THE UNIVERSITY OF BUCKINGHAM
MEDICAL SCHOOL

MB ChB

Unit Summary: Reproductive System

Updated: October 2014

1 Educational Aims of the Unit

The unit aims to enable students to make progress towards meeting some of the learning outcomes described in Tomorrow's Doctors (2009) relevant to 'The Doctor as a Scholar and Scientist' and 'The Doctor as a Professional'. The specific aims of this fourth term unit are that students should understand the processes of human reproduction from the production of gametes to the establishment of independent life of the neonate. Students should understand common problems and disorders of the male and female reproductive systems, mechanisms of contraception and the sexual transmission of diseases.

2 Learning Outcomes From Tomorrow's Doctors (2009)

Outcomes 1: The Doctor as a Scholar and Scientist.

8. The graduate will be able to apply to medical practice biomedical scientific principles.

a) Explain normal human structure and functions.

b) Explain the scientific bases for common disease presentations.

c) Justify the selection of appropriate investigations for common clinical cases.

d) Explain the fundamental principles underlying such investigative techniques.

g) Make accurate observations of clinical phenomena and appropriate critical analysis of clinical data.

12. Apply scientific method and approaches to medical research.

a) Critically appraise the results of relevant diagnostic, prognostic and treatment trials and other qualitative and quantitative studies as reported in the medical and scientific literature.

b) Formulate simple relevant research questions in biomedical science, psychosocial science or population science, and design appropriate studies or experiments to address the questions.

c) Apply findings from the literature to answer questions raised by specific clinical problems.

Outcomes 3: The Doctor as a Professional

20. The graduate will be able to behave according to ethical and legal principles. The graduate will be able to:

e) Recognise the rights and the equal value of all people and how opportunities for some people may be restricted by others' perceptions.

21. Reflect, learn and teach others.

b) Establish the foundations for lifelong learning and continuing professional development, including a professional development portfolio containing reflections, achievements and learning needs.

c) Continually and systematically reflect on practice and, whenever necessary, translate that reflection into action, using improvement techniques and audit appropriately for example, by critically appraising the prescribing of others.

d) Manage time and prioritise tasks, and work autonomously when necessary and appropriate.

e) Recognise own personal and professional limits and seek help from colleagues and supervisors when necessary.

3 Teaching and Learning Strategies

Principles will be introduced in formal lectures, and learning will be reinforced in practical classes and facilitator led small-group work immediately afterwards. Student will work in the same teams throughout Phase I to encourage team-working.

Some concepts will be discussed in more detail in tutorials, and Moodle- based tests and coursework will allow for formative assessment. Students will be provided with workbooks describing structured tasks to direct independent learning throughout the unit, and on-going use of an e-portfolio will nurture and encourage reflective practice.

4 Unit Outline/Syllabus

Session 1: Origin of the Sexes

Lecture: Development of male and female reproductive system

Group Work: Sexual differentiation

Lecture: Origin of the gametes

Session 2: Control of Reproductive Processes

Lecture: The HPG axis

Lecture: The menstrual cycle

Group Work: Hormonal control of reproduction

Session 3: Puberty and Abnormalities of Menstruation

Lecture: Puberty and the menopause

Group Work: Puberty and disorders of puberty

Lecture: Menstrual dysfunction

Session 4: The Male Reproductive System

Lecture: Clinical anatomy of the male reproductive system

Video presentation: Osteology of the pelvis

Group Work: The male reproductive system

Lecture: Histology of the male and female reproductive systems

Session 5: The Female Reproductive System

Lecture: Clinical anatomy of the female reproductive system

Video presentation: Childbirth

Group Work: The female reproductive system

Lecture: The pelvic floor

Session 6: Infections of the Genital Tract

Lecture: Infections of the genital tract

Group Work: Sexually transmitted infections

Lecture: Pelvic inflammatory disease

Session 7: Conception and Contraception

Lecture: Coitus and fertilization

Group Work: Fertility and infertility

Lecture: Contraception and infertility

Session 8: Pregnancy

Lecture: Placental development and dysfunction

Group Work: Maternal physiology of pregnancy

Lecture: Physiological adaptation in pregnancy

Session 9: Fetal Growth and Development

Lecture: Fetal physiology

Lecture: Fetal growth and development

Group Work: Assessment of fetal growth and well-being

Session 10: Labour and Birth

Group Work: Formative Assessment

Lecture: Parturition

Lecture: Labour and its problems

Session 11: Lactation and the Breast

Lecture: Lactation

Lecture: Breast disease

Group Work: Pathology o breast disease

Session 12: Tumours of the RT

Lecture: Lactation

Group Work: Case studies

5 Secondary Learning Outcomes

In addition to meeting the outcomes described in Tomorrow's Doctors, at the completion of the unit students will be able to:

- Describe the formation of the gametes in both sexes.
- Describe the embryological and fetal development of the reproductive tract in the female and male, the sequence of anatomical and physiological changes at puberty, and the mechanisms of these changes.
- Describe the anatomy of the male reproductive system, the histology of the testis and accessory sexual organs, and likewise that of the female reproductive tract and the histology of the ovaries, uterus, cervix, vagina and breast.
- Describe the ovarian and uterine cycles, explain the endocrine control of the menstrual cycle, and outline common menstrual problems.
- Describe the mechanism of the menopause.
- Describe the processes involved in coitus, the process of fertilisation and implantation, and mechanisms of action of common forms of contraception.
- List reasons for male and female infertility.
- Describe the role of the placenta in the maintenance of pregnancy and the maternal and fetal adaptations to pregnancy.
- Describe the normal pattern of fetal development and the principles of detection of fetal abnormalities.

- Describe the processes involved in normal delivery and some common problems of labour.
- Describe mechanisms of lactation.
- Describe common sexually transmitted diseases, their detection and treatment, common malignancies of the reproductive tract in the male and female, and disorders of the breast, in particular breast cancer and its treatment.

6 Key Texts and/or Other Learning Materials

- Core Texts, as detailed in your Phase 1 reading list
- *Essential Reproduction* (7th edition 2013), Johnson, M H & Everitt, B J, Blackwell Science.
- *The Reproductive System at a Glance*, (3rd edition 2010), Heffner, L J, Blackwell Science. A very basic revision text.
- *Essential Obstetrics & Gynaecology* (5th edition 2013), Symonds, Symonds & Arulkumaran, Churchill Livingstone.
- *Obstetrics and Gynaecology at a Glance*, (4th edition, 2013), Schorge, J.O & Norwitz, E., Blackwell Science

Also available in the Moodle Learning Environment is a series of self-marking multiple-choice formative assessments to allow you to assess your learning in the Unit.

Document Version Information

Document Title: Unit Summary: Reproductive System

Originator:

Date:

Replacing Document:

Approved:

Date: