

Faculty of Medical Sciences **University of Delhi**

SYLLABUS FOR COMPETENCY BASED POSTGRADUATE TRAINING PROGRAM FOR DIPLOMA IN OBSTETRICS & GYNAECOLOGY

Program Goals

The purpose of this program is to standardize Obstetrics & Gynaecology teaching for post Graduate Diploma in Delhi University so that it will achieve uniformity in competency with appropriate expertise in the subject.

Program Objectives

The goal of diploma course in Obstetrics and Gynaecology is to produce a competent Obstetrician and gynecologist who:

1. Recognizes the health needs of women and adolescents and carries out professional obligations in keeping with principles of National Health Policy and professional ethics
2. Has acquired the competencies pertaining to Obstetrics and Gynaecology that are required to be practiced in the community and at all levels of health system
3. Is aware of the contemporary advances and developments in medical sciences as related to Obstetrics and Gynaecology.
4. Has acquired skills in educating medical and paramedical professionals

Specific Learning Objectives

At the end of the diploma course in Obstetrics and Gynaecology, the student should be able to:

1. Provide quality care to the community in the diagnosis and management of Antenatal, Intra-natal & Postnatal period of normal and abnormal pregnancy.
2. Manage common gynaecological problems & emergencies.
3. Provide counseling and delivery of fertility regulation methods and perform medical termination of pregnancy.
4. Organize and implement the “National Health Programs” pertaining to Women’s health.
5. Develop adequate surgical skills to manage common obstetrical & gynaecological problems.
6. Have knowledge of the basic principles of anesthesiology and resuscitative measures.
7. Properly maintain medical records and know the Medico- legal aspects and acts in respect of Obstetrical & Gynecological practice.
8. Keep abreast with advances in the field of Obstetrics & Gynaecology.
- 9.** Develop communication skill and demonstrate compassionate attitude towards the patients.

Postgraduate Teaching

Theoretical teaching:

Should be imparted to the students through:

1. Lectures, seminars, symposia, journal club, inter & intra departmental meetings (clinic-pathological, Radio-diagnosis, Radiotherapy, Anesthesia, Pediatrics/Neonatology), Maternal morbidity/mortality meetings. Records of these are to be maintained by the department.
2. By encouraging and allowing students to attend and actively participate in CMEs, Conferences by presenting papers.
3. Maintenance of log book

PRACTICAL & CLINICAL TRAINING

1. Student should be trained on proper history taking, clinical examination, advising / ordering relevant necessary investigations, their interpretation and instituting medical / surgical management by posting students in OPD, specialty clinics, wards, operation theaters, labour room, family planning clinics and other departments like anesthesiology, neonatology, radiology / radiotherapy.
2. Emphasis should be self learning, group discussions and case presentations.
3. Details of 2 years posting in Resident program (4 semesters of 6 months each)
4. **Allied posts should be done during the course** – for 8 weeks
 - a. Neonatology – 2 weeks
 - b. Anesthesia – 2 weeks
 - c. Radiology / Radiotherapy – 2 weeks
 - d. Surgery – 2 weeks
5. Details of training in the subject during resident posting. The student should attend to the duties (routine and emergency):
 - i. Out patient Department and special clinics
 - ii. Inpatients
 - iii. Operation Theater
 - iv. Labour Room

Writing clinical notes regularly and maintains records.

1st & 2nd Semester – Working under supervision of senior residents & teaching faculty. Besides patient care in OPD, wards, casualty and labour room, carrying out minor operations under supervision & assisting in major operation.

3rd & 4th Semester - Independent duties in management of patient (including major operations under supervision of teaching faculty)

Postgraduate Examination

THEORY EXAMINATION:

There should be 3 theory papers

PAPER I: Basic sciences related to Obstetrics and Gynaecology.

PAPER II: Obstetrics including social Obstetrics & Diseases of New Born

PAPER III: Gynaecology

PRACTICAL EXAMINATION

OBSTETRICS:

Clinical

Long Case: 1 case

Short Case/Spot Case: 1 case

Viva including:

- i. Dummy Pelvis
- ii. Instruments
- iii. Pathology specimens
- iv. Drugs & X-rays, Sonography etc.

GYNAECOLOGY

Clinical

Long Case: 1 case

Short Case/Spot Case: 1 case

Viva including:

- v. Instruments
- vi. Pathology specimens
- vii. Drugs & X-rays, Sonography etc.
- viii. Family Planning

Course Content

Paper I

1. Basic Sciences

- Normal & abnormal development of structure and function (female & male) of urogenital system and female breast.

- Applied anatomy of genito-urinary system, abdomen, pelvis, pelvic floor, anterior abdominal wall, upper thigh (inguinal ligament, inguinal canal, vulva, rectum and anal canal).
- Physiology of Spermatogenesis.
- Endocrinology related to male and female reproduction (Neurotransmitters).
- Anatomy & physiology of urinary & lower GI (Rectum / anal canal) tract.
- Development, structure & function of placenta, umbilical cord & amniotic fluid.
- Anatomical & physiological changes in female genital tract during pregnancy.
- Anatomy of fetus, fetal growth & development, fetal physiology & fetal circulation.
- Physiological & Neuro-endocrinal changes during puberty, adolescence, menstruation, ovulation, fertilization, climacteric & menopause.
- Biochemical and endocrine changes during pregnancy, including systemic changes in cardiovascular, hematological, renal, hepatic and other systems.
- Biophysical and biochemical changes in uterus and cervix during pregnancy & labour.
- Pharmacology of identified drugs used during pregnancy, labor, post partum period in reference to their absorption, distribution, excretion, hepatic metabolism, transfer of the drugs across the placenta, effect of the drugs on labor, on fetus and their excretion through breast milk.
- Mechanism of action, excretion, metabolism of identified drugs used in the management of gynecological disorders.
- Role of hormones in Obstetrics & Gynecology.
- Markers in Obstetric & Gynecology- Non- neoplastic and neoplastic diseases.
- Pathophysiology of ovaries, fallopian tubes, uterus, cervix, vagina and external genitalia in healthy and diseased conditions.
- Normal and abnormal microbiology of genital tract. Bacterial, viral & parasitic infections responsible for maternal, fetal and gynaecological disorders.
- Humoral and cellular immunology in Obstetrics & Gynaecology.
- Gametogenesis, fertilization, implantation & early development of embryo.
- Normal pregnancy, physiological changes during pregnancy, labour & puerperium.
- Immunology of pregnancy.
- Lactation.

2. *Medical Genetics*

- Basic medical genetics including cytogenetics.
- Pattern of inheritance
- Chromosomal abnormalities- types, incidence, diagnosis, management and recurrence risk.
- General principals of teratology.
- Screening, counseling and prevention of developmental abnormalities.
- Birth defects- genetics, teratology & counseling.

Paper II

CLINICAL OBSTETRICS

1. Antenatal period:

- Prenatal care of normal pregnancy including examination, nutrition, immunization & follow up.
- Identification and management of obstetrical complications– abortion, ectopic pregnancy, vesicular mole, gestational trophoblastic disease, hyperemesis, Anemia, Rh incompatibility, preterm, premature rupture of membranes. post term pregnancies and intrauterine fetal growth retardation, multiple pregnancies, hydramnios, and oligoamnios.etc.
- Diagnosis of contracted pelvis (CPD) and its management.
- Evaluation of fetal & maternal health in complicated pregnancy by making use of diagnostic modalities including modern techniques (USG, Doppler, Electronic monitors) and plan for safe delivery for mother and fetus.
- Infections in pregnancy. (Bacterial, viral, fungal, protozoal)
 - Malaria, Toxoplasmosis.
 - Viral- Rubella, CMV, Herpes, HIV, Hepatic viral infections, etc.
- Identifying fetus at risk & its management.
- Identification & management of fetal malpositions and malpresentations.
- Prenatal diagnosis of fetal problems & abnormalities, treatment – Fetal therapy
- Management of pregnancies complicated by medical, surgical (with other specialties as required) & gynecological diseases.
 - Anemia, hematological disorders
 - Respiratory, heart, renal, liver, skin diseases, neurological, immunological disorders.
 - Gastro-intestinal, hypertensive, endocrine disorders.
 - Associated Surgical Problems: Acute Abdomen (surgical emergencies – appendicitis, GI emergencies etc.)
 - Gynecological disorders associated with pregnancy – congenital genital tract developmental anomalies, Gynaec pathologies – fibroid uterus, CaCx, genital prolapse etc.
- M.T.P, P.N.D.T acts etc.
- National health MCH programs, Social obstetrics and vital statistics.
- Recent advances in Obstetrics.

2. Intrapartum period

- Normal labour- mechanism & management.
- Partographic monitoring of labour progress, recognition of abnormal labour and its appropriate management.

- Identification and conduct of abnormal labour and complicated delivery- breech, forceps delivery, caesarian section, destructive operations.
- Induction and augmentation of labour.
- Management of abnormal labour- Abnormal pelvis, soft tissue abnormalities of birth canal, mal-presentation, mal-positions of fetus, abnormal uterine action, obstructed labour and other dystocias.
- Analgesia & anaesthesia in labour.
- Maternal & fetal monitoring in normal & abnormal labour (including electronic fetal monitoring).
- Identification and management of intrapartum complications, cord presentation, complication of 3rd stage of labour- retained placenta, inversion of uterus, rupture of uterus, post partum hemorrhage.
- Hematological problems in Obstetrics including coagulation disorders. Use of blood and blood components.

3. Postpartum

- Complication of 3rd stage of labour- management of primary & secondary postpartum hemorrhage retained placenta, inversion of uterus, post partum hemorrhage, rupture of uterus, amniotic fluid embolism.
- Identification & management of genital tract trauma – perineal tear, cervical/vaginal tear, episiotomy complications.
- Management of critically ill women.
- Breast feeding practices: counseling & importance of breast-feeding. Problems in breast-feeding and their management, baby friendly practices.
- Problems of newborn- at- birth (resuscitation), management of early neonatal problems.
- Normal and abnormal puerperium- sepsis, thrombophlebitis, mastitis, psychosis.
- Postpartum contraception.

OPERATIVE OBSTETRICS: PG students must have performed reasonable routine procedures and assisted/observed uncommon procedures.

- Decision-making, technique & management of complications.
- Vaginal instrumental delivery(forceps/ventouse), caesarean section, obstetric hysterectomy, destructive operations, manipulations (external / internal podalic version, manual removal of placenta etc)
- Management of incomplete / inevitable abortions presenting as emergencies

NEW BORN

1. Care of new born: normal and high risk new born (including NICU care).
2. Asphyxia and neonatal resuscitation.
3. Neonatal sepsis- prevention, detection & management.
4. Neonatal hyper-bilirubinemia- investigation & management.
5. Birth trauma- Detection & management.
6. Detection and management of neonatal malformation.

Paper III

CLINICAL GYNAECOLOGY

- Physiology of menstruation and its pathological disorders.
- Vaginal discharges: normal and abnormal and their management
- Diagnostic modalities and management of common benign and malignant gynaecological diseases (diseases of genital tract):
 - Fibroid uterus
 - Endometriosis & adenomyosis
 - Endometrial hyperplasia
 - Genital prolapse (uterine & vaginal)
 - Cervical erosion, cervicitis, cervical polyps, cervical intraepithelial neoplasia
 - Vaginal cysts, vaginal infections, vaginal intraepithelial neoplasia (VIN)
 - Benign ovarian neoplasms and cysts
 - Malignant neoplasms- uterus, cervix, ovary, fallopian tube, vagina, vulva and gestational trophoblastic diseases.
- Diagnosis and surgical management of clinical conditions related to congenital malformations of genital tract. Reconstructive surgery in gynaecology.
- Intersex, ambiguous sex and chromosomal abnormalities.
- Reproductive endocrinology: Evaluation of Primary/ secondary Amenorrhea, management of Hyperprolactenemia, Hirsutism, Chronic an-ovulation, PCOD, thyroid and other endocrine dysfunctions.
- Infertility- Evaluation and management of male and female infertility
 - Methods of ovulation induction
 - Tubal (Micro) surgery
 - Management of immunological factors of infertility
 - Male infertility
 - Obesity & other infertility problems.
 - Introduction to Assisted Reproductive Techniques (ART)
- Reproductive tract Infections: prevention, diagnosis & treatment.
 - STD& HPV,
 - HIV
 - Other Infections
 - Genital Tuberculosis.

- Principles of radiotherapy and chemotherapy in gynaecological malignancies. Choice, schedule of administration & complications of such therapies.
- Urological problems in Gynaecology- Diagnosis and management.
 - Urinary tract infection
 - Urogenital Fistulae
 - Incontinence
 - Other urological problems
- Menopause: management (HRT) and prevention of its complications.
- Recent advances in gynecology- Diagnostic & therapeutic
- Pediatric, adolescent & geriatric gynecology

OPERATIVE GYNAECOLOGY

- Abdominal & Vaginal Hysterectomy
- Surgical Procedures for genital prolapse, fibromyoma, endometriosis, ovarian, adnexal, uterine, cervical, vaginal and vulval diseases.
- Surgical treatment for urinary & other fistulae, urinary incontinence
- Surgical procedures for malignant disorders of genital tract.
- Endoscopy (Laparoscopy-Hysteroscopy)
 - Diagnostic & simple therapeutic procedures (PG students must be trained to do these procedures)
 - Introduction to Advanced Operative procedures.

FAMILY WELFARE PLANNING & DEMOGRAPHY

- Definition of demography and its importance in Obstetrics and Gynaecology.
- Statistics regarding maternal morbidity and mortality, perinatal morbidity/ mortality, birth rate, fertility rate.
- Organizational and operational aspects of National Health Policies & Programs in relation to population and family welfare including RCH.
- Knowledge of contraceptive techniques (including recent developments) for both male and female
 1. Temporary methods
 2. Permanent methods
 3. Recent advances in contraceptive technology
- Provide adequate services to service seekers of contraception including follow up.
- Medical termination of pregnancy: act, its implementation, providing safe and adequate services. Surgical techniques & management of complication.

Practical Training

OPERATIVE SKILLS IN OBSTETRICS & GYNECOLOGY

- Adequate proficiency in common minor & major operations, post operative management and management of their complications.
- Operative procedures which must be done by PG students during training period: (*in graded manner – assisting, Operating with senior person assisting, Operating under supervision*)

(Operations MUST BE DONE/ OBSERVED during PG residency & log book maintained)

1. Obstetrics:

Conduct normal deliveries
Episiotomy and its repair
Application of forceps & ventouse (10)
Carry out caesarean section(10)
Manual removal of placenta
Management of genital tract injuries
Venesection, abdominal paracentesis, culdocentesis

2. Gynaecology:

Endometrial/ cervical biopsy
Dilatation & curettage
Culdocentesis, Colpotomy
Opening and closing of abdomen (10 must be done)
Operations for vaginal wall prolapse
Ovarian cyst operation
Operation for ectopic pregnancy
Vaginal & abdominal hysterectomy (5 each)

3. Family Welfare

Post partum sterilization/ Minilap tubal ligation (20 must be done)
Medical termination of pregnancy- various methods (30 must be done)

Operations must be OBSERVED &/OR ASSISTED when possible:

Internal podalic version
Caesarean Hysterectomy
Internal iliac artery ligation
Destructive obstetrical operations

Tubal microsurgery
Radical operations for gynaecologic malignancies
Repair of genital fistulae
Operations for incontinence
Myomectomy
Laparoscopic and hysteroscopic surgery

DIAGNOSTIC PROCEDURES

- Interpretation of x-rays- Twins, common fetal malformations/ malpresentations, abnormal pelvis (pelvimetry), Hysterosalpingography.
- Sonography pictures at various stages of pregnancy- normal and abnormal pregnancies, fetal biophysical profile, common gynaecological pathologies.
- Amniocentesis.
- Fetal surveillance methods- Electronic fetal monitoring and its interpretation
- Post coital test
- Pap Smear
- Colposcopy
- Endoscopy- Laparo & Hysteroscopy

HEALTH OF ADOLESCENT GIRLS AND POST MENOPAUSAL WOMEN

- Recognize importance of good health of adolescent and postmenopausal women.
- Identification and management of health problems of postmenopausal women.
- Understanding and planning and intervention program of social, educational and health needs of adolescent girls & menopausal women.
- Education regarding rights and confidentiality of women's health, specifically related to reproductive function, sexuality, contraception and safe abortion.
- Geriatric problems.

MEDICOLEGAL ASPECTS

- Knowledge and correct application of various acts and laws while practicing obstetrics and gynaecology, particularly MTP act and sterilization, Preconception and P.N.D.T. Act.
- Knowledge of importance of proper recording of facts about history, examination findings, investigation reports and treatment administered in all patients.
- Knowledge of steps recommended for examination and management of rape cases.
- Knowledge of steps taken in the event of death of a patient.

ENVIRONMENT AND HEALTH

- Concept of safe disposal of human body fluids and other materials.
- Universal precautions need to be taken in examination and surgical procedures for the prevention of HIV and other diseases.
- Effect of environment on pregnancy outcome.

Internal Assessment

At the end of 12 & 18 months of Diploma course a theory and practical examination will be conducted by internal examiners and each candidate will enter details of theory paper, cases allotted (2 long & 2 short), obstetric & gynaecology viva and log book to be brought at the time of final practical examination.