



सत्यमेव जयते



Engaging General
Surgeons for Performing
CAESAREAN
SECTIONS
and Managing Obstetric
Complications

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

December 2014

Designed and printed with support from UNFPA



Designed by: Rouge Communications, New Delhi
E-mail: rougecommunications@gmail.com



सत्यमेव जयते



Engaging General
Surgeons for Performing
SECTIONS CAESAREAN
and Managing Obstetric
Complications

Maternal Health Division
Ministry of Health & Family Welfare
Government of India
December 2014



लव वर्मा
सचिव

Lov Verma
Secretary



भारत सरकार
स्वास्थ्य एवं परिवार कल्याण विभाग
स्वास्थ्य एवं परिवार कल्याण मंत्रालय

Government of India
Department of Health & Family Welfare
Ministry of Health & Family Welfare

Preface

During pregnancy, all women are at risk of obstetric complications, so they need to have access to Emergency Obstetric Care (EmOC), with adequate treatment so as to prevent maternal mortality and morbidity.

Our health facilities in India have been designed for conducting basic and emergency obstetric care services. However, it has been observed that most of our designated FRUs are not able to provide these services. One of the major bottlenecks in providing effective and timely services is shortage of specialized human resource, particularly obstetricians, paediatricians and anaesthetists.

Short term skill based training programs like training of MBBS doctors in EmOC and Life Saving Anaesthesia Skills (LSAS) have to some extent addressed these problems. However, in many of the states there is still acute shortage of specialists particularly below district level.

In view of this, Ministry of Health and Family Welfare (MoHFW), Government of India (GoI) has taken up this challenge of HR deficit. A policy decision has been taken for involving general surgeons for performing Caesarean Section after sufficient training in basic obstetric skills and fine tuning their surgical skills towards performing CS.

The technical and operational guidelines on “Engaging General Surgeons for Performing Caesarean Sections and Managing Obstetric Complications” will facilitate the States in operationalizing their designated CEmOC facility especially where a regular obstetrician or a trained EmOC doctor is not available.

I hope states will utilize these guidelines so as to address the issue of shortage of HR and operationalization of the CEmOC centers.

Lov Verma



भारत सरकार
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
निर्माण भवन, नई दिल्ली - 110011

Government of India
Ministry of Health & Family Welfare
Nirman Bhavan, New Delhi - 110011



C.K Mishra, IAS
Additional Secretary &
Mission Director, NHM
Telefax : 23061066, 23063809
E-mail : asmd-mohfw@nic.in

Foreword

As part of its efforts to reduce MMR, Ministry of Health and Family Welfare has been working towards strengthening delivery points including those offering Emergency Obstetric Care. Non-availability of obstetricians at the designated CEmOC centres delays access to the much needed care, especially Caesarean sections (CS). In fact, the proportion of CS to the total delivery load in the public sector is much less than the global standard, indicating that our CEmOC centres are unable to provide adequate CeMOC services to save the lives. This clearly indicates that further initiatives are required to improve the situation.

One of the reasons for this low CS performance in public institutions is the non-availability of doctors who could do CS. Training of MBBS doctors in EmOC and Life Saving Anaesthesia Skills (LSAS) has, to some extent, addressed these problems; however in many of the states there is still a wide gap between requirement and availability. In view of this, Ministry of Health and Family Welfare (MoHFW), Government of India (GoI) has taken a policy decision for involving general surgeons for performing CS after sufficient training in basic obstetric skills and after fine tuning their surgical skills towards performing CS.

The technical and operational guidelines on “Engaging General Surgeons for Performing Caesarean Sections and Managing Obstetric Complications” would help the states to effectively roll out this strategy.

C.K Mishra



भारत सरकार
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
निर्माण भवन, नई दिल्ली - 110011

Government of India
Ministry of Health & Family Welfare
Nirman Bhavan, New Delhi - 110011



Dr. Rakesh Kumar, IAS

Joint Secretary
Telefax : 23061723
E-mail : rk1992uk@gmail.com
E-mail : rkumar92@hotmail.com

Foreword

India's progress in improving maternal health outcomes has been widely appreciated. However to bend the curve and to ensure that the momentum gained is not lost, we need to address all possible gaps in service delivery and ensure that all high risk groups are tracked and managed well in time in order to mitigate complications and safeguard positive pregnancy outcomes.

One way of doing this is to ensure that critical and life saving service like Caesarean section is made available in life threatening circumstances. Multi-skilling of MBBS doctors in EmOC and Life Saving Anaesthesia Skills (LSAS) has, to some extent, addressed these issues; however gaps persist both in terms of requirement and availability.

Taking cognizance of this, the Ministry of Health and Family Welfare has taken a policy decision and mandated general surgeons to perform caesarean section after rigorous training in basic obstetric and surgical skills required to perform caesarean section.

The Technical & Operational Guidelines on "Engaging General Surgeons for Performing Caesarean Sections and Managing Obstetric Complications" articulates the nuances of this strategy and will prove to be a very useful resource for both programme managers and clinicians.

I am certain that this strategy will go a long way in addressing the challenge of operationalizing CEmOC centers and address a critical gap in service delivery and help save many mothers and newborns.

Dr. Rakesh Kumar



भारत सरकार
स्वास्थ्य एवं परिवार कल्याण मंत्रालय
निर्माण भवन, नई दिल्ली - 110011

Government of India
Ministry of Health & Family Welfare
Nirman Bhavan, New Delhi - 110011



Dr. H Bhushan

Deputy Commissioner (MH)
Telefax : 23062930
E-mail : drhbhushan@gmail.com

Programme Officer's Message

For effective management of complications during pregnancy, childbirth and in post natal period, availability of Comprehensive Emergency Obstetric Care services are critical. Some of the complications may need routine or emergency Caesarean section (CS) to avoid maternal mortality and morbidity. Considering around 15% of obstetric complications, nearly 8-10% of total delivery cases may require Caesarean section. However this is very low at the public health facilities.

One of the reasons for low CS performance in public institutions is the non-availability of obstetricians who could do CS. Training of MBBS doctors in EmOC and Life Saving Anaesthesia Skills (LSAS) has, to some extent, addressed these problems; however in many of the States there is still a wide gap between requirement and availability. Based on wide ranging discussions with representatives from tertiary care institutions and other service providers, MoHFW, GoI has come out with a policy decision that the general surgeons can perform CS after a short training in basic obstetric and surgical skills.

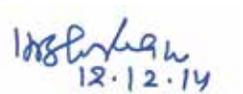
In situations like non-availability of obstetricians at a particular facility while surgeons are posted at the same facility, the surgeons can be engaged for conducting Caesarean section and also managing critical Obstetric complications. This would also reduce referral to higher centers, thereby not only reducing the load there, but also preventing the delay due to referral.

The Technical & Operational Guidelines on "Engaging General Surgeons for Performing Caesarean Sections and Managing Obstetric Complications" will facilitate the state in operationalizing their designated CEmOC facility where a regular obstetrician or a trained EmOC doctor is not available.

I would like to express that these guidelines would not have been possible without the constant encouragement from Mr. C.K Mishra, AS & MD and Ms Anuradha Gupta, Ex AS & MD. Dr. Rakesh Kumar, Joint Secretary (RMNCH+A) headed the expert group meeting and gave valuable inputs in framing this guideline.

I would like to acknowledge the contribution of all members of the Expert Group in developing the content of these Technical and Operational Guidelines. I would also like to acknowledge my colleagues in MH Division especially Dr. Dinesh Baswal, DC (MH) and development partners for their valuable efforts and inputs in developing this document.

I hope states will utilize these guidelines to address shortage of skilled manpower and operationalization of the CEmOC centers.

Handwritten signature in blue ink, appearing to read 'Himanshu Bhushan', with the date '12.12.14' written below it.

Dr. Himanshu Bhushan

List of Contributors

1	Shri C. K. Mishra	AS & MD (NHM), MoHFW
2	Dr. Rakesh Kumar	JS (RMNCH+A), MoHFW
3	Dr. Himanshu Bhushan	DC (I/c MH), MoHFW
4	Dr. Dinesh Baswal	DC (MH), MoHFW
5	Dr. Pratima Mittal	Prof. & Head, Dept of Obstetrics & Gynaecology, VMMC & Safdarjung Hospital, New Delhi
6	Dr. M. K. Mittal	Sr. Specialist / Consultant Radiologist, Safdarjung Hospital, New Delhi
7	Dr. Bhartendu Kumar	Assoc. Prof. of Surgery, SKMCH, Muzaffarpur
8	Dr. Ratna Kumar	Ex HoD, Institute of Obstetrics & Gynaecology, Chennai, Tamil Nadu
9	Dr. K. Kolanda Swamy	Director Public Health, Govt. of TN, Chennai
10	Dr. Ragini Mehrotra	HoD, Obstetrics & Gynaecology, AIIMS Bhopal
11	Dr. Sudhir Gupta	Prof & Head, Depart of Gastroenterology, GMC & Super-speciality Hospital, Nagpur
12	Dr. Somesh Gupta	Assoc. Prof., Department of Dermatology & Venereology, AIIMS, New Delhi
13	Dr. Suneeta Mittal	Sr. Consultant – Obstetrics & Gynaecology, Fortis Hospital, Gurgaon
14	Dr. Archana Mishra	DD (MH), GoMP
15	Dr. Suchitra Pandit	President, FOGSI
16	Dr. Achala Batra	Dept. of Obstetrics & Gynaecology, Safdarjung Hospital, New Delhi
17	Dr. Aman Kumar Singh	Technical Expert STI, NACO
18	Dr. P. R. Deo	UNFPA State Program Coordinator, Madhya Pradesh, Bhopal
19	Dr. Anchita Patil	National Programme Officer, UNFPA, New Delhi

20	Dr. Pushkar Kumar	Lead Consultant, MH, MoHFW
21	Dr. Rajeev Agarwal	Senior Mgt. Consultant, MH, MoHFW
22	Dr. Ravinder Kaur	Senior Consultant, MH, MoHFW
23	Dr. Gulfam Ahmed Hashmi	Regional Coordinator, NRU, MoHFW
24	Dr. Ashish Chakraborty	Regional Coordinator, NRU, MoHFW
25	Mr. Prasanth K. S.	Senior Consultant, PHA Division, NHSRC
27	Dr. Neelima Singh	Faculty, Indian Institute of Health and Family Welfare, Hyderabad
28	Dr. Nomita Chandiok	ICMR
29	Dr. Raja Mahendra	Radiologist, Daga Hospital, Nagpur
30	Dr. Charu Lata Mahorkar	Obstetrician & Gynaecologist, Nagpur
31	Dr. Gorakh Gopalkrishna Mandrupkar	Joint Secretary, FOGSI
32	Dr. Arunabh Ray	BTAST, Patna
33	Mr. Shridhar Pandit	PO, NRHM, Govt. of Maharashtra
34	Dr. Sharmila G. Neogi	Maternal Health Specialist, USAID India
35	Dr. Sudhir Manikkar	National RMNCH+A Expert, JSI
MGIMS Team		
36	Dr. B. S. Garg	Secretary, KHS, MGIMS, Sevagram
37	Dr. Poonam Varma Shivkumar	Prof. of Obstetrics & Gynaecology, MGIMS, Sevagram
38	Dr. Manjiri Ramteke Podder	Assist. Prof., Dept. of Obstetrics & Gynaecology, MGIMS, Sevagram
39	Dr. A. T. Kamble	Prof. Dept. of Surgery, MGIMS, Sevagram

List of Acronyms

AMTSL	Active Management of the Third Stage of Labor
ANC	Antenatal Care
ANM	Auxiliary Nurse Midwives
APH	Antepartum Haemorrhage
BEmOC	Basic Emergency Obstetric Care
CEmOC	Comprehensive Emergency Obstetric Care
CHC	Community Health Centre
CME	Continuing Medical Education
CS	Caesarean Section
EmOC	Emergency Obstetric Care
JSSK	Janani Shishu Suraksha Karyakram
JSY	Janani Suraksha Yojana
LSAS	Life Saving Anaesthesia Skills
LSCS	Lower Segment Caesarean Section
MMR	Maternal Mortality Ratio
MO	Medical Officer
NMR	Neonatal Mortality Rate
OPD	Outpatient Department
PNC	Postnatal Care
PPH	Postpartum Haemorrhage
SBA	Skilled Birth Attendant
SDH	Sub-district Hospital
SN	Staff Nurse
SNCU	Sick Newborn Care Unit
TOT	Training of Trainers

Contents

Introduction.....	1
Technical Guidelines for Engaging General Surgeons to Perform Caesarean Sections and Manage Obstetric Complications.....	2
Operational Aspects	3
Training Curriculum	7
Key Components of 12-Day Training.....	8
Key Skills to be Imparted During Training	10
Day-wise Training Schedule.....	12
Budget	14
Annexure 1: Log Book.....	16
Annexure 2: Certificate of Training	18

Introduction

One of the process indicators for provision of emergency obstetric care services is to have a fully functional Comprehensive Emergency Obstetric Care (CEmOC) centre providing planned and emergency CS services, along with blood transfusion facility. Availability of CEmOC services is critical for effective management of complications during pregnancy, childbirth and in the post natal period. Some of the complications need planned or emergency CS to avoid maternal and neonatal mortality and morbidity. Around 15% of pregnancies suffer from major obstetric complications that require emergency care; nearly 10% of the total delivery cases may require CS.

Both national and international guidelines suggest that there should be at least one CEmOC centre performing CS, with facilities for blood transfusion, for every five lakh population, with equitable geographical distribution within a district. However, in some of the districts, especially in the high focus states, CS facilities are not available even at district hospitals. Non-availability of CS facilities is an important factor for high maternal and neonatal morbidity and mortality. With the launch of JSY and JSSK, the delivery load during the past few years has increased manifold without concomitant increase in the number of available obstetricians and gynaecologists. This is a major bottleneck in operationalizing CEmOC services below district level, and even at district level in some of the high-focus states.

Available HR data indicates that even though there is a scarcity of obstetricians, general surgeons are available even at sub-district hospitals (SDH)/Community Health Centres (CHCs). Normally CS are performed by obstetricians. However in the absence of obstetricians, general surgeons present at the facility can perform life saving CS and also manage life threatening obstetric complications. This would reduce referral to higher centres, thereby not only reducing the load at these centres but also preventing delay in receiving care due to referrals.

Surgeons are skilled in the basics of surgery and therefore can be trained in a relatively short duration in obstetric surgery too and be able to provide the needed care in obstetric emergencies. In centres (mainly district hospitals) where a single obstetrician is functioning and is overburdened because of a huge patient load, the general surgeon can be trained to perform CS, thereby allowing the obstetrician to give more time to the women and improve the quality of care.

To make CEmOC centres fully functional by deploying general surgeons, it is essential that the general surgeons have not only the surgical skills to perform CS, but also the knowledge and skills to identify obstetric complications and to manage them effectively by using standard evidence-based management protocols, including making a decision regarding whether a CS is required in a particular case or not. They also need to acquire the necessary skills to manage complications of CS, postnatal complications, neonatal resuscitation and management of neonatal complications. It is therefore necessary to train them in all these areas through a specially designed, competency-based training. Through this strategy, if some of the sub-district level CEmOC facilities are made functional, it will be a great help in delivering the required services.

Technical Guidelines for Engaging General Surgeons to Perform Caesarean Sections and Manage Obstetric Complications

Aim:

To accelerate reduction of maternal and neonatal mortality and morbidity by making designated CEmOC centres fully functional.

Objective:

- To increase the number of functional CEmOC centres, particularly at sub-district level;
- To improve the quality of services at CEmOC centres where a single obstetrician is available and overburdened;
- To train general surgeons to perform planned/emergency Lower Segment Caesarean Section (LSCS) and to manage life threatening obstetric complications through a specially designed training programme.

Approach:

Training of all surgeons within the public health facility should not be made the norm. Instead, an informed decision about undertaking this activity should be taken under the following situations:

- a) A designated CEmOC facility is non-functional due to non-availability of obstetrician but a surgeon and an anaesthetist/LSAS-trained doctor is available at the same facility;
- b) A high-load functional CEmOC centre has a single obstetrician with a surgeon available at the same facility with relatively low number of major general surgeries;

Training load for this activity should be calculated based on the criteria defined above at (a) and (b). It must be ensured that after training, the surgeon must be posted at the same CEmOC facility. Only in special situations can a surgeon posted anywhere, other than the designated CEmOC centre, be selected for this training. However, following completion of training, these surgeons must be posted at CEmOC facilities which match the criteria defined above at (a) and (b).

Operational Aspects

I. Preparatory actions:

1. Map the existing and proposed CEmOC centres for equitable geographic distribution based on either population norms or time-to-care approach. The latter is particularly important in areas with sparsely distributed population or in a high-priority district;
2. Review and map availability of general surgeons, obstetricians, anaesthetists and paediatricians at the CEmOC centres mapped under Step 1;
3. Analyse and map infrastructure, equipment needed for CS including the availability of blood transfusion facilities at the CEmOC centres mapped under Step 1;
4. Assess whether redeployment of obstetricians will help in making some additional facilities functional as CEmOC centres. This needs to be done before selecting surgeons for training;
5. Conduct a comprehensive gap analysis of the remaining facilities (which are not functional even after redeployment) and select CEmOC centres where training of surgeons will make the facility operational (See criteria (a) and (b) under the section on Approach);
6. In case anaesthetists are not available or are inadequate in number, then medical officer (MO) posted at these facilities should be given LSAS training to assist the surgeon, and if required perform life saving anaesthesia;
7. At least two MOs, need to be trained from the same facility which has been chosen for the training of surgeons - one for BEmOC and another for CEmOC;
8. It must be ensured that the Staff Nurses (SNs) and Auxiliary Nurse Midwives (ANMs) posted at these facilities are trained as Skilled Birth Attendants (SBA).

II. Training:

A. Duration of training:

- ❖ Duration of this training shall be 12 working days;
- ❖ It can be extended to an additional 6 working days in case the trainer is not satisfied about the acquisitions of skills and knowledge by the trainee. No further extension can be given.

B. Selection of training institute:

- ❖ Government medical colleges having post-graduate teaching facilities which conduct a minimum of 5,000 deliveries per year and about 100 LSCS per month;
- ❖ The medical colleges which are already conducting EmOC training should be given preference as the training site;
- ❖ The medical college should not have less than four Ob-Gyn faculty; availability of in-house paediatrician is required at the training site;
- ❖ In exceptional cases, a government district hospital having the minimum client load as explained above and availability of senior obstetrician and team to effectively conduct skill-based training as per training curriculum may be selected.

C. Preparing the site for training:

- ❖ Willingness of training institutes to plan, conduct, manage and monitor quality of training as per training curriculum;
- ❖ Accommodation arrangements should preferably be provided for the trainees within the campus of the training institute to enable them to be posted at the hospital round-the-clock;
- ❖ Availability of EmOC training module and ensuring its use during training programme;
- ❖ Availability and use of mannequins and training videos for skills/ management of complications which may not be encountered during the training period.

D. Preparation of a training plan and calendar:

After finalizing the training institutes, the training load should be calculated based on comprehensive gap analysis and selecting those CEmOC centres where training of surgeons will make the facility operational. Each state should prepare an annual training plan which would include the name of the training institute, number of batches to be organized and number/names of trainees to be deputed per batch.

E. Selection of trainers:

- ❖ Trainers should be willing to train general surgeons;
- ❖ Trainer-trainee ratio should be 1:1;
- ❖ Although one identified obstetrician/gynaecologist should be designated as the trainer for one surgeon; however, practically a single trainer cannot be present round the clock. Therefore faculty available beyond normal duty hours shall be the co-trainers and will have responsibility for on-site mentoring.

F. Orientation / Training of trainers (TOT) for faculty of training institutes:

After selecting training institutes (as described above), the state National Health Mission (NHM) cell will organize a one-day orientation training for the following staff:

- ❖ Head of the department of obstetrics-gynaecology and/or designated training coordinator from medical colleges;
- ❖ Senior obstetrician, training coordinator and civil surgeon of district hospital selected for training the surgeons;
- ❖ Officers of state Maternal Health Cell of NHM.

G. Selection of site for training of trainers:

To be decided by the state at state level.

Prerequisites:

Any medical college can be chosen as a site for conducting the TOT if it has the following facilities:

- ❖ Seminar/Conference room with capacity to accommodate 50–60 participants;
- ❖ Audio-visual and other training aids;
- ❖ A substantial delivery load, including deliveries through LSCS, along with sufficient numbers of gynaecologists and paediatricians, so that the trainers will be able to understand the set-up required for the training site.

H. Orientation of master trainers:

National Institute of Health and Family Welfare (NIHFW)/ National Health Systems Resource Centre (NHSRC) will conduct the national-level orientation programme for state-level trainers under the guidance and supervision of the Maternal Health Division. Subject experts shall also be invited during the national orientation.

The state-level TOT for the faculty of medical colleges and identified training institutes (as mentioned above) will be on similar lines.

I. Selection of trainees:

General surgeons who are willing to undergo the training and are posted at the identified CEMOC centres should be selected as trainees for this initiative.

J. Batch size:

This will depend on the number of faculty present in the institution. Ideally there should not be more than two surgeons per batch posted at the training centre.

Only one batch should be posted at one time at a training centre. If the need, and therefore the number of batches, is more, additional training sites should be identified.

K. Training methodology:

- ❖ Training should be skill-based and through on-site mentoring. This should be done by posting the trainees to the Antenatal Care (ANC) clinic, ANC/ Postnatal Care (PNC) wards, obstetric emergency room, labour room and operation theatre;
- ❖ Every day one or two theory classes may be conducted, if necessary, for imparting knowledge as per the topics indicated under knowledge/skills in the curriculum;
- ❖ A rotational plan for posting of each trainee should be prepared based on the topics indicated in the training calendar;
- ❖ Every trainee has to maintain a daily log book for the number of cases seen and knowledge/skills learned (**Annexure 1**).

L. Certification:

- ❖ Certification shall be done as per the criteria mentioned in proforma (**Annexure 2**);
- ❖ Certification shall be based on the recommendation of the designated trainer as per his/her qualitative assessment and log book of the trainee;
- ❖ The certificate should be signed by the designated trainer/Head of the Department, Principal/Dean of the Institute and MD (NHM) or his/her nominee.

M. Post-training follow-up:

- ❖ The certified surgeon can be posted for two weeks at a district hospital for independent practice of CS and management of complications under the supervision of the district gynaecologist;
- ❖ State/District Programme Officers should maintain a centralized data/ record of all such trained surgeons and should conduct quarterly performance reviews for each of them;
- ❖ Ideally the surgeons chosen for this training should be from the identified CEmOC centres as per the criteria defined in this guideline. Posting order (to change the posting) of a trained surgeon should be given only for such surgeons who have come for training from a centre other than the identified one, and need to be posted at one of the identified CEmOC centres;
- ❖ Periodic refresher training, through Continuing Medical Education seminars (CMEs) and seminars/workshops, needs to be imparted. Monitoring visits should be conducted by trainers to ensure quality of services delivered by the trained surgeons;
- ❖ Availability of minimum required trained HR support i.e. anaesthesiologist/ LSAS-trained MO, BEmOC trained MOs, SBA-trained ANMs/SNs/LHVs, and other infrastructure such as blood banks, equipment, etc., should be ensured at the CEmOC site where the trained surgeon is posted.

N. Output indicators to be monitored:

- ❖ Percentage of obstetric complications managed by surgeons out of total institutional deliveries;
- ❖ Percentage of LSCS performed by surgeons out of total institutional deliveries;
- ❖ Number and type of patients referred to higher institute.

O. Outcome indicator:

Reduction in MMR and Neonatal Mortality Rate (which can be captured through Annual Health Survey especially in the high focus states).

Training Curriculum

Key components of 1-day orientation/**Training of trainers at the state level:**

- Maternal/neonatal morbidity and mortality status of the state;
- Status of functionality of CEmOC centres in the state;
- Management of obstetric complications and including access to LSCS services for reducing maternal mortality due to direct obstetric causes;
- Non-availability of obstetricians and potential role of general surgeons to make all designated CEmOC centres fully functional which is important to reduce maternal mortality due to direct obstetric causes and save lives of many mothers and neonates in the state.

Key components of the training of surgeons:

- The training should be hands-on, skill-based training;
- Maintenance of log books and adherence to the teaching schedule is very important;
- The quality of training being imparted needs to be monitored very strictly;
- The criteria for certification need to be adhered to ensure quality of skills being imparted;
- Post-training hands-on problem solving and continuous mentoring support needs to be provided by the training institutes to ensure that the designated CEmOC centre, where the trained surgeon is working following training, is functioning optimally;
- The programme officers and the training institutes need to liaison well with the State NHM cell to plan, implement and monitor the quality of training and also ensure smooth fund flow for this activity;
- The performance of the trained surgeon including management of obstetric complications, performing CS and referral of cases to higher facility needs to be monitored and documented.

Key Components of 12-Day Training

Curriculum

Topic	Knowledge	Skill
Moderate/Severe Anaemia	Recognizing symptoms/signs and management	Specific precautions in management of anaemia at term and during LSCS
Pre-eclampsia/eclampsia	Pathophysiology of PIH, symptoms/signs and management of imminent eclampsia	Specific precautions in management of pre-eclampsia/eclampsia at term and during LSCS
Obstetric haemorrhage – Antepartum haemorrhage (APH)	Differential diagnosis of APH	Recognizing symptoms and signs and management of antepartum haemorrhage (abruptio placentae and placenta praevia)
Obstetric haemorrhage - Postpartum haemorrhage (PPH)	Definition of PPH and its differential diagnosis	Recognizing signs and symptoms of PPH and its management including B-lynch suturing, hysterectomy; identification of inversion of uterus and its management
Labour	Stages and phases of labour	Conduct normal delivery with emphasis on AMTSL, initiation of breastfeeding
Partograph	Importance of partograph as a diagnostic tool for prolonged/obstructed labour	Partograph plotting and its interpretation to take decision for performing Caesarean section
Foetal distress		Recognizing signs and symptoms of foetal distress and its management
Ruptured uterus		Recognizing signs and symptoms of threatened rupture/scar dehiscence/rupture of uterus
LSCS		Caesarean section following trial of labour/failed forceps/instrumental, vaginal delivery

Delivery of head		Delivery of head during Caesarean section, including delivery of deeply engaged head
LSCS: Malpresentation		Caesarean section for transverse lie and breech
LSCS: Obstructed labour		Caesarean section for obstructed labour (Bandl's ring etc.)
LSCS : Intra-operative problems		Caesarean section with dense adhesions and drawn up bladder; recognizing and managing bladder/ bowel or other visceral injury during Caesarean section
LSCS : Post-operative care		Post-operative management of Caesarean section cases and follow-up during hospital stay; Recognizing internal haemorrhage following Caesarean section and its management
Essential newborn care		Immediate resuscitation of the newborn in the labour room and in the operating theatre
Management of traumatic PPH		Identifying and management of cervical tear, vaginal and vulval haematoma, complete perineal tear, colporrhexis, injury to urethra, extension of incision to uterine artery, cervix and vagina
Management of shock		Recognizing signs and symptoms of shock and management of the same

If any of these skills cannot be taught during the training period due to non-availability of relevant cases (e.g. inversion of uterus etc.), at least the theoretical knowledge should be imparted and wherever possible, the skill may be imparted using mannequins/videos.

Key Skills to be Imparted During Training

Name of the trainee:

Place of training:

Duration: From: To:

Name of the nodal trainer:

Name of the HoD:

S. No.	Knowledge	Skill	Number of cases
1	Anatomy and physiology of gravid uterus and foetal well-being	Abdominal examination for presentation and position of foetus, clinical estimation of liquor volume and foetal heart sound;	15
2	Abdominal examination to assess potential complications	Abdominal examination to recognise cephalo-pelvic disproportion, or abnormal lie and presentations etc.	15
3	Stages and phases of normal labour	Vaginal examination for identifying effacement and dilation of cervix, station of the presenting part, presence and absence of membrane, adequacy of pelvis, cephalo-pelvic disproportion, caput and moulding	15
4	Elements of a partograph and their interpretation	Plotting a partograph based on examination findings and interpreting the same to take a decision on whether or not and when to perform LSCS	10
5	Common complications during labour such as prolonged/obstructed labour, foetal distress etc	Recognising the signs and symptoms of prolonged/obstructed labour foetal distress etc. and its management including indications for LSCS	Variable – depending on the occurrence of these complications

6	Indications of LSCS	Clinical assessment of indications for elective and emergency LSCS, including recognizing signs and symptoms of prolonged labour/ obstructed labour, foetal distress etc.	20
7	Steps of Caesarean section	Steps/precautions to be taken while incising the uterus and performing LSCS	Observe/assist the obstetrician 5; assisted by obstetrician 5; perform independently under supervision 10
8	Routine post-operative care following LSCS, potential complications during and following surgery such as <ul style="list-style-type: none"> ◆ PPH ◆ Visceral injury ◆ Internal haemorrhage ◆ Inversion of uterus ◆ Others 	Recognizing signs and symptoms of complications following LSCS and their management including modified B-lymph suturing and obstetric hysterectomy	Variable – depending on the occurrence of these complications

NOTE: If the skills mentioned in point 1-7 are not fulfilled then the training has to be extended by 6 working days

- The trainers need to ensure that all the trainee surgeons acquire the above mentioned knowledge and skills;
- A summary of the total cases observed/assisted/performed independently under these various heads, need to be maintained by the individual trainee, besides a daily log book;
- The trainees may also maintain a work-book with a detailed description of all the cases seen during the training.

Day-wise Training Schedule

Day 1: Sensitization of surgeons on importance of management of obstetric complications and performing caesarean sections to avert maternal deaths

- The maternal health scenario of the country with special reference to the state and region-specific data;
- Rationale of the training;
- Importance of timely CS in improving delivery care and reduction of maternal and newborn mortality and morbidity;
- Labour ward set-up and roles and responsibilities of staff of labour ward;
- Anatomy and physiology of gravid uterus.

Day 2:

- Antenatal outpatient department: Obstetric abdominal examination;
- Ward rounds - Antenatal ward, postnatal ward and post-caesarean section ward: Discussing problems relevant to the training;
- Explaining the procedure of vaginal examination and salient points;
- Casualty: Obstetric triage; managing life-threatening obstetric emergencies;
- Labour room: Explaining the labour room protocols for admission and initial assessment.

Day 3 to day 12:

- Attend antenatal outpatient department (OPD) in the morning till such time they attain reasonable proficiency in abdominal examination of pregnant women;
- Posting to labour room in two shifts on all working days in rotation (day and night shifts);
- Posting to emergency ward on all government holidays, if any, during the training period;
- Posting to operation theatre for observing LSCS, assisting conduct of LSCS and performing LSCS under supervision;
- Posting to postnatal ward and Sick Newborn Care Unit (SNCU) for hands-on skill-based training on diagnosis and management of postnatal complications, neonatal resuscitation and management of sick newborns.

Post-training hands-on support:

Post-training hands-on support is to be provided by a team from the training centres to the designated CEmOC centre where a trained surgeon is posted. Three such visits are to be conducted during the first year and thereafter periodic monitoring is required.

Budget

A. For training at identified training institute:

12-Day training of surgeons for caesarean section - batch of 2 trainees

S. No.	Head	Unit cost	Number of participants	Days	Total
1	TA for participants (as per actual)	3,000	2	To and Fro	6,000
2	DA to trainees	700	2	12	16,800
3	Accommodation to trainees*	2,000	2	12	48,000
4	Lunch and tea	200	2	12	4,800
5	Per diem/Honorarium for trainers**	1,000	2	12	24,000
6	Logistic expenses like study material, course material, photocopying, job aids, flip charts, LCD etc.	200	2	12	400
	Sub-total				1,00,000
7	Institutional charges/Incidental overheads (10% of sub-total)				10,000
	Total for one batch of 2 candidates for 12 days				1,10,000

NOTE: *State should try and arrange for in-house accommodation of trainees. However when this cannot be done the amount of accommodation will be reimbursed to the trainee on an actual basis on production of a valid original bill.

** In a scenario where there is more than one trainer, the amount is to be distributed equally.

Organization cost of the training, will increase proportionately if the training is extended for another six days for further building the confidence of the surgeon or for acquiring minimum required skills.

B. For 1-day orientation / TOT:

1-Day orientation of surgeons for caesarean section, batch of 30

S. No.	Head	Unit cost	Number of participants	Days	Total
1	TA for participants (by train) – as per actuals	3,000	30	To and fro	90,000
2	DA to trainees	700	30	1	21,000
3	Lunch and tea	200	30	1	6,000
4	Per diem/Honorarium for trainers**	1,000	2	1	2,000
5	Logistic expenses like study material, course material, photocopying, job aids, flip charts, LCD etc.	200	30	1	6,000
	Sub-total				1,25,000
6	Incidental overhead (10% of sub-total)				12,500
	Total for one batch of 30 candidates for 1-day				1,37,500

NOTE: ** In a scenario where there is more than one trainer, the amount is to be distributed equally.

C. Training follow-up

Rs. 1,000 honorarium will be provided per trainer / mentor along with travel cost (on actual) for the team members for each visit, for a maximum of 3 visits during the first year following training.

D A Y	TOPICS																											
	Visceral injuries				Inversion uterus				Internal haemorrhage				Abnormal delivery				Instrumental delivery				Others				Remark			
	Observed	Assisted	IP	Total	Observed	Assisted	IP	Total	Observed	Assisted	IP	Total	Observed	Assisted	IP	Total	Observed	Assisted	IP	Total	Observed	Assisted	IP	Total	Observed	Assisted	IP	Total
1																												
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												
13																												
14																												
15																												

IP: Independently performed

Signature of Trainee

Signature of Trainer

Annexure 2: Certificate of Training

CERTIFICATION

FOR GENERAL SURGEON TO PERFORM CAESAREAN SECTION AND MANAGE OBSTETRICAL EMERGENCIES

This is to certify that Dr. _____
has been trained from _____ to _____
for “Performing Caesarean Sections and Management of Obstetric
Complications” in the Government approved training site _____
_____.

He/she has performed _____ number of Caesarean sections
independently as against a recommended minimum number
of 10. He/she is now competent to perform Caesarean sections
independently.

This certificate is valid for working in a government health facility
only.

Trainer/HoD
OBGY

Dean/Principal
Training Institution

MD
NHM

Maternal Health Division
Ministry of Health & Family Welfare
Government of India
Nirman Bhawan, New Delhi-110011
Website: www.mohfw.gov.in & www.nhm.gov.in