Processing of equipment & instruments for decontamination & sterilization
3	Infection prevention 2.1 Universal precautions for Infection prevention 2.2 instrument processing & sterilization 2.3 Housekeeping & waste disposal	II	3.1 RIA & Triage 3.2 Maternal Collapse 3.3 Basic Cardiac Life support (BCLS)	3.4 Adult Resuscitation	3.1 Obstetric collapse	3.1 Septic or Hypovolemic Shock	3.1 Interpersonal Communication During CEmONC 3.2 RIA	3.1 Basic Cardiac Life Support (BCLS)
4	Antenatal care- 4.1 Routine antenatal care 4.2 Pre-conception care 4.3 RMC	IV	4.1 Routine antenatal Care 4.2 Pre conceptional Care 4.3 RMC	4.4 Antepartum assessment 4.5 Pelvic assessment 4.6 Counseling for Nutrition in Pregnancy 4.7 Counseling for oral iron/ calcium in pregnancy	4.1 Acute abdomen in early pregnancy 4.2 Antenatal Care	4.3 Anemia in pregnancy	4.1 Counseling for oral Iron/ calcium 4.2 Counseling for birth preparedness &complication readiness 4.3 Counseling for breast feeding in antenatal period 4.4 Counseling for breast feeding in antenatal period in Retro Positive women 4.5 RMC of women in labour	4.1 Calcium Supplementation 4.2 BP measurement 4.3 RMC

5.1	5.1.1 Special Needs in Pregnancy 5.1.2 Hyperemesis Gravidarum 5.1.3 Anaemia During Pregnancy & in the Postpartum Period 5.1.4 Urinary Tract Infection & Retention of urine 5.1.5 Malaria Prophylaxis & treatment in Pregnancy 5.1.6 HIV infection in pregnancy &PPTCT 5.1.7 Fever in pregnancy	IV	5.1.1 Special Needs 5.1.2 Hyperemesis, Fever & UTI 5.1.3 Anemia in Pregnancy 5.1.4 Malaria in Pregnancy 5.1.5 PPTCT & HIV		5.1 Fever in pregnancy 5.1 Anaemia during pregnancy and in the postpartum period 5.2 Hyperemesis Gravidarum 5.3 Retention of Urine			5.1 IV Antibiotics during pregnancy
5.2	Misc.: 5.2.1 GDM guidelines 5.2.2 Calcium supplementation in pregnancy 5.2.3 Hypothyroidism in pregnancy 5.2.4 Deworming in pregnancy 5.2.5 Vaccination in pregnancy	IV	5.2.1 GDM Guidelines 5.2.2 Calcium Supplementation in Pregnancy 5.2.3 Hypothyroidism in Pregnancy 5.2.4 Deworming in Pregnancy 5.2.5 Vaccination in pregnancy				5.2.1 Counselling in GDM	5.2.1 Deworming in Pregnancy
6	Vaginal Bleeding in early pregnancy 6.1 Abortion 6.2 Ectopic Pregnancy 6.3 Molar Pregnanc	IV	6.1 Vaginal Bleeding in early Pregnancy 6.2 MVA 6.3 Post abortion Care	6.1 Manual Vacuum Aspiration [MVA] &Post abortion Care 6.2 Post abortion Family Planning Counselling 6.3 Post Abortion IUCD insertion	6.1 Incomplete abortion 6.2 Incomplete abortion with sepsis 6.3 Ruptured ectopic pregnancy	6.4 Vaginal Bleeding in early Pregnancy	6.1 Vaginal Bleeding in early pregnancy	6.1 MVA
7	Vaginal Bleeding in late pregnancy & Labour 7.1 Placenta Previa 7.2 Abruption placenta 7.3 Coagulopathy 7.4 Rupture uterus	IV	7.1 Vaginal Bleeding in late pregnancy		7.1 Vaginal bleeding in late pregnancy –placenta Previa 7.2 Vaginal bleeding in late pregnancy-abruption placentae		7.1 Vaginal Bleeding in late pregnancy	

8	Hypertensive Disorders in Pregnancy	II	8.1 Hypertension in Pregnancy	8.2 Preparation & administration of MgSO4	8.1 Non severe PE 8.2 Severe PE 8.3 Chronic hypertension	8.1 Headaches, Blurred vision, Convulsions, loss of the Consciousness for elevated Blood Pressure	8.1 Role Play Eclampsia	8.1 Introduction to Eclampsia 8.2 Management of a patient with Eclampsia
9	Normal labour & delivery 9.1 Assessment & Diagnosis of labour 9.2 Supportive care of woman during labour 9.3 Birth companion 9.4 Monitoring of Labour & Management of Normal Delivery	I	9.1 Normal Labour 9.2 Labour Position 9.3 Birth Companion 9.4 AMTSL	9.5 Conducting a Childbirth 9.6 Episiotomy and Repair	9.1 Exercises using Partograph 9.2 Exercises using Partograph case 2 9.3 Exercises using Partograph case 3	9.1 Exercises using Partograph 9.2 Exercises using Partograph case 2 9.3 Exercises using Partograph case 3	9.1 AMTSL	9.1 AMTSL video 9.2 Episiotomy repair 9.3 Partograph 9.4 Normal Delivery 9.5 Birth Companion
10	Special Situations in Labour & Delivery 10.1 Induction & Augmentation of labour 10.2 Instrumental Delivery 10.3 Prolonged & Obstructed Labour 10.4 Breech Delivery 10.5 Twin 10.6 Preterm Labour 10.7 PROM 10.8 Fetal Distress 10.9 Prolapsed Cord 10.10 Shoulder dystocia	I	10.1 Induction & Augmentation of Labour 10.2.1 Obstetric Outlet Forcep Delivery 10.2.2 Vaccum Extraction 10.3 Prolonged & Obstructed labour 10.4 Breech Presentation Diagnosis & Management 10.5 Twins 10.6 Preterm Labour 10.7 PROM 10.8 Fetal Distress 10.9 Prolapsed Cord 10.10 Shoulder Dystocia	10.1 Vacuum Extraction 10.2 Breech Delivery 10.3 Internal podalic version for 2nd twin 10.4 Outlet Forceps delivery 10.5 Intracervical Foley insertion 10.6 PGE2 Gel insertion 10.7 Striping of membranes	10.1 Unsatisfactory Progress in Labour (CPD) 10.2 Acute abdomen in late pregnancy (rupture uterus) 10.3 PROM 10.4 Twins 10.5 Prolonged/ Obstructed Labour 10.6 Preterm Labour	10.1 Prolonged/ obstructed labour	10.1 Role play cord prolapse	10.1 Breech delivery 10.2 Forceps delivery 10.3 Ventouse delivery 10.4 Shoulder dystocia

11	Obstetric surgery Operative Care Principle 11.1 Caesarean Section 11.2 Laparotomy for ruptured uterus 11.3 Laparotomy for ruptured ectopic pregnancy 11.4 Laparotomy for ruptured ectopic pregnancy	I	11.1 Operative Care principles 11.2 Obstetric Surgery	11.3 Cesarean Section 11.4 Rupture Uterus – subtotal hysterectomy/ repair and salpingectomy for ectopic pregnancy				11.1 Caesarean delivery 11.2 Patwardhan technique for delivery of deeply impacted head
12	Postpartum Haemorrhage 12.1 Atonic PPH 12.2 Traumatic PPH 12.3 Rupture of Uterus 12.4 Uterine Inversion	III	12.1 Vaginal Bleeding after Child Birth 12.2 Perineal Tears 12.3 Uterine Inversion	12.4 Bimanual Compression of Uterus 12.5 Compression of Abdominal Aorta 12.6 Manual Removal of Placenta 12.7 Repair of Cervical Tears 12.8 Uterine compression suturing 12.9 Uterine balloon tamponade	12.1 Atonic uterus 12.2 Secondary PPH 12.3 Traumatic PPH	12.1 Vaginal Bleeding after Childbirth	12.1 Role play PPH 12.2 Role play Rupture Uterus	12.1 PPH drill video 12.2 Primary PPH video 12.3 UBT for PPH 12.4 How to perform manual removal of the placenta 12.5 Aorta Compression 12.6 Medical Management of PPH 12.7 Surgical Management of PPH 12.8 Genital exploration
13	Postpartum Care 13.1 post-natal care of the Newborn 13.2 Post-partum care of mother	III	13.1 Postnatal Assessment &Counseling 13.2 Puerperal Pyrexia	13.3 Basic Postpartum Care 13.4 Postpartum Assessment 13.5 Postpartum Family planning 13.6 Counselling for Breast feeding & technique	13.1 Metritis 13.2 Wound abscess 13.3 Metritis 13.4 Postpartum psychosis		13.1 Counselling for breast feeding in postnatal women 13.2 Counselling for Inability to feed the baby (No lactation)	13.1 Breastfeeding

14	Essential Newborn Care & Basic Newborn Resuscitation 14.1 Immediate Newborn Care 14.2 Neonatal Resuscitation	III	14.1 Immediate Newborn care & Resuscitation	14.1 Newborn Examination 14.2 Newborn Resuscitation 14.3 Kangaroo Mother care	14.1 Essential Newborn care	14.1 Neonatal Resuscitation	14.1 Role play -Newborn resuscitation 14.2 Counselling for breastfeeding and routine immunization of baby	14.1 Essential new born care 14.2 Neonatal resuscitation 14.3 Kangaroo mother care 14.4 Newborncare series
15	Contraception	I	15.1 Contraception	115.1 Checklist for Postpartum insertion of IUCD 15.2 Checklist for intra-caesarean insertion of IUCD 15.3 Checklist for Post placental insertion of IUCD			15.1 Postpartum family planning counseling	15.1 PPIUCD insertion
16	16.1 MDSR 16.2 MNM	II	16.1.1 Introduction MDSR 16.1.2 FBMDSR 16.1.3 CBMDSR 16.1.4 Confidential review 16.2 MNM				16.1 Filling up MDSR form 16.2 Filling up MNM form	
17	17.1 Organization of OT/ LR 17.2 MCTS Card 17.3 RCH Portal	V	17.1 Organizing Labour room & OT 17.2 RCH Portal					17.1 Organizing labour room 17.2 Setting up & sterilization of OT 17.3 Blood body fluid- large spill management

Annexure 6:

Equipment required for LSAS training

Academic material (Simulation mannequins and instruments)

	Mandatory	Desirable
Equipment	AMBU bag (Adult & Neonatal): 1 each	ECG rhythm generator: 1
	LMA / i-gel size 3: 2	Airway larynx and tracheal model: 1
	Laryngoscope: 1 adult set	AED simulator: 1
Mannequins	BCLShalf CPR torso with CPR feedback (Depth and Rate): 1	
	Airway management trainer: 1	
	Infant CPR torso for Basic Cardiac Life support with CPR feedback (Depth and Rate): 1 (For Neonatal Resuscitation)	

Teaching and other supportive material: (can be preferably procured from the Institute / expected to have in Institute)

Mandatory:

1. Computer (Desktop / Laptop preferable) with DVD:1
2. Black and white printer: 1
3. LCD projector with screen: 1
4. Manual defibrillator : 1

Annexure 7:

Equipment required for CEmONC training

Academic material (Simulation mannequins and instruments)

	Mandatory	Desirable
Equipment	Digital Thermometer (Measurement Of Body Temperature)	
	Electrical Suction Machine	
	Foot-Operated Suction Machine	
	Glucometer	
	Ventouse cups & suction machine	
	BP instruments, Stethoscope, Weighing machine (adult & infant both), scissors, blade	
	Pelvis + Dummy	
	MVA Syringe +Karmann Cannulae set	
	Sponges for episiotomy skill practice	
	Outlet forceps	
	Foley's catheter	
	Self-inflating Bag -250/500ml	
	Masks Size 0 & 1	
	Wall clock with seconds hand	Optional
	Baby tray (Contents of each baby tray: Baby tray (Contents of each baby tray: Gloves 1 pair Sheets/towels-2 Cord tie/Clamp 1 Inj. Vitamin K ampoule, 1ml syringe Disposable needle 26 gauze Shoulder roll Dee Lee's / Mucus Extractor bowls containing cotton swabs	
	Cloth for wrapping the mannequin /Doll	Desirable
Mannequins	Abdominal Palpation Mannequin For Leopold Maneuvers During Pregnancy	
	Hand Held Uterus Mannequin for IUCD insertion	

	Female Lower Torso Mannequin With Normal And Postpartum Uterus And Accessories	
	Child Birth Simulator Along With Attachment For Cervical Dilatation (Closed Os,4 Cm, 6cm, 8cm, Fully Dilated Cervix)	
	Postpartum Suturing Trainer	
	Mannequin For Simulation And Management of PPH	
	Intramuscular Injection Training Mannequin	
	Adult CPR Mannequin	
	Adult IV Training Arm Kit	
	Female Catheterization Mannequin	
	Essential New Born Care & Resuscitation Mannequin	
	Normal New Born Baby Mannequin(KMC)	
	BCLS Mannequin	
	OG Tube Insertion Mannequin	
	Mannequin (Neonatal, Ready to use)	

Teaching and other supportive material: (can be preferably procured from the Institute / expected to have in Institute)

Mandatory:

1. Computer (Desktop / Laptop preferable) with DVD : 1
2. Black and white printer: 1
3. LCD projector with screen: 1

Annexure 8:

Schedule for LSAS training-24 weeks

Week-1 • Introduction to course • Introduction to Anaesthesia • Medico legal aspects of the course • Operation room management	**Week-2** • Overview of peri operative care • Anatomy related to Anaesthesia including airway anatomy • Physiologic changes during pregnancy • Pre- Anaesthesia check up	**Week-3** • Airway gadgets – I • Airway gadgets – II • Airway Gadgets – III • Airway gadgets – IV • Airway assessment	**Week-4** • Management of Airway • Management of difficult airway • Physiology of spinal anaesthesia • Spinal anaesthesia • General Anaesthesia
Week-5 • Anaesthesia Machine: I • Anaesthesia Machine : II • Readiness and checklist of machine • Anaesthesia monitoring system • Premedication	**Week-6** • Cardio Pulmonary resuscitation • Obstetric CPR and revision of adult CPR skills • Neonatal CPR • Fluid therapy & electrolytes • Blood transfusion, Acid base balance	**Week-7** • Pain relief • Anaesthesia records keeping • Recovery room (Post Anaesthesia care unit) • Complications in perioperative setup : I • Complications in perioperative setup : II	**Week-8** • Hypertensive disorder of pregnancy • COPD and pregnancy • Diabetes mellitus & Pregnancy • Anaemia & Pregnancy • Kidney injury and pregnancy
Week-9 • Haemorrhagic disorders and pregnancy • Cardiac diseases and pregnancy • Liver diseases and pregnancy • Trauma & Pregnancy	**Week-10** • Premedication drugs • Opioid and non-opioid analgesics • IV Anaesthesia induction agents • Inhalational anaesthesia agents • Neuro muscular blocking agent	**Week-11** • Local anaesthesia drugs • Cardiac drugs: I • Cardiac Drugs: II • Respiratory drugs • Miscellaneous agents	**Week-12** • Communication skills • Referral guidelines • Transport of critically ill patients • Foetal distress: anaesthesiologist role • Infection control practices in operation theatre

Week-13 & 14	Week-15 & 16	Week-17, 18, 19 & 20	Week-21 to 24
• Revision of any chapters as desired by students and as deemed essential by trainers.	• Revision of practical skills as desired by students and as deemed essential by trainees on mannequins.	DH posting (4 weeks) • All Skills Assist / Perform Day and Night posting by Rotation.	• Revision of any chapters & practical skills as desired by students and as deemed essential by trainees at MC • Certificate distribution and completion of essential formalities.

Note- Day wise schedule is in the workbook

Various resource materials for teaching and learning include:-

- Presentation (For all above topics)
- Case Study
- Role Play
- Video
- Mannequins

All theory classes will be followed by practice session on mannequins, through case study, role plays, videos etc. before the trainees are posted to various clinical sites.

Annexure 9:

Schedule for CEmONC Training-24 weeks

Week-1 • MMR overview • RIA, Triage & BCLS • IP	**Week-2** • ANC • Special needs • Guidelines • Vaginal bleeding early pregnancy	**Week-3** • Vaginal bleeding late pregnancy • Hypertension in pregnancy	**Week-4** • Normal labour & delivery • Special situation in labour & delivery • Obstetric surgery
Week-5 • PPH • Postpartum care • Contraception	**Week-6** • 2.5 Days- Essential newborn care & Newborn resuscitation • 2.5 Days- Tier I exam:-MCQ &Skill assessment • 2 Days-Long weekend		**Week-7** • RIA, Triage & BCLS
Week-8 • IP	**Week-9** • ANC • Special needs • Guidelines	**Week-10** • Vaginal bleeding early pregnancy	**Week-11** • Vaginal bleeding late pregnancy
Week-12 • Hypertension in pregnancy	**Week-13** • Normal labour & delivery • Special situation in labour & delivery	**Week-14** • Obstetric surgery • Contraception	**Week-15** • PPH • Postpartum care
Week-16 • Essential newborn care • Newborn resuscitation Tier II exam- • Skill assessment	**Week-17, 18, 19, 20, 21** DH posting (6 weeks) • All Skills Assist / Perform • Day and Night posting by Rotation	**Week-23** • MC-Revision	**Week-24** • 2 Days- MC Revision • 3 Days- MCQ, Skill Assessment & OSCE • 1 Day- Certificate distribution and completion of essential formalities.

- All teams to stay in hospital from 9 am to 5 pm
- Night duty team (A) to return at 10 pm & stay in hospital till 6 am
- All teams to return at 9 am
- Previous day night duty team (A) to be relieved after 1 pm
- Team B to stay in hospital from 2 – 5 pm & then return at 10 pm for night duty till 6 am
- All teams to return at 9 am
- Team B to be relieved after 1 pm
- Night rotation days to be changed
- Sunday off to both teams

Annexure 10:

LSAS certificate

Trainees successfully completing the LSAS programme should be provided a certificate outlining their scope of practice (related to this training). A draft of the certificate is presented below.

LSAS Completion Certificate

Place: ……..

Date:……..….

This is to certify that Dr. ……. (Name) …….. (Designation) working under the health services for the state of ……has successfully completed the 24 week LSAS training from _____ to _____. This is an in-service training programme for capacity building of MBBS doctors to undertake life saving anesthetic skills for Emergency Obstetric Care (CEmONC) in public health care facilities.

Signed by

Director, SIHFW/CTI	HOD Anaesthesia/Principal Medical College	MD NHM/DHS

Annexure 11:

CEmONC certificate

Trainees successfully completing the CEmONC programme should be provided a certificate outlining their scope of practice (related to this training). A draft of the certificate is presented below.

CEmONC Completion Certificate

Place: ……..

Date:……..……

This is to certify that Dr. ……. (Name) …….. (Designation) working under the health services for the state of …… has successfully completed the 24 week CEmONC training from _____ to _____. This is an in-service training programme for capacity building of MBBS doctors to undertake Emergency Obstetric Care (CEmONC) in public health care facilities.

Signed by

Director, SIHFW/CTI	HOD OBG/Principal Medical College	MD NHM/DHS

Annexure 12:

Indemnity Cover for MBBS doctors trained for LSAS and CEmONC

Scope/Eligibility

The cover of indemnity is limited to MBBS doctors that have undergone LSAS and CEmONC training and are providing Emergency Obstetric services at government facilities/FRUs.

Extent of coverage

All LSAS/CEmONC trained doctors handling emergency obstetric cases shall be provided indemnity support by the state against the claims of medical complication/death arising from emergency cases handled by them while providing these services at government facilities. The costs of litigation in such cases shall be borne by the state. This will include costs for the actual modality of defending the prosecuted doctor and/or health facility in court. The state can decide the mechanism under which this indemnity will be provided (for example, under the Family Planning Indemnity Scheme, the state/government has entered into an insurance scheme with a private Insurance Company).

Annexure 13:

Quality and Monitoring check-lists

Monitoring checklist for CEmONC/ LSAS training at Medical College:

A. MEDICAL COLLEGE

Name of state:	Name of district:	Name of Medical College:
Name of person visiting :	Designation & Contact details:	Date of visit:

S. No.	Questions	Response/ Remarks
	General information	
1.	MC accredited for CEmONC/ LSAS training, (Yes / No)	
2.	If MC is already accredited, mention year of accreditation	
3.	ToT for faculty conducted or not (Yes / No)	
4.	If yes, when was the ToT conducted	
5.	No. of MOs trained till date	
6.	No. of MOs being trained, if any batch is ongoing	
	Training schedule	
7.	No. of trainees to be trained	
8.	No. of identified trainers	
9.	Whether all trainers are MD/ DNB Anaesthesia(for LSAS)or MS/MD/ DNB OBG(for CEmONC)with experience of training (Yes / No)	
10.	Date of commencement of current ongoing training	
11.	Availability of training plan, with details of examination plan	
12.	Identified District Hospitals for training	
13.	Plan for monitoring visit (Yes / No);	
	Teaching & Training facility	
14.	No. of Faculty in Dept. of Anaesthesia	
15.	No. of Faculty in Dept. of Medicine	
16.	No. of Faculty in Dept. of Surgery	
17.	No. of Faculty in Dept. of Paediatrics	
18.	No. of Faculty in Dept. of OBGY	
19.	No. of Faculty in Dept. of Orthopaedics	

20.	No. of Faculty in Dept. of Emergency Medicine (if any)			
	Infrastructure			
21.	Number of beds in the entire hospital			
22.	No. of functional operation theatres (OTs)			
23.	No. of Emergency OTs			
24.	No. of Labour tables/ LDR			
25.	No. of beds in OBG HDU/ ICU			
26.	Functional- Emergency Department, (Yes / No);			
27.	No. of beds in Emergency Department			
28.	Functional blood bank (Yes / No);			
29.	Functional round the clock lab services (especially emergency lab services) (Yes / No);			
		Dept. of Medicine	**Dept. of Surgery / Orthopaedics**	**Dept. of OBG**
30.	No. of functional beds			
31.	Bed occupancy (%)			
32.	Average daily OPD/ OPD last month			
33.	Delivery load- annually at the MC			
34.	Total major surgeries done last month			
35.	Total LSCS done last month			
	FACILITIES(If currently no batch, please see past records)			**Yes/ No**
	Training facilities:			
36.	Training/seminar room;			
37.	Availability of training curriculum			
38.	Availability of Presentation and videos			
39.	Pen drive/ soft copy made available			
40.	Availability of schedule of classes with mentioned trainers			
41.	Availability of duty roaster			
42.	Availability of log book			
43.	Availability of skill check list			
44.	Match the progress of ongoing training curriculum with Training schedule			
45.	Availability of Library facilities with access to Anesthesia books/ journals;			
46.	Appropriate audio-visual aids for teaching (LCD projector with screen:1);			

47.	Laptop/computer access;	
48.	Internet access;	
49.	Access to a skills lab for hands-on practice (desirable)	
Other facilities		
	Practices and protocols: Adherence to national guidelines for OTs-	
50	• Adherence to IMEP, BMW, WASH :	
51	• Zoning in OT	
52.	• Patients and HR flow	
53.	• Autoclaving	
54.	• Single surgical set for single patient	
55.	• CSSD / TSSU or linkages with CSSD/ TSSU	
56.	Continuous piped central supply of oxygen should be available along with availability of Vaccum, suction, medical air	
Observation: Take a round of OT, LR, HDU/ ICU & ED		
57.	ED: Triaging (Red/ Yellow/ Green)	
58.	LR: • Practicing Respectful maternity care • Adequate privacy • Process for management of high risk pregnancies	
Equipment for LSAS		
	Mandatory:-	
59.	• BCLS Half CPR torsowith CPR feedback for rate and Depth : 1	
60.	• AMBU bag (Adult & Neonatal):1 each	
61.	• LMA / i-gel size 3: 2	
62.	• Laryngoscope: 1 adult set	
63.	• Infant CPR torso for Basic Cardiac life support skills with CPR feedback for rate and Depth:1	
	Desirable:-	
64.	• Airway management trainer :1	
65.	• Airway larynx and tracheal model:1	
66.	• AED simulator: 1	
67.	• ECG rhythm generator: 1	
Equipment List for CEmONC		
	Mandatory:-	
68.	Ventouse Cups & Suction Machine	

69.	Pelvis + Dummy	
70.	MVA Syringe + Karmann Cannulae Set	
71.	Sponges For Episiotomy Skill Practices	
72.	Outlet Forcepss	
73.	UBT/Foley's Catheter	
74.	Self-Inflating Bag 250/500 Ml	
75.	Dee Lee's/Mucus Extractor Bowls Containing Cotton Swabs	
76.	Abdominal Palpation Mannequin For Leopold Manoeuvres During Pregnancy	
77.	Hand Held Uterus Mannequin And IUCD Insertion	
78.	Female Lower Torso Mannequin With Normal And Postpartum Uterus And Accessories	
79.	Child Birth Simulator Along With Attachment For Cervical Dilatation (Closed Os, 4cm, 6cm, 8cm, Fully Dilated Cervix)	
80.	Postpartum Suturing Trainer	
81.	Mannequin For Simulation And Management Of PPH	
82.	Intramuscular Injection Training Mannequin	
83.	Adult CPR Mannequin	
84.	Adult IV Training Arm Kit	
85.	Female Catheterization Mannequin	
86.	Essential New Born Care & Resuscitation Mannequin	
87.	Normal New Born Baby Mannequin (KMC)	
88.	BCLS Mannequin	
89.	OG Tube Insertion Mannequin	
90.	Mannequin (Neonatal, Ready to use)	
Residential Facilities:92.		
91.	Availability of accommodation for trainees (In house/outside).	
92.	Facility for trainees to stay near the Anaesthesiology department / OT complex for night duties (Yes / No)	
Feedback from Nodal for LSAS/ CEMONC at MC (Interaction about following)		
93.	Selection process of the student	
94.	Availability of teaching Schedule	
95.	Availability of Resource Material	
96.	Timely Receipt of funds	

Feedback from trainees (Interaction about following)		
97.	Are they satisfied with the quality of training	
98.	Are they getting sufficient skill practice opportunities	
99.	Are they confident of the skills practiced	
	If required may ask to demonstrate the skill on Mannequin	
100.	Check the log book	
101.	Maintenance of work book-observe	
102.	Exam on schedule	
103.	Result of past exams/ Tier1 & 2	
104.	Post training deployment plan	
105.	Feedback on Accommodation	
106.	Feedback on Mess Food	
107.	Any other issues	

B. DISTRICT HOSPITAL

Name of state:	Name of district:	Name of DH:
Name of person visiting :	Designation & Contact details:	Date of visit:

S. No.	Questions	Response/ Remarks
General information		
1.	DH certified for CEmONC/LSAS training, (Yes / No)	
2.	If DH is certified mention year of certification	
3.	ToT for faculty conducted or not (Yes / No)	
4.	If yes, when was the ToT conducted	
5.	No. of MOs trained till date	
6.	No. of MOs being trained, if any batch is ongoing	
	Training schedule	
7.	No. of trainees	
8.	No. of trainers identified	
9.	Whether all trainers are MD/ DNB Anaesthesia (For LSAS) or MS/MD/ DNB OBG (for CEmONC) with experience of training(Yes / No)	
10.	Date of commencement of current ongoing training	
11.	Availability of training plan, with details of examination plan	
12.	Plan for monitoring visit (Yes / No);	
Teaching & Training facility		
13.	No. of Doctors in Dept. of Anaesthesia	
14.	No. of Doctors in Dept. of Medicine	
15.	No. of Doctors in Dept. of Surgery	
16.	No. of Doctors in Dept. of Paediatrics	
17.	No. of Doctors in Dept. of OBGY	
18.	No. of Doctors in Dept. of Orthopaedics	
19.	No. of Doctors in Dept. of Emergency Medicine (if any)	
Infrastructure		
20.	Number of beds in the entire hospital	
21.	No. of functional operation theatres (OTs)	
22.	No. of Emergency OTs	
23.	No. of Labour tables/ LDR	
24.	No. of beds in OBG HDU/ ICU	

25.	Functional- Emergency Department, (Yes / No);			
26.	No. of beds in Emergency Department			
27.	Functional blood bank/ blood storage (Yes / No);			
28.	Functional round the clock lab services (especially emergency lab services) (Yes / No);			
		Medicine	**Surgery**	**OBG**
29.	No. of functional beds			
30.	Bed occupancy (%)			
31.	Average daily OPD/ OPD last month			
32.	Delivery load- annually at the DH			
33.	Total surgeries done last month			
	FACILITIES(If currently no batch, please see past records)			**Yes/ No**
Training facilities:				
34.	Availability of duty roaster			
35.	Availability of log book			
36.	Availability of skill check list			
37.	Access to a skills lab for hands-on practice (desirable) .			
	Other facilities			
Practices and protocols: Adherence to national guidelines for OTs				
38.	• Adherence to IMEP, BMW, WASH :			
39.	• Zoning in OT			
40.	• Patients and HR flow			
41.	• Autoclaving			
42.	• Single surgical set for single patient			
43.	• CSSD / TSSU or linkages with CSSD/ TSSU			
44.	Continuous piped central supply of oxygen should be available along with availability of Vaccum, suction, medical air			
Observation: Take a round of OT, LR, HDU/ ICU & ED				
45.	ED: Triaging (Red/ Yellow/ Green)			
46.	LR: • Practicing Respectful maternity care • Adequate privacy • Process for management of high risk pregnancies			
47.	**Teaching and other supportive material: Mandatory:**			
	Computer (Desktop / Laptop preferable) with DVD :1			
	Residential facilities:			
48.	Facility for trainees to stay near the Anesthesiology department / OT complex for night duties (Yes / No).			
	Feedback from Nodal at DH (Interaction about following)			

49.	Availability of Resource Material	
50.	Timely Receipt of funds	
	Feedback from Students (Interaction about following)	
51.	Are they satisfied with the quality of training	
52.	Are they getting sufficient skill practice opportunities	
53.	Are they confident of the skills practiced	
	If required may ask to demonstrate the skill on Mannequin	
54.	Check the log book	
55.	Maintenance of work book-observe	
56.	Exam on schedule	
57.	Result of past exams/ Tier1 & 2	
58.	Post training deployment plan	
59.	Facility for trainees to stay near the Anesthesiology department / OT complex for night duties (Yes / No).	
60.	Feed back on Mess Food	
61.	Any other issues	

Annexure 14:

Undertaking by the State Government

In-service MBBS doctors will be nominated for the LSAS training programme by the state. The state should provide an undertaking for their post-training deployment at strengthened FRUs after proper counseling of interested candidates. A draft undertaking to be furnished by the state is provided below; states can adapt these to suit their specific purpose.

UNDERTAKING

The Government of ……nominates……(List of MBBS Medical Officers enclosed), working with the State Health Services and/or the State NHM to undergo the 24 week Training Programme on Life Saving Anesthetic Skills (LSAS) for Emergency Obstetric Care being organized by the state of …… at …… (name of training site/Medical College). It is confirmed that:

i. The First Referral Units (FRUs) / Community Health Centres (CHCs) where the participants will be posted after completion of the above mentioned training have been identified keeping in view the fact that these are either operational or will become fully operational for providing emergency obstetric care with the posting of the nominated officer after their return from training. A list of such FRUs/CHCs is enclosed.

ii. Trainees have been selected as per the criteria laid down for the Training Programme.

iii. The willingness of the nominated officers has been taken for undergoing the Training Programme along with an undertaking that they are willing to serve in the identified FRUs/CHCs after their return from training for not less than 3 years.

iv. Trained doctors will not be transferred out without their proper substitute. Those transferred will only be placed at such DH/ SDH/ FRU where they can practice the skills learnt.

v. The State Government will also take steps to indemnify and/or ensure the trained LSAS Medical Officers against any Court proceedings / civil suits arising out of their involvement in Emergency Obstetric Care at FRUs. Provisions for this can also be included in the Undertaking above.

vi. The state will not propose further batches of LSAS/ CEmONC training unless the previous batches are posted at functional FRUs.

PS (Health) or MD (NHM) or Director Health Services; Government of …..

Annexure 15:

Assessment of RMC at Facility

SN	Item	Record		Remarks
A.	**Availability of structure, equipment and furniture**	**Yes**	**No**	
1.	Facility for privacy is present at ALL examination and consultation rooms			
2.	Screens/curtains are present at the entrance of ALL wards and labour room			
3.	ALL window panes are frosted and intact			
4.	There is seating arrangement for waiting pregnant clients and their companions (chairs/daris) in the OPD and outside Lab			
5.	There is arrangement of drinking water at the facility			
6.	Female toilets are clean with available running water			
7.	There is a toilet in the labour room with western style seat			
8.	The labour tables have mattress and pillow			
9.	There is arrangement in the labour room for giving birth in alternate positions			
10.	There is arrangement for a stool for the companion of each pregnant woman in the wards and labour room			
B.	**Performance of RMC by facility staff**			
10.	All service providers are performing RMC during quality MNH services as per protocol including newborn care			
11.	All service providers greet the woman and introduce their name			
12.	All service providers explain in clear and understandable language to the client what is going to be done and take her verbal consent for examination and procedures			
13.	All providers inform the woman and her companion of the findings and status of the progress of the client			
15.	The facility has policy of allowing one birth companion with each woman during ANC, labour, delivery and postpartum period			
16.	All service providers allow a birth companion with the woman in ANC, labour, delivery and postpartum period			

17.	All service providers train the birth companion on her role and tasks to support the woman and identify danger signs early and inform service provider promptly			
18.	All Service providers allow and support the woman to deliver in the position of her choice			
19.	All service providers and support staff communicate respectfully and politely with the pregnant woman and her companion			
20.	All service providers communicate with compassion and empathy in case of bereavement of the newborn/woman to the mother and family members respectively			
C.	**Client experience of MNH services at the facility**			
21.	Service providers and staff were polite and respectful			
22.	Service providers or staff did not talk rudely to clients or their companions			
23.	Service providers or staff did not threaten, slap, hurt or abuse clients			
24.	Service providers communicated clearly what to expect and respected clients' decision			
25.	Service provider explained clearly and took consent before physical examination and any procedure			
26.	Service providers or staff did not deny the service that was due to the clients			
27.	Service providers and staff ensured privacy during all care of clients			
28.	Service providers or staff did not ask money from clients for the services			
29.	Service providers and staff did not discriminate and misbehave with the clients			
30.	Clients were satisfied with the behavior and services			
	Score achieved			**Grade:**

Annexure 16:

Beneficiary Exit Interview

Client Exit Interview for RMC

Note: Introduce yourself and explain to the respondent, the purpose of this interview and seek her verbal consent for it. Assure her that the information will be confidential and only for the use of the facility to improve the services. If the respondent agrees, ask her if she will want to complete the questionnaire herself. If she is literate and wants to do it, allow her to do it. Explain how to fill her honest response by writing a '✓' as per her experience of services for each question in the appropriate response option in column 2.Request her to respond to all the questions if possible. Thank her once she has completed the questionnaire and take it for records and filing.

If the respondent cannot read or write but agrees for the interview, read each question to the respondent in a language she can understand clearly, then based on her response, '✓' the appropriate response option in column 2. If the respondent has any additional comments on a question, write it verbatim in the column of remarks. Encourage the respondent to respond to all the questions. Once completed, thank the respondent and her attendant if any for their time.

Name of Facility: _____District/State: _____/_____

Date of Interview (dd/mm/yy): _____/_____/_____ Date of Discharge (dd/mm/yy): _____/_____/_____

Mode of Delivery (Circle the appropriate response): Normal Vaginal/ Assisted Vaginal/ Caesarean

Condition of Mother (Circle the appropriate response): Alive and Healthy/ Sick/ Dead

Condition of Baby (Circle the appropriate response): Alive and Healthy/ Dead/ Stillborn/ IUD

Type of Respondent (Circle the appropriate response): Woman/Companion/ Family member

Name of Interviewer: _____

Cadre of Interviewer (Circle the appropriate response): Doctor/Staff Nurse/ Counsellor/ANM/Other (specify)_____

SN	Question	Response			Remarks
		Yes	No	NA	
1.	For what service did you come to this facility? (Write the code of the service) 1-ANC; 2-Delivery; 3-Other (specify)_____				
2.	Did you get the service you came for?				
3.	Did the service provider greet you and introduce you with her name?				
4.	Did you feel the doctors, nurses, or other health providers shouted at you, scolded, insulted, threatened, or talked to you rudely?				
5.	Did you feel you were treated roughly? Please specify what was done to you roughly?				
6.	During your time in the health facility, were you treated differently because of any personal attribute like your age, marital status, number of children, your education, wealth, religion/caste, your connections with the facility, differently-abled status or something like that?				
7.	During your stay, were you covered with a cloth or blanket or screened with a curtain so that you did not feel exposed during resting or during examination?				
8.	Did the doctors, nurses or other staff at the facility ask your permission/consent before doing procedures and examinations on you by explaining them?				
9.	Did the doctors or nurses inform you of the examination findings in simple language you understood?				
10.	Were you free to choose a position comfortable to you for labour and childbirth?				
11.	Were you or your family asked for a bribe or informal payment?				

12.	Was any birth companion (female relative) allowed to be with you during labour and childbirth?				
13.	Were you provided breastfeeding counselling and support after childbirth?				
14.	Do you feel the service providers responded to you promptly when you called for their help?				
15.	(If the baby was still born or died later before discharge, or the woman died at the hospital, ask the mother or respondent respectively) Were you informed in a polite and empathetic manner about the bereavement of the baby/ mother and explained on the cause of death and consoled on how to cope and what to do?				
16.	Are you satisfied with the care provided to you: • During antenatal care • On admission • During labour and childbirth • After birth until discharge				
17.	Are you satisfied with the overall services offered to you?				
18.	Do you have any suggestion for improvement of services to make childbirth experience happy? (Write verbatim in the remarks column).				

Thank you for your time, participation and information provided during this interview.

Annexure 17:

Sample budget for LSAS & CEmONC training program

LSAS BUDGET SUMMARY

ONE TIME COST	MC	DH
Strengthening	12,00,000	10,00,000
ToT/ state	4,44,000	
TOTAL ONE TIME COST		**26,44,000**

RECURRING COST FOR EACH BATCH OF TRAINING	MC	DH
Conducting training including monitoring visit	18,27,000	3,63,000
Cost to state for Monitoring, CME (annually)	2,40,000	
TOTAL RECURRING COST		**24,30,000**

B. DISTRICT HOSPITAL

LSAS BUDGET				
	MEDICAL COLLEGE	**No.of people**	**Duration-days/ sessions**	**Total cost**
1	**Budget for strengthening & up-gradation of Medical College Training Centre (Cost per centre)**			
a.	Infrastructure renovation &Up gradation (eg. Replacement of non functional audio visual and other teaching aids, including furniture, computer, 1 laptop, small library including library racks, reference books, renovation of seminar room including furnishing, ensuring functionality of OTs). -As per the gap analysis and specific requirement of the institute.			10,00,000
b	Procurement/ Replacement of models and mannequins (in case of any shortfall, the fund from the above head can be taken. Both heads can be utilized cumulatively)			2,00,000
	ONE TIME COST			**12,00,000**
2	**Cost of Training at each Medical College training centre**			
	4 Trainees/ batch for 140 days (16+4 weeks) 4 Trainers / batch for 120 working days			
a.	Travelling Allowance for 4 Trainees once during training @ (Rs.2500 x 4 persons, from place of posting to MC and back)(As per actuals & state rules)	4	2	20000
b.	Accommodation @ Rs 1000/day/ person (4 trainees)x140 Days	4	140	560000
c.	Food (Lunch + Tea)@ Rs 500/day/ person (4 trainees)x 140 Days	4	140	280000
d.	Honorarium to Trainers @ (Rs. 1000 x 2 persons/ day x 20 weeks x 6 days each)	2	120	240000
e.	Honorarium to Trainee @ Rs. 500 x 4 persons/ day x 20 weeks x 7 days each)	4	140	280000

f.	Teaching material, Stationery, Photocopy etc. @ Rs 2000/ trainee	4	1	8000
	Institutional charges (10%)			1,38,800
	SUB TOTAL			**15,26,800**
3	**Centre running cost of Medical College Training centre**			
a.	Coordinator (Senior Faculty/ HOD) at Medical College Training Center (@ Rs.10000/ month)	1	6	60,000
b.	Nodal person at Medical College Training Center (@ Rs.5000/ month)	1	6	30,000
c.	1 Administrative Assistant at Medical College Training Center (@ Rs.500/ day)		120	60,000
	SUB TOTAL			**1,50,000**
4	**Monitoring visit to DH(by Faculty MC)**			
	1 Expert visits each training site for 2 days			
a.	Travel allowance @Rs. 2000/day(As per actuals & state rules)x 4 sites x 2 days	4	2	16,000
b.	Accommodation @ Rs 3000/day/ personx 4 sites x 2 days	4	2	24,000
c.	Food (Breakfast + Lunch + Tea) @ Rs 500/day/ person x 4 sites x 2 days	4	2	4000
d.	Honorarium @ Rs 2000/day/ person x 4 sites x 2 days	4	2	16,000
	Note- If visit is of 1 day, reimbursement to be done accordingly No accommodation, if no night stay i.e. if the visit is of<2 days			
	SUB TOTAL			**60,000**
5	**Budget for conducting examination(4 examiners- 2 internal, 2 external)**			
a.	Travel allowance (Airfare) @ Rs 15,000/ person x 2 external examiners	2		30,000
b.	Accommodation @ Rs 5000/day/ person (2 external examiners, 2 nights)	2	2	20,000
c.	Food (Lunch+Tea)@Rs 500/day/person(4 examiners +4 examinees+2 support staff) x 2 days	10	2	10,000

d.	Honorarium to Examiners @ Rs 2000/person x 4 examiners x 2 days	4	2	16,000
e.	Engagement of vehicle@2000/day x 3 days x 1 vehichle	1	3	6000
	10% institutional charges of point 1-5			8200
	SUB TOTAL			**90,200**
	Total Recurring cost for each batch (4 participants) at Medical College (Point 2-5)			**18,27,000**
	DISTRICT HOSPITAL			
6	**Budget for strengthening & up-gradation of District Hospital Training Centre (4 DH)**			
a.	1 computer/ laptop for district anaesthesiologist/ HoD / Faculty Anaesthesiology (This is for departmental use, the nodal needs to hand it over if transferred)		4	2,00,000
b.	1 time support for making OTs functional, to be utilized only if the OT is non functional		4	8,00,000
	Total one time cost			**10,00,000**
7	**Cost of Training at DH training centre**			
	4 Trainees/ batch for 28 days and 1 trainer for 24 working days			
a.	Travelling Allowance for 4 Trainees @(Rs.1250 x 4 persons x 2)MC to DH & back(As per actuals & state rules)	4	2	10,000
b.	Accommodation @ Rs 1000/day/ person (4 trainees)x28 Days	4	28	1,12,000
c.	Food (Lunch + Tea)@ Rs 500/day/ person (4 trainees)x28 Days	4	28	56,000
d.	Honorarium to Trainers @ (Rs. 1000 per day x 4 weeks x 6 days each)	4	24	96,000
e.	Honorarium to Trainee @ Rs. 500 per day x 4 weeks x 7 days each)	4	28	56,000
f.	Institutional charges @ 10% (Rs. 33000 for 4 DH/ batch of 4 trainees)	4		33,000
	SUB TOTAL			**3,63,000**

	1 DH training site with 1 trainee will get Rs. 90,750 for conducting all the activities			
	Total Recurring cost for each batch (4 participants) at District Hospital			**3,63,000**
	STATE			
8	**Budget for training of Medical College Master trainers(ToT)**			
	20 Trainees/ batch for 2 days and 4 Trainers each day for 2 days			
a.	Travel allowance (Airfare) @ Rs 15,000/ person (4 Trainers from outside state)	4		60,000
b.	Travel allowance for trainees @ 4000(As per actuals & state rules)	20		80,000
c.	Accommodation @ Rs 5000/day/ person (4 Trainers)	4	2	40,000
d.	Accommodation @ Rs 4000/day/ person (20 trainees)	20	2	1,60,000
e.	Food (Lunch + Tea)@ Rs 500/day/ person (20 trainees + 4 trainers + 6 support staff)	30	2	30,000
f.	Honorarium to Trainers @ Rs 2000/day/ person	4	2	16,000
g.	Engagement of vehicle@2000/day	2	3	12,000
h.	DA for Trainees@1000/day/trainee(faculty)	20	2	40,000
i.	Teaching material, Stationery, Photocopy etc. @ Rs 300/ trainee	20	1	6000
	One time cost for conducting ToT at state level			**4,44,000**
9	**Mentoring/Post training Follow up visit(post training completion, 2 visits at 3 months & 1 year)**			
	1 Expert visits each trainee at FRU for 1 day			
a.	Travel allowance @Rs. 2000/day(As per actuals & state rules) x 2 days		2	4000
b.	Accommodation @ Rs 3000/day/ person x 1 day		1	3000
c.	Food (Breakfast + Lunch + Tea) @ Rs 500/day/ person x 2 days		2	1000
d.	Honorarium @ Rs 2000/day/ person x 1 day		1	2000

	Note- If visit is of 1 day, reimbursement to be done accordingly No accommodation, if no night stay i.e. if the visit is of<2 days, if 2 persons are visiting, accommodation and honorarium can accordingly be calculated			
	SUB TOTAL			**10,000**
	SUB TOTAL: VISIT TO 4 FRUs where trainees are posted			**40,000**
10	**Budget for CME, 1 time grant annually to state**			**2,00,000**
	SUB TOTAL			**2,00,000**
	Recurring cost for monitoring and CME(annually) on LSAS at State			**2,40,000**
	TOTAL ESTIMATED BUDGET for LSAS			**50,74,000**
	One Time Cost			**26,44,000**
	Recurrent Cost			**24,30,000**

CEmONC BUDGET SUMMARY

ONE TIME COST	MC	DH
Strengthening	12,00,000	10,00,000
ToT/ state	4,44,000	
Total one time cost	**26,44,000**	

RECURRING COST (For Each Batch Of 4 Participants)	MC	DH
Conducting training including monitoring visit	16,71,400	5,39,000
Cost to state for Monitoring, CME(annually)	2,40,000	
TOTAL RECURRING COST	**24,50,400**	

CEmONC BUDGET				
	MEDICAL COLLEGE	**No. of people**	**Duration- days/ sessions**	**Total cost**
1	**Budget for strengthening & up-gradation of Medical College Training Centre (Cost per centre)**			
a.	Infrastructure renovation & Upgradation (e.g. Replacement of non functional audio visual and other teaching aids, including furniture, computer, 1 laptop, small library including library racks, reference books, renovation of seminar room including furnishing, ensuring functionality of OTs). -As per the gap analysis and specific requirement of the institute.			10,00,000
b.	Procurement/ Replacement of models and mannequins (in case of any shortfall, the fund from the above head can be taken. Both heads can be utilized cumulatively)			2,00,000
	ONE TIME COST			**12,00,000**
2	**Cost of Training at each Medical College training centre**			
	4 Trainees/ batch for 126 days (16+2 weeks, all 7 days a week) 4 Trainers / day for 108 working days (16+2 weeks, 6 days a week)			
a.	Travelling Allowance for 4 Trainees once during course@(Rs.2500 x 4 persons, from place of posting to MC and back)(As per actuals & state rules)	4	2	20,000
b.	Accommodation @ Rs 1000/day/ person (4 trainees)x126 Days	4	126	5,04,000
c.	Food (Lunch + Tea)@ Rs 500/day/ person (4 trainees)x 126 Days	4	126	2,52,000
d.	Honorarium to Trainers @ (Rs. 1000 x 2 persons/ day x 18 weeks x 6 days each i.e. 108 days)	2	108	2,16,000
e.	Honorarium to Trainee @ Rs. 500 x 4 persons/ day x 18 weeks x 7 days each i.e. 126 days)	4	126	2,52,000
f.	Teaching material, Stationery, Photocopy etc. @ Rs 2000/ trainee	4	1	8000
g.	Total			12,52,000

h.	Institutional charges (10%)			1,25,200
	SUB TOTAL			**13,77,200**
3	**Centre running cost of Medical College Training centre**			
a.	Coordinator (Senior Faculty/ HOD) at Medical College Training Center (@ Rs.10000/ month)	1	6	60,000
b.	Nodal person at Medical College Training Center (@ Rs.5000/ month)	1	6	30,000
c.	1 Administrative Assistant at Medical College Training Center (@ Rs.500/ day)		108	54000
	SUB TOTAL			**1,44,000**
4	**Monitoring visit to DH(by Faculty MC)**			
	1 Expert visits each training site for 2 days			
a.	Travel allowance @Rs. 2000/day(As per actuals & state rules)x 4 sites x 2 days	4	2	16,000
b.	Accommodation @ Rs 3000/day/ person x 4 sites x 2 days	4	2	24,000
c.	Food (Breakfast + Lunch + Tea) @ Rs 500/day/ person x 4 sites x 2 days	4	2	4000
d.	Honorarium @ Rs 2000/day/ person x 4 sites x 2 days	4	2	16,000
	Note- If visit is of 1 day, reimbursement to be done accordingly No accommodation, if no night stay i.e. if the visit is of<2 days			
	SUB TOTAL			**60,000**
5	**Budget for conducting examination(4 examiners- 2 internal, 2 external)**			
a.	Travel allowance (Airfare) @ Rs 15,000/ person x 2 external examiners	2		30,000
b.	Accommodation @ Rs 5000/day/ person (2 external examiners, 2 nights)	2	2	20,000
c.	Food (Lunch + Tea)@ Rs 500/day/ person(4 examiners+ 4 examinees+ 2 support staff) x 2 days	10	2	10,000
d.	Honorarium to Examiners @ Rs 2000/person x 4 examiners x 2 days	4	2	16,000

e.	Engagement of vehicle@2000/day x 3 days x 1 vehicle	1	3	6000
	Sub Total			82,000
	10% institutional charges of point			8200
	SUB TOTAL			**90,200**
	Total Recurring cost for each batch (4 participants) at Medical College (Point 2-5)			**16,71,400**
	DISTRICT HOSPITAL			
6	**Budget for strengthening & up-gradation of District Hospital Training Centre**			
a.	1 computer/ laptop for district anaesthesiologist/ HoD / Faculty Anaesthesiology (This is for departmental use, the nodal needs to hand it over if transferred) (@ 50,000/ DH)		4	2,00,000
b.	1 time support for making OTs functional, to be utilized only if the OT is non functional@ Rs. 200000/ DH		4	8,00,000
	One Time Cost			**10,00,000**
7	**Cost of Training at DH training centre**			
	4 Trainees/ batch for 42 days and 1 trainer for 36 working days			
a.	Travelling Allowance for 4 Trainees @(Rs.1250 x 4 persons x 2)MC to DH & back(As per actuals & state rules)	4	2	10,000
b.	Accommodation @ Rs 1000/day/ person (4 trainees)x42 Days	4	42	1,68,000
c.	Food (Lunch + Tea)@ Rs 500/day/ person (4 trainees)x42 Days	4	42	84,000
d.	Honorarium to Trainers @ (Rs. 1000 per day x 6 weeks x 6 days each i.e. 36 days)	4	36	1,44,000
e.	Honorarium to Trainee @ Rs. 500 per day x 6 weeks x 7 days each i.e. 42 days)	4	42	84,000
f.	Institutional charges @ 10% (Rs. 49000 for 4 DH/ batch of 4 trainees)	4		49,000

	SUB TOTAL			**5,39,000**
	Total Recurring cost for each batch (4 participants) at District Hospital			**5,39,000**
	STATE			
8	**Budget for training of Medical College Master trainers(ToT)**			
	20 Trainees/ batch for 2 days **4 Trainers each day for 2 days**			
a.	Travel allowance (Airfare) @ Rs 15,000/ person (4 Trainers from outside state)	4		60,000
b.	Travel allowance for trainees @ 4000(As per actuals & state rules)	20		80,000
c.	Accommodation @ Rs 5000/day/ person (4 Trainers)	4	2	40,000
d.	Accommodation @ Rs 4000/day/ person (20 trainees)	20	2	1,60,000
e.	Food (Lunch + Tea)@ Rs 500/day/ person (20 trainees + 4 trainers + 6 support staff)	30	2	30,000
f..	Honorarium to Trainers @ Rs 2000/day/ person	4	2	16,000
g.	Engagement of vehicle@2000/day	2	3	12,000
h.	DA for Trainees@1000/day/trainee(faculty)	20	2	40,000
i.	Teaching material, Stationery, Photocopy etc. @ Rs 300/ trainee	20	1	6000
	ONE TIME COST for conducting CEmONC State ToT			**4,44,000**
9	**Mentoring/Post training Follow up visit(post course completion, 2 visits at 3 months & 1 year)**			
	1 Expert visits each trainee at FRU for 1 day			
a.	Travel allowance @Rs. 2000/day(As per actuals & state rules) x 2 days		2	4000
b.	Accommodation @ Rs 3000/day/ person x 1 day		1	3000
c.	Food (Breakfast + Lunch + Tea) @ Rs 500/day/ person x 2 days		2	1000
d.	Honorarium @ Rs 2000/day/ person x 1 day		1	2000

	Note- If visit is of 1 day, reimbursement to be done accordingly No accommodation, if no night stay i.e. if the visit is of<2 days, if 2 persons are visiting, accommodation and honorarium can accordingly be calculated			
	SUB TOTAL			10,000
	Note: SUB TOTAL: VISIT TO 4 FRUs where trainees are posted			**40,000**
10	**Budget for CME, 1 time grant annually to state**			**2,00,000**
	SUB TOTAL			**2,00,000**
	Recurring cost for Monitoring and CME at state level			**2,40,000**
	TOTAL ESTIMATED BUDGET			**50,94,400**
	One Time Cost			**26,44,000**
	Recurrent Cost			**24,50,400**

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Ministry of Health and Family Welfare
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