



ZIAUDDIN UNIVERSITY

CURRICULUM

POSTGRADUATE MASTER PROGRAM FOR OBSTETRICS & GYNECOLOGY

(Approved by PMDC)

POSTGRADUATE MASTER PROGRAM FOR OBSTETRICS & GYNECOLOGY

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A specialist in Obstetrics and Gynecology is a physician with special education and expertise in the field of women's health and reproduction. He/she has the appropriate medical, surgical and obstetrical knowledge and skills for the prevention, diagnosis and management of a broad range of conditions affecting women's reproductive and gynecological health. As well as providing clinical care and education in normal and complicated obstetrics and gynecology, he/she may contribute significantly to research.

EDUCATION OBJECTIVES

Two levels of knowledge and proficiency are referred:

- **Working Level:** A level of knowledge sufficient for the clinical management of a condition, and/or an understanding of an approach or technique sufficient to counsel and recommend it, without having personally achieved mastery of that approach or technique.
- **Extensive Level:** An in-depth understanding of an area, from basic science to clinical application, and possession of skills to manage independently a problem in the area.

Duration of programme: 4 years

GENERAL OBJECTIVES

Consultancy Competence

At the completion of training, the trainee must have the necessary knowledge, skills, and attitudes for independent management of a wide range of obstetrical and gynecological conditions. He/she must have the ability to develop trust and effective partnership with female patients necessary to achieve successful outcomes in normal and complicated pregnancies, as well as in gynecologic health and illness throughout a woman's life.

Communication

The trainee must achieve a high level of competence in communicating with patients and relatives, reflecting an understanding of their psychosocial and cultural context. He/she must also develop effective oral and written communication skills with other members of the health care team.

Health Economics

The trainee must have a working knowledge of the economic aspects of health care. He/she will understand that interventions should be limited to situations where benefit can be reasonably expected, based on best available evidence. The resident must have the ability to assess the efficacy, cost, risks, benefits, and reliability of diagnostic, investigative, and therapeutic interventions.

Teaching

The trainee will recognize his/her responsibility to teach and will demonstrate competence in teaching others.

Behaviours / Values

The trainee will demonstrate ethical, empathetic, and professional behavior, showing an awareness of personal limitations and seeking consultation appropriately. He/she must demonstrate leadership when appropriate, as well as the ability to work collaboratively with other members of the health care team.

Fear, Anxiety and Pain

The trainee must have an understanding of the impact of fear and anxiety on pain, patient satisfaction, and treatment outcome.

He/she must have a working knowledge of pharmacologic and non-pharmacologic methods of acute and chronic pain relief and their associated risks and benefits.

Critical Appraisal

The trainee must have an understanding of the basic biostatistical and clinical epidemiological principles necessary for critical evaluation of the medical literature, especially the aspects of causation, prevention, diagnosis, prognosis, and therapy.

Research

The trainee must understand the strengths and limitations of various research designs, and will, during residency training, design and present the results of at least one study which addresses an issue of relevance to the specialty.

Medical Imaging

The trainee must have the working knowledge necessary for appropriate and effective utilization of medical imaging in Obstetrics and Gynecology.

He/she must have extensive knowledge of the appropriate use and interpretation of ultrasound in obstetrics and gynecology.

Quality Improvement

The trainee must understand the value and application of various approaches to quality improvement, and have participated in a medical audit process or served on a Quality Assurance Committee.

Equity

Trainees must demonstrate the knowledge, skills, and attitudes relating to gender, culture, and ethnicity pertinent to Obstetrics and Gynecology. All trainees must demonstrate an ability to incorporate gender, cultural, and ethnic perspectives in research methodology, data presentation, and analysis.

Ethics

The trainee must have knowledge of the fundamental principles of ethics and their application to issues in obstetrics and gynecology, particularly as they relate to informed consent, substitute decision making, conflict resolution, confidentiality, doctor-patient relationship, refusal of treatment, resource allocation, and research.

SPECIFIC OBSTETRICS OBJECTIVES

Antepartum Care

The trainee must have extensive knowledge of maternal physiological changes in pregnancy, fetal development and physiology, antepartum assessment of mother and fetus, and the effects of underlying medical, surgical, social, and environmental conditions on pregnancy.

The trainee must have a working knowledge of genetic screening, testing, and counseling.

The trainee must have the extensive knowledge and skills necessary to evaluate the health of mother and fetus, including appropriate history taking and physical examination, provision of comprehensive ongoing antepartum surveillance, ability to identify deviations from normality, and the effective use of laboratory testing, imaging, and non-stress testing. He/she will be able to implement appropriate management strategies where deviation from normal is identified.

Medical and Surgical Complications

The trainee must have a broad working knowledge of medical, surgical, and psychosocial complications of pregnancy and their appropriate management, including timely consultation or transfer of care.

Obstetric Complications

The trainee must have extensive knowledge of the pathophysiology, prevention, investigation, diagnosis, and management of common obstetric complications at all stages of pregnancy, including: second trimester pregnancy loss, preterm labor, premature rupture of membranes, antepartum hemorrhage, pregnancy-induced hypertension, multiple gestation, fetal growth restriction, isoimmunization, post-term pregnancy, and fetal death.

Intrapartum Care

The trainee must have the extensive knowledge and skills necessary to conduct normal and complicated labor and delivery.

He/she will be able to assess maternal and fetal health and progress in labor utilizing history and physical examination, intermittent auscultation, electronic fetal monitoring, basic ultrasound imaging, and fetal scalp blood sampling.

The trainee must have extensive knowledge of techniques of induction and augmentation of labor, including indications, methodology, pharmacology, management, and complications.

Delivery

The trainee must have extensive knowledge and skills with respect to the mechanisms and techniques of spontaneous and assisted vaginal delivery.

He/she will have the ability to identify situations requiring assisted delivery and be able to appropriately perform:

- Forceps delivery
- Vacuum extraction
- Cesarean section
- Breech delivery
- Management of shoulder dystocia
- Repair of obstetric lacerations
- Vaginal birth after cesarean delivery

Postpartum

The trainee must have extensive knowledge of the puerperium and the skills necessary to provide postpartum care, including:

- Recognition and management of early and delayed postpartum hemorrhage and sepsis
- Promotion of breastfeeding
- Family planning
- Recognition of risk factors for depression and support in psychosocial adjustment

Medical Imaging

The trainee must be able to perform a limited diagnostic obstetric ultrasound scan for the purpose of ascertaining:

- Placental localization
- Fetal number
- Fetal presentation
- Level of fetal well-being, including viability

Neonatal Resuscitation

The trainee will have the working knowledge and skills necessary to recognize abnormalities of the neonate. He/she must be able to carry out an appropriate physical examination of the newborn and know when to seek the assistance of a pediatrician. He/she must be able to institute initial resuscitation and stabilization of the newborn.

SPECIFIC GYNECOLOGY OBJECTIVES

Physiological Changes

The trainee must have extensive knowledge of the changes in normal reproductive physiology.

Pediatric and Adolescent Gynecology

The trainee must have a working knowledge of the pathophysiology, investigation, diagnosis, management, and possible psychosocial ramifications of gynecologic problems in children and adolescents. These include:

- Developmental anomalies
- Precocious and delayed puberty
- Abnormal vaginal discharge and bleeding
- Sexual abuse
- Family planning
- Teenage pregnancy
- Medico-legal aspects of consent and confidentiality

Reproductive and Endocrine Disorders

The trainee must have extensive knowledge of:

- Menstrual irregularity
- Amenorrhea
- Dysfunctional uterine bleeding
- Hormonal under- and over-activity
- Galactorrhea

- Hirsutism
- Polycystic ovarian disease
- Premenstrual syndrome

Menopause

The trainee must have extensive knowledge of the changes associated with menopause and aging and be able to provide appropriate periodic assessment and management including hormonal and non-hormonal modalities.

Human Sexuality

The trainee must have the ability to identify problems related to sexual dysfunction, including dyspareunia, inhibited sexual desire, and anorgasmia, and be able to initiate management and/or referral.

Family Planning

The trainee must have extensive knowledge of methods of contraception, including mechanisms of action, indications, contraindications, and possible complications. He/she must be able to inform women of options and provide required services or refer appropriately.

Infertility

The trainee must have an extensive knowledge of factors contributing to infertility, enabling him/her to diagnose, evaluate and manage the major causes.

He/she will be able to utilize and interpret the tests and procedures commonly used in diagnosis, such as hormonal evaluation, semen analysis, ovulation prediction, endometrial biopsy, hystero salpingography and endoscopy.

The trainee will be aware of the effectiveness, and complications of current standard treatments as well as appropriate indications for subspecialty referral.

The trainee must have the necessary knowledge for diagnosis and management of ovulatory disorders. He/she must have an extensive knowledge for situations requiring simple regimen such as clomiphene citrate and a working knowledge for more complex regimens utilizing GnRH analogues and gonadotropins.

The trainee must have a working knowledge of the surgical techniques used in treating tubal and pelvic causes of infertility, including pelvic adhesions, endometriosis, tubal obstruction and uterine malformations.

The trainee must have a working knowledge of the assisted reproductive technologies currently available, including appropriate indications for referral.

Pregnancy Loss

The trainee must have extensive knowledge of pathophysiology, investigation, diagnosis and treatment in spontaneous abortion, ectopic pregnancy and recurrent pregnancy loss.

Gynecologic Infections

Extensive knowledge of pathophysiology, investigation, diagnosis, and treatment of:

- Vaginal and vulval infections
- Sexually transmitted diseases
- Pelvic inflammatory disease

Breast Conditions

The trainee must have a working knowledge of the pathophysiology, diagnosis, and management of benign breast disease, screening and referral for breast cancer, and the effect of breast cancer and its therapies on the reproductive system.

Other Non-Malignant Gynecologic Conditions

The trainee must have extensive knowledge of the underlying pathophysiology, investigation, diagnosis, medical and surgical treatment in the areas of:

- Pelvic support defects
- Pelvic masses
- Acute and chronic pelvic pain
- Endometriosis
- Abnormal uterine bleeding
- Vulval pain

Imaging

The trainee must have a working knowledge of the use of imaging techniques including ultrasound, and will have the skills to assess normal pelvic structures and identify abnormalities.

General Gynecologic Surgery

The trainee must have extensive knowledge of the indications for and be highly skilled in the performance of common gynecological procedures including Hysterectomy (abdominal and vaginal), Myomectomy, Adnexal surgery, Pelvic lymph node sampling, abdominal exploration, Omentectomy, identification and repair of operative complications, Paracentesis, Anterior and posterior Colporrhaphy and evacuation of the pregnant uterus.

The trainee must be able to discuss with the patient the risks, benefits, and complications of any surgical treatment, as well as non-surgical treatment alternatives.

Laparoscopic and Hysteroscopic Surgery

Endoscopic Surgery

The trainee must have extensive knowledge of the indications for and be able to assist in:

- Diagnostic laparoscopy
- Laparoscopic sterilization
- Aspiration of simple cysts
- Ovarian biopsy
- Lysis of adhesions
- Surgery for endometriosis
- Surgery for ectopic pregnancy
- Salpingectomy
- Salpingo-oophorectomy
- Ovarian cystectomy

Hysteroscopic Surgery

The trainee to assist must have extensive knowledge of the indications and be skilled to assist in hysteroscopy.

The trainee will require a working knowledge of advanced laparoscopic and hysteroscopic techniques.

Preoperative and Postoperative Patient Care

The trainee must have the extensive knowledge and skills necessary to provide appropriate preoperative and postoperative care, recognition and assessment of perioperative risk factors, provision of nutritional support, promotion of wound healing, and management of medical and surgical complications.

Preinvasive and Malignant Gynecological Diseases

Risk Factors

The trainee must have extensive knowledge of known risk factors for gynecologic malignancy and of pre-malignant gynecologic conditions.

Screening

The trainee must have extensive knowledge of the current guidelines and indications for screening for cervical, endometrial, and ovarian cancer, and an understanding of the reliability of current screening methods.

Colposcopy

The trainee will have a working knowledge of colposcopic technique and interpretation, the indications for and limitations of the procedure, and indications for referral for colposcopic assessment.

Vulvar Neoplasia

The trainee will have the working knowledge and skills for diagnosis and staging, and for appropriate referral for treatment of vulvar neoplasia.

Cervical Neoplasia

The trainee will have the working knowledge and skills for the management of benign and pre-invasive lesions of the cervix.

He/she will have a working knowledge of diagnosis, staging, and appropriate surgical management (simple or radical hysterectomy) for cervical carcinoma. He/she will be able to refer appropriately for radical surgery, radiotherapy, and/or adjuvant therapy.

Endometrial Cancer

The trainee must have the extensive knowledge and skills necessary for diagnosis, staging, and appropriate use of simple hysterectomy and bilateral salpingo-oophorectomy with node sampling. He/she will refer appropriately for more extensive surgery and radiation.

Ovarian Cancer

The trainee must have the working knowledge and skills for diagnosis, and for appropriate referral for:

- Surgical staging
- Radiation
- Chemotherapy
- Other treatment modalities

He/she must be able to appropriately use techniques of:

- Debulking laparotomy
- Salpingo-oophorectomy
- Omentectomy

Gestational Trophoblastic Disease

The trainee must have the working knowledge and skills for diagnosis, primary intervention, and follow-up. He/she will carry out appropriate metastatic work-up and distinguish low and high-risk disease with referral for further assessment and treatment.

Adjuvant Cancer Therapies

The trainee will have a working knowledge of the principles and complications of adjuvant therapy, including understanding indications for consultation with appropriate specialists.

Palliative Care

The trainee will have a working knowledge of palliation in curable gynecologic disease, including social, ethical, and legal implications of the various options.

Medical and Surgical Diseases

The trainee will have a working knowledge of important medical and surgical disorders which may affect or be affected by the female reproductive system.

CONTENT AND ORGANIZATION OF THE TRAINING PROGRAMME

We have an organized program of rotations and other educational experiences, both mandatory and elective, designed to provide each trainee with the opportunity to fulfill the educational requirements and achieve competence in the specialty.

1. The content and organization of our program is consistent with the specialty training requirements.
2. Trainees are provided with increasing individual professional responsibility, under appropriate supervision, according to their level of training, ability, and experience.
3. There is a senior-level experience in both obstetrics and gynecology for a minimum of 6 months in the final year of the programme.
4. In addition to offering the components noted, we offer community-based learning experience.

Specific Objectives by Discipline

Obstetrics

S. No.	Objective
i	To assume, under appropriate supervision, major responsibility for normal and complicated obstetrics and to take an active part in providing consultative services.
ii	To obtain adequate experience in obstetric procedures such as vaginal delivery (including normal, forceps, breech, and multiple pregnancy) and abdominal delivery by Caesarean section.
iii	To obtain adequate experience in the prevention, identification, assessment, and management of high-risk obstetrical problems.
iv	To gain experience in fetal resuscitation, stabilization, and follow-up of the newborn.

Gynecology

S. No.	Objective
v	To assume, under appropriate supervision, major responsibility for patients with gynecologic problems.
vi	To obtain technical experience in major and minor gynecological surgical procedures including hysteroscopy and operative laparoscopy.
vii	To develop appropriate skills in the diagnosis, prevention, and management of gynecological cancer including the respective roles of surgery, radiotherapy, and chemotherapy. Assignments to cancer treatment units or clinics should be assured.
viii	To develop appropriate skills in the management of patients with gynecological endocrine/infertility disorders.

Organization of Clinical Services

We have adequate numbers of patients available for teaching and an identified faculty member to whom trainees are directly responsible. There are qualified obstetricians/gynecologists attached to each clinical teaching service. The teaching service has clearly identified educational objectives.

Organized Scholarly Activities

There is a program of organized scholarly activities such as journal clubs, teaching rounds, seminars, and research conferences.

Basic and Clinical Sciences Relevant to Obstetrics and Gynecology

Our educational program provides opportunities for residents to learn and demonstrate:

Category	Description
a. Knowledge	Knowledge of anatomy of the abdomen, pelvis, and breast; physiology including the principles of the major organ systems relative to reproduction, principles of embryology, conception, fertilization, and placentation; the physiology of endocrine system; the basis of sexual dysfunction; the principles of human genetics; pathology of obstetrical and gynecological disorders; pharmacology including the metabolism, action, and toxicity of drugs commonly used in obstetrics and gynecology.
b. Clinical skills	The capability of independent patient care and the ability to choose investigation and management appropriate to the clinical situation in all aspects of obstetrics and gynecology.
c. Technical skills	Competence in all surgical and technical procedures commonly performed in obstetrics and gynecology as well as competence in pre-operative and postoperative care.
d. Judgment	The ability to select the management and procedure appropriate to the clinical situation and recognize his/her professional and technical limitations.
e. Attitudes	A compassionate interest and overall understanding of the patient as a person; the ability to function as a member of the health care team; an understanding of the obligation of continuing self-education and the teaching of others; sensitivity to psychosocial and gender issues.
f. Biomedical Ethics	Program ensures that trainees gain an understanding of the basic principles and practice of biomedical ethics as it relates to obstetrics and gynecology.

g. Communication skills	Program ensures that trainees learn effective communication skills for interacting with patients and their families, colleagues, co-workers from other disciplines, and students. Clearly defined educational objectives for teaching these skills and mechanisms of formal assessment should be in place.
h. Patient Care Team	Trainees must be given opportunities to develop effective skills in collaborating with all members of the patient care team.
i. Teaching skills	Development of effective teaching skills by teaching junior colleagues and students, through conference presentations, clinical and scientific reports.
j. Management Skills	Trainees are given opportunities to develop skills in management as applied to obstetrics and gynecology.
k. Quality Assurance / Improvement	Program provides trainees with opportunities to gain understanding of principles relating to medico-legal issues, improvement of quality of care, and resource utilization.
l. Research Opportunities for Residents	Faculty members facilitate the involvement of trainees in research and scholarly work. The program provides opportunities to develop appreciation of research through critical analysis of scientific developments, understanding research methodology, study design, data collection, and analysis. It also includes age, gender, culture, and ethnicity considerations in research.

Eligibility to Enter the Training Program

Candidate should have:

- Completed his/her MBBS, registered with PMDC
- One-year internship training

Selection Criteria

Candidate must apply to the Director of Obstetrics and Gynecology Department and will be selected for specialty training by a selection committee based on available posts and other criteria:

- Above average academic record
- Special interest in Obstetrics and Gynecology
- Passing the entrance exam is mandatory to enter the Residency training program

Instruction to Trainees

- Trainees are required to maintain their Log Book
- They are advised to make the required entries on the same day as they take place

Log Book

It is a day-to-day record of the clinical and academic work done by the trainee. Its purpose is to assess overall training and determine deficiencies for correction. It should be signed by the immediate supervisor as soon as the activity is completed. The Head of the Department should sign it once every three months.

Competency Level

The residents are expected to gain the competency level in different procedures. Key to competency level:

S No.	Description
1	Observer status
2	Assistant status
3	Performed under supervision
4	Performed independently

The candidate shall acquire the given levels of competence for the following procedures by the end of each specified period.

Obstetrics

A. Antenatal (OPD and Ward)

S. No.	Procedure	12 Month	24 Month	36 Month
1	Eliciting pertinent history	4	4	4
2	Performing physical examination	4	4	4

3	Requesting appropriate investigations	3	4	4
4	Interpreting the results of investigations	3	4	4
5	Making treatment plan	3	4	4
6	Managing immediate complications	3	4	4
7	Maintaining follow up	4	4	4
8	Using ultrasound (basic) facilities	3	4	4
9	Fetal Monitoring	3	4	4
10	Counseling	4	4	4

Gynecology

A. OPD and Ward

S. No.	Procedure	12 Month	24 Month	36 Month
1	Eliciting pertinent history	4	4	4
2	Performing physical examination	4	4	4
3	Requesting appropriate investigations	3	4	4
4	Interpreting the results of investigations	3	4	4
5	Deciding and implementing appropriate treatment	3	4	4
6	Managing immediate complications	3	4	4
7	Maintaining immediate complications	4	4	4
8	Taking "Pap" smears	4	4	4
9	Arranging assessment by Anesthetist	4	4	4
10	Pre-operative preparation of patients	4	4	4
11	Inserting vaginal pessary / IUCD	3	4	4

12	Colposcopy	1	2	3
13	Hysterosalpingography (Injection of dye)	3	4	4
14	Pipple biopsy	1	2	3

B. Intrapartum (Labor Ward)

S. No.	Procedure	12 Month	24 Month	36 Month
1	Assessment on admission	3	4	4
2	Medical induction of labor	3	4	4
3	Surgical induction of labor	3	4	4
4	Management of normal labor	4	4	4
5	Performing and repairing episiotomy	4	4	4
6	Repair of vaginal and perineal tear (excluding 3rd degree tears)	4	4	4
7	Repair of 3rd degree tears	2	3	4
8	Repair of cervical tears	2	3	4
9	Immediate management of postpartum hemorrhage	3	4	4
10	Outlet forceps delivery	4	4	4
11	Vacuum vaginal delivery	2	3	4

C. Postnatal

S. No.	Procedure	12 Month	24 Month	36 Month
1	Resuscitation of neonate	4	4	4
2	Examination of neonate	4	4	4

3	Contraception advice	4	4	4
4	Insertion of IUCD	3	4	4

B. Operative Skills

B1 – General Skills

S. No.	Procedure	12 Month	24 Month	36 Month
1	Scrubbing	4	4	4
2	Pre-operative preparation of patients	4	4	4
3	Opening and closing abdomen	4	4	4

B2 – Operative Skills

S. No.	Procedure	12 Month	24 Month	36 Month
1	Evacuation of retained products of conception	4	4	4
2	Dilatation and curettage	4	4	4
3	Cervical biopsy	3	4	4
4	Polypectomy	3	4	4
5	Marsupialization of Bartholin's cyst	3	4	4
6	Incision & Drainage of abscess	3	4	4
7	Tubal Ligation	3	4	4
8	Laparoscopy	2	3	4
9	Hysteroscopy	2	3	4
10	Ovarian cystectomy	2	3	4

11	Laparotomy for ectopic pregnancy	2	3	4
12	Myomectomy	2	3	4
13	Abdominal hysterectomy	2	3	4
14	Vaginal hysterectomy	2	3	4
15	Repair of fistula	1	2	3
16	Wertheim's operation	1	2	2
17	Cancer Surgery	1	2	2

At the End of the Clinical Training, Trainees Are Expected to:

- Submit their Log Book
- Complete their research papers / thesis
- Qualify for the final examination
- Have adequate marks in weekly assessments

Certification

Those who have completed their training satisfactorily and qualified for the exam will be awarded a training completion certificate by the institution.