



Higher National Unit specification

General information

Unit title: Maternal and Fetal Development and Wellbeing
(SCQF level 7)

Unit code: H5XG 04

Superclass: PB

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Unit purpose

This Unit is designed to introduce the candidates to the anatomical and physiological changes that occur to the mother from conception to birth. In addition the candidate will learn about fetal development from conception to the changes that take place immediately following birth. The candidate will gain an understanding of the antenatal screening process for the mother and fetus and will link this to relevant disease processes. The Unit will introduce the candidate to obstetric emergencies and the assessment and treatment processes that are appropriate. Finally the candidate will understand the role of the maternity support worker in supporting the mother baby and other professionals together with the limitations of that role.

Outcomes

On successful completion of the Unit the learner will be able to:

- 1 Identify and explain anatomical and physiological changes that occur in the mother from conception to birth.
- 2 Explain the stages of normal fetal and newborn development.
- 3 Describe antenatal screening of the mother and fetus and relate this to disease processes.
- 4 Describe common obstetric emergencies and the assessment and treatment for the mother, fetus and newborn infant.

Higher National Unit specification: General information (cont)

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Credit points and level

2 Higher National Unit credits at SCQF level 7: (16 SCQF credit points at SCQF level 7)

Recommended entry to the Unit

Although entry is at the discretion of the centre, it is recommended that candidates should have good Communication Skills, both written and oral. These can be evidenced either by the achievement of nationally recognised qualifications for example Higher English or a qualification equivalent to SCQF level 6 or by the completion of a pre-course interview part of which could take the form of a written assignment. It is also recommended that candidates should have achieved a nationally recognised qualification or Unit preferably at SCQF level 6 in human biology or anatomy and physiology. In addition to this, candidates should preferably have worked in a related field or have undertaken some work experience, paid or voluntary, in a care setting.

Core Skills

Opportunities to develop aspects of Core Skills are highlighted in the Support Notes for this Unit specification.

There is no automatic certification of Core Skills or Core Skill components in this Unit.

Context for delivery

If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes. If it is being delivered as part of a Professional Development Award (PDA) it should be taught and assessed within the subject area of that PDA.

Equality and inclusion

This Unit specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence.

Further advice can be found on our website www.sqa.org.uk/assessmentarrangements.

Higher National Unit specification: Statement of standards

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Acceptable performance in this Unit will be the satisfactory achievement of the standards set out in this part of the Unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the Knowledge and/or Skills section must be taught and available for assessment. Learners should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Outcome 1

Identify and explain anatomical and physiological changes that occur in the mother from conception to birth.

Knowledge and/or Skills

- ◆ The normal menstrual cycle and conception
- ◆ Anatomical changes that occur during conception and pregnancy and birth
- ◆ Physiological changes that occur during conception, pregnancy and birth
- ◆ Infant feeding and nurturing

Outcome 2

Explain the stages of normal fetal and newborn development.

Knowledge and/or Skills

- ◆ The development of the fetus during the first trimester
- ◆ The development of the fetus during the second trimester
- ◆ The development of the fetus during the third trimester
- ◆ The changes that occur to infant during and immediately following birth

Outcome 3

Describe antenatal screening of the mother and fetus and relate this to disease processes.

Knowledge and/or Skills

- ◆ Sexually transmitted diseases
- ◆ Anaemia — blood tests
- ◆ BP
- ◆ Down's syndrome CVS
- ◆ Ultrasounds
- ◆ Spina bifida
- ◆ Inherited disorders

Higher National Unit specification: Statement of standards (cont)

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Outcome 4

Describe common obstetric emergencies and the assessment and treatment for the mother, fetus and newborn infant.

Knowledge and skills

- ◆ Obstetric emergency care in maternity services
- ◆ Maternal Haemorrhage
- ◆ Sepsis
- ◆ Maternal resuscitation
- ◆ Pregnancy Induced Hypertension
- ◆ Role of Maternity Care Support Worker

Newborn Infant

- ◆ Hypovolaemic shock
- ◆ Sepsis
- ◆ Infant resuscitation
- ◆ Fetal abnormality

Higher National Unit specification: Statement of standards (cont)

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Evidence Requirements for this Unit

Learners will need to provide evidence to demonstrate their Knowledge and/or Skills across all Outcomes by showing that they can:

- ◆ Describe the normal menstrual cycle and conception.
- ◆ Explain the anatomical changes that occur during conception and pregnancy and birth.
- ◆ Describe the physiological changes that occur during conception, pregnancy and birth.
- ◆ Describe the physiology of breastfeeding.
- ◆ Describe the benefits of breast feeding for the mother and infant.
- ◆ Describe the development of the fetus during the first trimester
- ◆ Describe the development of the fetus during the second trimester
- ◆ Describe the development of the fetus during the third trimester
- ◆ Explain the changes that occur to infant during and immediately following birth.
- ◆ Describe screening procedures for the mother, fetus and newborn and relate them to a range of common diseases and conditions, for example;
 - Sexually transmitted diseases.
 - Anaemia - blood tests
 - Pregnancy induced hypertension.
 - Down's syndrome CVS
 - Ultrasounds
 - Spina bifida
 - Inherited disorders
- ◆ Describe the care and treatment for 3 common obstetric emergencies
 - Maternal Haemorrhage
 - Sepsis
 - Maternal resuscitation
 - Pregnancy Induced Hypertension
- ◆ Describe the assessment and treatment of the mother during 3 obstetric emergencies.
- ◆ Describe the assessment and treatment of the fetus or newborn infant during 3 obstetric emergencies.
 - Infant resuscitation
 - Fetal abnormality
 - Hypovolaemic shock
 - Sepsis
- ◆ Understand the role of Maternity Care Support Worker in supporting the mother, newborn and registered practitioners in emergency care.
- ◆ Understand the limitations of this role and the concept of delegation and accountability.



Higher National Unit Support Notes

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Unit Support Notes are offered as guidance and are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 80 hours.

Guidance on the content and context for this Unit

This Unit is designed to enable candidates to develop their Knowledge and Understanding of the care of pregnant women, the fetus and the newborn within multi professional teams. It is expected that the candidate will become familiar with the language and terminology specific to this area of care.

The candidate should be aware of legislation, principles and initiatives that support Maternity Services health and wellbeing

- ◆ Refreshed Maternity Services Framework
- ◆ Expert Group on Acute Maternity Services
- ◆ CMACE
- ◆ Scottish Patient Safety Programme
- ◆ NMC — Code of conduct and Midwives Rules
- ◆ NES A Guide to Health care Support Worker Education and Role Development
- ◆ 10 Essential Shared Capabilities

It is expected that candidates who are undertaking this PDA whilst in practice will evidence their ability to link theory to practice and record their clinical competence through either a:

- ◆ Record of Achievement
- ◆ Skills passport
- ◆ Competency Framework
- ◆ Learning Contract
- ◆ Reflective Portfolio

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Outcome 1

Whilst it has not been stated explicitly in this Unit specification, it is expected that normal anatomy and physiology will be described before addressing the changes in anatomy and physiology that occur as a result of conception, pregnancy, childbirth and the puerperium. The candidate is expected to have an understanding of the changes in the body from conception to birth. This will include looking at the normal menstrual cycle and the process of fertilisation of the ovum and the ensuing changes to the body systems throughout the pregnancy and birth. The candidate should understand the anatomical and physiological changes that occur to the mother during each of the 3 trimesters of pregnancy and during the birth. This must include hormonal changes. The candidate will gain an awareness of changes and symptoms that may be experienced by women that are normal, and those that require referral to another professional. Minor disorders of pregnancy are a series of commonly experienced symptoms related to the effects of hormones and consequence of enlargement of the uterus as the fetus grows during pregnancy. Knowledge of these symptoms such as: nausea, constipation, indigestion and heartburn, varicose veins, haemorrhoids, backache and frequency of micturition are examples that should be discussed.

Understanding of these symptoms is imperative as they may mask other more serious problems.

The candidate must understand the signs that indicate that labour has started, as well as understand the three stages and their impact on the women. They will understand about mobility during labour including optimal fetal positioning and active birth, pain relief and choices available in maternity care. The candidates will have an understanding of the process of inducing a labour when the baby is either overdue or compromised. They will be provided with information to support an understanding of alternative methods of delivery such as, forceps, ventouse, caesarean section, breech and twin births.

Postnatal care and the return of the woman's body to the non-pregnant state, will include, recognition of deviations from the normal. The candidate will gain a Knowledge and Understanding of the physiology of breastfeeding and the benefits of breastfeeding for the mother and infant both in physiological and emotional terms. In addition the nurturing aspects of alternative types of infant feeding will be discussed for example; bottle feeding, tube feeding and cup feeding.

Outcome 2

The candidate is expected to gain a knowledge and understanding of the development of the fetus from conception to birth through each of the 3 trimesters. The candidate will examine fertilization and implantation and the development of the ovum, zygote, morula, blastocyst, embryo and fetus through to the fetus. The candidate should gain an understanding of chromosomes at this stage. Also the candidate should understand how to calculate of gestational age of the fetus.

Higher National Unit Support Notes (cont)

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The development of the placenta and the amnion and chorion should be examined and the make-up and function of the placenta, amniotic fluid and the umbilical cord — it contains 2 arteries and 1 vein should also be understood. The development of the fetus could be studied on a month by month basis so the candidate gains a thorough Knowledge and Understanding of the development of body systems, growth and movement of the fetus.

Month 1 — the fetus is $\frac{1}{4}$ inch long, the heart, digestive system, spine and spinal cord begin to form, the placenta begins to develop, the fertilized egg is now 10,000 times larger than at conception.

Month 2 — the fetus is now 1 $\frac{1}{8}$ inches long, the heart is functioning, eyes nose, lips and teeth are forming, the penis begins to appear in boys, the baby is now moving.

Month 3 — the fetus is now 2 $\frac{1}{2}$ –3 inches long and is now recognisable as a baby, nails start to develop and earlobes are formed, all limbs are fully formed, eyes are almost fully developed, most organs and tissues are already formed. The heart can be heard using a doppler.

Month 4 — the fetus is now about 7 inches long, and can now swallow, and may even start to suck his/her thumb, tooth buds begin to form and sweat glands are forming on the palms and soles of the feet. Fingers and toes are well developed, the gender of the fetus is identifiable, the skin is pink and covered in downy hair called lanugo.

Month 5 — the fetus is now about 10 inches long and weighs about 1 pound. Hair starts to grow on the head and the mother will start to feel movement. eyelids, eyelashes and eyebrows start to grow and internal organs continue to mature.

Month 6 — the fetus is now about 14 inches long and can weigh about 2 pounds. The eyes begin to open for short periods and the skin is covered in a protective layer called vernix.

Month 7 — the fetus is now about 14 inches long and weighs about 3 pounds. Fat layers are forming and taste buds in the tongue have developed. Organs continue to mature, the skin is wrinkled and red.

Month 8 — the fetus is now about 18 inches long and weighs about 6 pounds. Rapid brain growth starts to occur and overall growth is rapid. With the exception of the lungs most organs are now fully developed. Fetal movement can be seen from the outside. Fingernails now extend beyond the fingertips.

Month 9 — the fetus is now about 20 inches long and can weigh about 7-8 pounds. The lungs are now mature and the fetus is fully developed and can survive outside the mother's body. The skin is pink and smooth.

The candidate should understand the anatomical and physiological changes that occur in the newborn immediately following delivery.

The candidate will be provided with the knowledge to assess the wellbeing of the newborn infant after birth. The importance of drying and wrapping the baby will be explained in order to prevent hypothermia. Common minor problems will be highlighted in the neonate, such as skin lesions, breast enlargement, skin tags, accessory digits, sacral dimples, tongue tie, single palmar creases and nerve injuries. The management of thermoregulation of the newborn as well as the physiology and management of jaundice and hypoglycaemia will be discussed.

Higher National Unit Support Notes (cont)

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Outcome 3

This Unit is designed to give the candidate an understanding of evidenced based health and wellbeing of the pregnant woman and baby. Candidates should be introduced to the variety of care environments where pregnant women and infants will be present and the professionals who are responsible for delivering care in those environments. Candidates will develop knowledge and understanding of pregnancy and new-born screening and the significance on care delivery. The normal parameters for pregnancy and the new-born, thermoregulation, healthy heart and normal breathing will be examined.

The candidates will be able to recognise and appropriately assess a variety of conditions and appropriate screening procedures in the antenatal, intranatal and post natal periods and have knowledge of, for example:

Pregnancy:

- ◆ Blood Screening
- ◆ Ultrasound Scanning
- ◆ Diabetes — IDD, gestational
- ◆ Hypertension in Pregnancy
- ◆ Complex needs

Infant:

- ◆ Dried blood spot
- ◆ Jaundice
- ◆ Hypoglycaemia
- ◆ Thermoregulation
- ◆ Oxygen therapy
- ◆ Capillary blood sampling
- ◆ Recognition of the sick infant

Candidates should be introduced to current legislation and guidance on health surveillance aimed at identifying problems early and referral to registered practitioner in supporting women and infants and their families to ensure good health and wellbeing.

Outcome 4

This Unit is designed to give the candidate an understanding of obstetric emergency care of woman, fetus and newborn infant. It is important that the candidate explores normal parameters of health such as blood pressure, pulse, respiration and recognises the role of the maternity support worker in acute, planned or unplanned hospital admission and the effect that this admission will have on the mother, the infant and their families.

Higher National Unit Support Notes (cont)

Unit title: Maternal and Fetal Development and Wellbeing
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The candidates will be able to recognise and know the assessment procedures for a variety of conditions and emergency situations.

Maternal:

- ◆ Haemorrhage
- ◆ Sepsis
- ◆ Maternal resuscitation
- ◆ Pregnancy Induced Hypertension

Newborn Infant:

- ◆ Hypovolaemic shock
- ◆ Sepsis
- ◆ Infant resuscitation
- ◆ Recognition of the sick infant

In learning about the assessment process the candidate must be familiar with common assessment tools such as:

- ◆ Standardised early warning score (SEWS)
- ◆ Situation Background Assessment and Recommendation (SBAR)

Guidance on approaches to delivery of this Unit

This Unit is most likely to be studied by candidates undertaking the Group Award. It is primarily designed to equip trainee maternity assistants with the underpinning Knowledge and Skills to work with patients with maternity care needs from a health improvement perspective.

Candidates should have an understanding of the role and scope of practice of the maternity care assistant.

This Unit is an options Unit within the Professional Development Award (PDA) in Developing Professional Practice in Health and Social Care at SCQF level 7. The Knowledge and Skills highlighted within this Unit provide a theoretical and practical base for further study. Each Outcome is mutually supportive of each other and builds on Knowledge and Skills in a sequential way. An understanding of each of the Outcomes will be required in order to evidence all the Outcomes of this Unit.

Guidance on approaches to assessment of this Unit

Evidence can be generated using different types of instruments of assessment. The following are suggestions only. There may be other methods that would be more suitable to learners.

Centres are reminded that prior verification of centre devised assessments would help to ensure that the national standard is being met. Where learners experience a range of

assessment methods, this helps them to develop different skills that should be transferable to work or further and higher education.

Outcome 1 and 2 could be integrated and assessed by short answer questions or the use of a case study if the candidate is on placement. The maternal development could be discussed in tandem with the fetal development. The case study or questions must meet the Evidence Requirements for these Outcomes.

The assessment should be academically written and referenced using the Harvard referencing system.

Higher National Unit Support Notes (cont)

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Outcomes 3 and 4 these Outcomes could have an integrated assessment in the form of a written case study with questions. The case study could explore the screening process and consequences of lack of uptake and link this to an obstetric emergency.

The assessment should be academically written and referenced using the Harvard referencing system.

Opportunities for e-assessment

E-assessment may be appropriate for some assessments in this Unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or social software. Centres which wish to use e-assessment must ensure that the national standard is applied to all learner evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. The most up-to-date guidance on the use of e-assessment to support SQA's qualifications is available at www.sqa.org.uk/e-assessment.

Opportunities for developing Core and other essential skills

There are opportunities to develop the Core Skills of:

- ◆ *Communication* at SCQF level 6
- ◆ *Problem Solving* at SCQF level 5
- ◆ *Working with Others* at SCQF level 5
- ◆ *Information and Communication Technology (ICT)* at SCQF level 5

In this Unit, although there is no automatic certification of Core Skills or Core Skill components.

Communication — will be evidenced via the candidate's work with individuals and groups as well as within written assessments.

Problem Solving — critical thinking, planning and organising, reviewing and evaluating will be evidenced through supervision in the candidate's workplace and within written assignments.

Working with Others — will again be evidenced in the candidate's ability to interact, communicate and negotiate with those with whom they come into contact and to work collaboratively with other professionals and individuals.

Information and Communication Technology (ICT) — could be evidenced by the use of standard applications to obtain and process information and data for assignments.

Higher National Unit Support Notes (cont)

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Disabled candidates and/or those with additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website www.sqa.org.uk/assessmentarrangements

Indicative Reading

Stables, D., Rankin, J. (2010) Physiology in Childbearing with anatomy and related biosciences. 3rd edition. Edinburgh: Balliere Tindall Elsevier

Chenery-Morris, & McLean, M (2013) Normal Midwifery Practice: Transforming Midwifery Practice. Sage Publications Ltd, London

Fraser, D., & Cooper, M. (2009) Myles Textbook for Midwives. 15th Edition. Edinburgh: Churchill Livingstone.

Johnstone, R. & Taylor, W (2009). Skills for Midwifery Practice. 3rd edition. Edinburgh: Churchill Livingstone

Medforth, J, Battersby, S, Evans, M, Marsh, B & Walker, a (2006) Oxford Handbook of Midwifery. Oxford University Press

Chaudhry, B, & Harvey, D (2001) Paediatrics and Child Health
Mosby Edinburgh

Robson, SE., & Waugh, J., (2008). Medical Disorders in Pregnancy- A manual for midwives. Oxford: Blackwell Publishing

Boyle, M. (2009) Emergencies around Childbirth a handbook for Midwives 2nd edition. Cornwall: Radcliffe Medical Press.

Nursing and Midwifery Council (2009). Standards of Proficiency for pre-registration midwifery education. London: Nursing and Midwifery Council.

History of changes to Unit

Version	Description of change	Date

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General information for learners

Unit title: Maternal and Fetal Development and Wellbeing (SCQF level 7)

This Unit will introduce you to the process of pregnancy from conception through to birth.

You will learn about the changes that happen to the mother's body during pregnancy and what happens during the three stages of labour and in the postnatal period. You will also explore the different stages of fetal development from a few cells to a fully formed baby at birth.

You will learn about the development of the foetus on a month by month basis and how each of the body systems develop, when the fetus starts to move and when they are capable of living independently of the mother.

Candidates will develop Knowledge and Understanding of pregnancy and new-born screening and the significance on care delivery as well as the different professionals and care environments where you will encounter pregnant women and newborn infants. In addition you will understand the role of the maternity support worker in supporting the mother, newborn and registered practitioners. It is important that you understand the limitations of your role and that you will be supervised throughout your practice. It is important that you learn about obstetric emergencies and the actions you may need to take, so you will explore common obstetric emergencies and the assessment and treatment that would be applied. It will also be necessary for you to be familiar with the assessment tools that are routinely used in this environment.

The assessment for this Unit may be integrated into two assessments. These could be case studies based on individuals and situations you have encountered if you are on placement or they could be written case studies with questions.