



## Higher National Unit Specification

### General information

**Unit title:** Dental Nursing: Inhalation Sedation (SCQF level 8)

**Unit code:** HT8T 35

**Superclass:** PH

**Publication date:** August 2017

**Source:** Scottish Qualifications Authority

**Version:** 01

### Unit purpose

This specialist unit is designed to equip the learner with the knowledge and skills required to work as a second appropriate person during the delivery of inhalation sedation by a competent operator. This unit is suitable for registered dental nurses (DN) who work in a setting that delivers inhalation sedation.

### Outcomes

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

- 1 Define the role of the dental nurse prior to the sedation visit, during the sedation visit and during patient recovery.
- 2 Explain the current legislation and professional guidance relevant to inhalation sedation.
- 3 Explain the anatomy and physiology relevant to inhalation sedation.
- 4 Explain the pharmacology of inhalation sedation agents.
- 5 Demonstrate recognition and management of medical emergencies including sedation related complications.

### Credit points and level

2 Higher National Unit credits at SCQF level 8: (16 SCQF credit points at SCQF level 8)

### Recommended entry to the unit

Access to this specialist unit is only upon the successful completion of a registerable primary Dental Nurse Qualification and registration with the General Dental Council (GDC).

## **Higher National Unit Specification: General information (cont)**

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The learner must be working in a dental practice that regularly treats patients using inhalation sedation and should have the support of appropriately skilled and qualified staff and access to the equipment and resources required to complete sedation procedures.

It is strongly recommended that the learner be working in a role where they may exercise some autonomy and use their initiative whilst supporting the dentist with pre-operative care, during the sedation visit and with post-operative care.

### **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.

The unit is designed to contribute to the continued professional development of registered dental nurses and can therefore be delivered as a standalone unit. It is contained within the PDA in Inhalation Sedation for Dental Nurses and within the HND in Dental Nursing.

### **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](http://www.sqa.org.uk/assessmentarrangements).

## Higher National Unit Specification: Statement of standards

### Unit title: Dental Nursing: Inhalation Sedation (SCQF level 8)

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

Define the role of the dental nurse prior to the sedation visit, during the sedation visit and during patient recovery.

##### Knowledge and/or skills

- ◆ Patient assessment
- ◆ American Society of Anesthesiologists' (ASA) patient classification
- ◆ Methods for dealing with anxious patients
- ◆ Equipment used for inhalation sedation
- ◆ Preparation of the environment for inhalation sedation
- ◆ Methods of scavenging
- ◆ Support of the patient and dentist during the sedation procedure including clinical monitoring
- ◆ Support of the patient during recovery
- ◆ Post-operative advice

#### Outcome 2

Explain the current legislation and professional guidance relevant to inhalation sedation.

##### Knowledge and/or skills

- ◆ Legal and ethical considerations
- ◆ Patient consent
- ◆ Recording of patient information
- ◆ Evidence based guidance and how to maintain standards
- ◆ CPD requirements for dental teams delivering inhalation sedation
- ◆ Policies and procedures required for the delivery of inhalation sedation

#### Outcome 3

Explain the anatomy and physiology relevant to inhalation sedation.

##### Knowledge and/or skills

- ◆ Cardiovascular system
- ◆ Respiratory system

## Higher National Unit Specification: Statement of standards (cont)

**Unit title:** Dental Nursing: Inhalation Sedation (SCQF level 8)

### Outcome 4

Explain the pharmacology of inhalation sedation agents.

#### Knowledge and/or skills

- ◆ Pharmacology and presentation of nitrous oxide and oxygen
- ◆ Advantages and disadvantages of inhalation sedation agents
- ◆ Indications and contra-indications of inhalation sedation agents
- ◆ Control measures for the use of nitrous oxide

### Outcome 5

Demonstrate recognition and management of medical emergencies including sedation related complications.

#### Knowledge and/or skills

- ◆ Recognition of complications and emergencies
- ◆ Management of complications and emergencies

#### 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:

#### Outcome 1

- ◆ Define the role of the dental nurse prior to the sedation visit, during the sedation visit and during patient recovery.
  - Explain patient assessment procedures.
  - Explain methods of dealing with and supporting anxious patients.
  - Explain the ASA patient classification system.
  - Identify and describe equipment needed for inhalation sedation.
  - Identify the safety features of the inhalation sedation machine.
  - Explain the importance of using an appropriate scavenging system.
  - Prepare the dental environment for inhalation sedation.
  - Explain the role of the dental nurse assisting with inhalation sedation.
  - Explain the purpose of clinical monitoring during inhalation sedation.
  - Explain the role of the dental nurse during patient recovery.

#### Outcome 2

- ◆ Explain the current legislation and professional guidance relevant to inhalation sedation.
  - Explain boundaries of the dental nurse's role during sedation procedures.
  - Describe key legal and ethical considerations including the importance of chaperone duties.
  - Describe the ethics, professional standards and legislation which inform the process around gaining valid consent for inhalation sedation.
  - Outline the professional guidance governing conscious sedation in dentistry.
  - Identify other team members' roles and responsibilities within sedation guidance and explain how standards are maintained, including the use of continued professional development.

## Higher National Unit Specification: Statement of standards (cont)

### Unit title: Dental Nursing: Inhalation Sedation (SCQF level 8)

#### Outcome 3

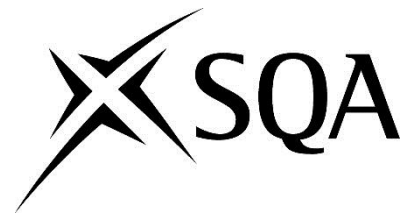
- ◆ Explain the anatomy and physiology relevant to inhalation sedation.
  - Identify major landmarks associated with the heart and major blood vessels.
  - Identify the structures of the respiratory.

#### Outcome 4

- ◆ Explain the pharmacology of inhalation sedation agents.
  - State the advantages and disadvantages of inhalation sedation.
  - State the indications and contraindications for use of inhalation sedation.
  - Describe the properties of nitrous oxide and oxygen.
  - Describe the control measures used when working with nitrous oxide.
  - Describe the stages and planes of anaesthesia.
  - Explain how nitrous oxide is eliminated from the body.
  - Explain the term diffusion hypoxia.

#### Outcome 5

- ◆ Demonstrate recognition and management of medical emergencies including sedation related complications.
  - Recognise and assist with the management of:
    - respiratory depression/arrest.
    - airway obstruction.
    - cardiac arrest.
    - vasovagal syncope.
    - diabetic coma.
    - epileptic seizure.
    - angina attack.
    - myocardial infarction.
    - asthmatic attack.
    - over-sedation.
  - Establish and maintain airway.
  - Demonstrate effective chest compressions during CPR.
  - Demonstrate safe use of a defibrillator.
  - Select emergency drugs and equipment and make ready for use.



## Higher National Unit Support Notes

### Unit title: Dental Nursing: Inhalation Sedation (SCQF level 8)

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

The unit can be taken individually for purposes of continued professional development. It can also be taken as part of the HND in Dental Nursing at SCQF level 8.

The content has been aligned with the unit, *Dental Nursing: Intravenous Sedation* therefore offers opportunities for integration of assessment or recognition of prior learning, although these are always at the discretion of the delivering centre.

#### Outcome 1 should include:

- ◆ The role of the DN prior to the inhalation sedation visit including preparation of the environment
- ◆ The role of the DN during the sedation visit
- ◆ The role of the DN during patient recovery
- ◆ Patient assessment and treatment planning, including valid consent
- ◆ American Society of Anesthesiologists (ASA) patient classification
- ◆ Advanced communication skills required to carry out the role effectively
- ◆ Equipment for inhalation sedation
- ◆ Methods of scavenging
- ◆ Clinical monitoring

#### Outcome 2 should cover:

- ◆ GDC Standards for the Dental Team
- ◆ GDC Scope of Practice
- ◆ GDC Continuing Professional Development
- ◆ Consent
- ◆ Ethical considerations
- ◆ Relevant current legislation and guidance including:
  - Data protection
  - Freedom of information
  - Caldicott principles
  - Conscious Sedation in Dentistry Dental Clinical Guidance — Scottish Dental Clinical Effectiveness Programme 2006
  - Standards for Conscious Sedation in the Provision of Dental Care — Report of the Intercollegiate Advisory Committee for Sedation in Dentistry 2015
  - NICE guidelines [CG112] Sedation in under 19s: using sedation for diagnostic and therapeutic procedures

## Higher National Unit Support Notes

**Unit title:** Dental Nursing: Inhalation Sedation (SCQF level 8)

### Outcome 3 should include

- ◆ Cardiovascular system including the major blood vessels, heart and blood pressure
- ◆ Respiratory system including structure and function
- ◆ Physiology of respiratory system

### Outcome 4 should include:

- ◆ Properties and actions of nitrous oxide
- ◆ Properties and actions of oxygen
- ◆ Control measures for the use of nitrous oxide
- ◆ Control of Substances Hazardous to Health (COSHH)
- ◆ Stages and planes of anaesthesia
- ◆ Advantages and disadvantages of inhalation sedation
- ◆ Indications and contra-indications of inhalation sedation
- ◆ Process of elimination of nitrous oxide from the body

### Outcome 5 should include:

- ◆ Recognition and management of sedation related conditions:
  - respiratory depression/arrest
  - airway obstruction
  - cardiac arrest
  - vasovagal syncope
  - diabetic coma
  - epileptic attack
  - angina attack
  - myocardial infarction
  - asthmatic attack
  - anaphylaxis
  - over-sedation
- ◆ Demonstrating the use of the ABCDE approach:
  - establishing and maintaining airway
  - demonstrating effective chest compressions during CPR
  - safe use of a defibrillator
  - selection of emergency drugs and equipment and readiness for use

## Higher National Unit Support Notes (cont)

**Unit title:** Dental Nursing: Inhalation Sedation (SCQF level 8)

### Guidance on approaches to delivery of this unit

The nature of this unit requires that it be delivered over a period of time, sufficient for learners to complete the activities required to gather the necessary evidence and gain sufficient experience to operate competently.

Delivery should be student centred and take account of actual workplace experience.

It is strongly recommended that learners participate in a minimum of 10 inhalation sedation cases to allow them to gather the practical evidence required.

### Guidance on approaches to assessment of this unit

Evidence can be generated using different types 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.

Assessment for this unit can be a mixture of observed practice, responses to structured questions and learner reports based on their research into relevant topics, eg current legislation and professional guidance. The cases covered must be real life patient cases and be witnessed by a dentist who can authenticate the learners contribution to the procedure. The learner should work in a dental environment that regularly offers inhalation sedation to patients in order for the learner to develop and cement the skills learned. The nature of this unit is such that learners require to maintain the skills they have developed. Simulation based on a realistic working environment is acceptable for Outcome 5.

#### Outcome 1

Performance evidence for this outcome should come from participation in a minimum of 10 actual patient cases. A template 'Record of Inhalation Sedation Patient Case' has been produced and is available to download from the SQA website if required. The learner's underpinning knowledge relating to this outcome could be assessed using questions in a closed-book assessment, eg describe methods of dealing with anxious patients. This closed-book assessment could be integrated with assessment of Outcomes 3 and 4.

#### Outcome 2

Learners should produce a report based on their research into current legislation and professional guidance relating to conscious sedation. The learner should show clearly how her/his own dental practice follows the legislation/guidance, including training/CPD of staff. The report could be supported by appropriate product evidence from their 10 patient cases in practice, eg consent documentation and post-operative instructions. Patient confidentiality must be maintained at all times therefore identifying patient data from practice documentation must be obscured.



## Higher National Unit Support Notes (cont)

**Unit title:** Dental Nursing: Inhalation Sedation (SCQF level 8)

### Outcome 3

This outcome could be assessed by a series of closed-book questions covering the knowledge and skills. These questions can be made up of multiple-choice questions, short answer questions and/or labelling a diagram. This closed-book assessment could be integrated with Outcomes 1 and 4.

### Outcome 4

This outcome could be assessed by a series of structured extended response questions detailing the presentation and properties of nitrous oxide and oxygen, the dosage and indications and contra-indications of the nitrous oxide, elimination of nitrous oxide, etc. This closed-book assessment could be integrated with Outcomes 1 and 3.

### Outcome 5

This outcome could be assessed by the observation (using an observation checklist) of the simulated management of sedation related complications supported by professional discussion/verbal questioning.

## 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](http://www.sqa.org.uk/e-assessment).

## Opportunities for developing Core and other essential skills

There will be opportunities to develop aspects of the Core Skills of *Communication, Working with Others, Information and Communication Technology (ICT)* and *Problem Solving* at SCQF level 6 and *Numeracy* at SCQF level 5 throughout this Unit.

## History of changes to unit

Version	Description of change	Date

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## General information for learners

### Unit title: Dental Nursing: Inhalation Sedation (SCQF level 8)

This section will help you decide whether this is the unit for you by explaining what the unit is about, what you should know or be able to do before you start, what you will need to do during the unit and opportunities for further learning and employment.

This section will help you decide whether this is the unit for you by explaining what the unit is about, what you should know or be able to do before you start, what you will need to do during the unit and opportunities for further learning.

This specialist unit is designed to enable you to work as a second appropriate person during the delivery of inhalation sedation by a competent operator. This unit is suitable for you if you are a registered dental nurse who works in a setting that delivers inhalation sedation. You will be expected to exercise some autonomy and use your initiative whilst supporting the dentist with patient pre-operative care, during the sedation visit and during post-operative care. You will complete evidence for five outcomes to achieve this unit, based on a minimum of 10 real patient cases.

- ◆ Define the role of the dental nurse prior to the sedation visit, during the sedation visit and during patient recovery.
- ◆ Explain the current legislation and professional guidance relevant to inhalation sedation.
- ◆ Explain the anatomy and physiology relevant to inhalation sedation.
- ◆ Explain the pharmacology of inhalation sedation agents.
- ◆ Demonstrate recognition and management of medical emergencies including sedation related complications.

It can be taken as a stand-alone unit for purposes of dental nursing/DCP continued professional development. It can also be taken as part of the HND in Dental Nursing at SCQF level 8. The content has been aligned with the unit, *Dental Nursing: Intravenous Sedation* therefore offers opportunities for integration of assessment or recognition of prior learning, although these are always at the discretion of the delivering centre.

There are opportunities to develop aspects of your Core Skills in *Communication, Problem Solving, Working with Others, Information and Communication Technology (ICT)* and *Numeracy* throughout the unit.