



Higher National Unit Specification

General information

Unit title: Dental Nursing: Intravenous Sedation (SCQF level 8)

Unit code: HT8V 35

Superclass: PH

Publication date: August 2017

Source: Scottish Qualifications Authority

Version: 02

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 intravenous sedation by a competent operator. This unit is suitable for registered dental nurses who work in a setting that delivers intravenous sedation.

Outcomes

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

- 1 Define the role of the dental nurse during the pre-operative visit, the sedation visit and post-operative care.
- 2 Explain the current legislation and professional guidance relevant to intravenous sedation.
- 3 Explain the anatomy and physiology relevant to sedation
- 4 Explain the pharmacology of intravenous sedation drugs
- 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)

Higher National Unit Specification: General information (cont)

Unit title: Dental Nursing: Intravenous Sedation (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 GDC. The learner must be working in a dental practice that frequently treats patients using intravenous sedation and has the necessary skills, continued professional development and equipment 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.

This unit is contained within the optional section of the HND 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.

Higher National Unit Specification: Statement of standards

Unit title: Dental Nursing: Intravenous 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 during the pre-operative visit, the sedation visit and post-operative care.

Knowledge and/or skills

- ◆ Patient assessment
- ◆ American Society of Anesthesiologists' (ASA) patient classification
- ◆ Alternative techniques to intravenous midazolam (both standard and advanced)
- ◆ Blood pressure recording
- ◆ Methods for dealing with anxious patients
- ◆ Equipment used for intravenous sedation
- ◆ Preparation of the environment for intravenous sedation
- ◆ Support of the patient and dentist during the sedation procedure including monitoring methods
- ◆ Support of the patient and dentist during patient recovery
- ◆ Post-operative care

Outcome 2

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

Knowledge and/or skills

- ◆ Legal and ethical considerations
- ◆ Patient consent
- ◆ Recording of patient information
- ◆ Evidence based guidance and how the dental team maintains standards
- ◆ Continued Professional Development (CPD) requirements for dental teams delivering IV sedation
- ◆ Policies and procedures required for a practice to deliver sedation

Outcome 3

Explain the anatomy and physiology relevant to sedation.

Higher National Unit Specification: Statement of standards (cont)

Unit title: Dental Nursing: Intravenous Sedation (SCQF level 8)

Knowledge and/or skills

- ◆ Cardiovascular System
- ◆ Respiratory System
- ◆ Cannulation Sites

Outcome 4

Explain the pharmacology of intravenous sedation drugs.

Knowledge and/or skills

- ◆ Presentation of midazolam and flumazenil
- ◆ Properties of midazolam and flumazenil
- ◆ Other drugs that may be used for IV sedation

Outcome 5

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

Knowledge and/or skills

- ◆ Recognition of complications/emergencies
- ◆ Management of complications/emergencies

Higher National Unit Specification: Statement of standards (cont)

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

- ◆ explain patient assessment procedures.
- ◆ describe the alternative techniques to intravenous midazolam and their advantages and disadvantages.
- ◆ explain methods for dealing with and supporting anxious patients.
- ◆ explain the American Society of Anesthesiologists' (ASA) patient classification.
- ◆ record blood pressure.
- ◆ identify and describe equipment needed for intravenous sedation.
- ◆ prepare the dental environment for intravenous sedation.
- ◆ explain the dental nurses' role during intravenous sedation.
- ◆ explain the purpose of mechanical and clinical monitoring during sedation.
- ◆ explain the dental nurses' role during patient recovery and post-operative care.

Outcome 2

- ◆ explain the role and boundaries of the dental nurse during sedation procedures.
- ◆ describe key legal and ethical considerations including the importance of chaperone duties.
- ◆ describe the issues ethics/professional standards/legislation which inform the process around gaining written consent for IV sedation.
- ◆ outline the professional guidance governing conscious sedation in dentistry.
- ◆ identify the dental team's role within sedation guidance and explain how the team maintains these standards, including the use of continued professional development.

Outcome 3

Cardiovascular system

- ◆ label major landmarks associated with the heart and major blood vessels.
- ◆ describe the physiology of blood pressure and how it is controlled and monitored.

Respiratory system

- ◆ identify the structures of the respiratory system.
- ◆ describe the process of respiration.
- ◆ describe the oxygen disassociation curve.

Cannulation sites

- ◆ describe the anatomy of the dorsum of the hand.
- ◆ describe the anatomy of the cubital fossa.
- ◆ list other sites that may be used to gain intravenous access.

Higher National Unit Specification: Statement of standards (cont)

Unit title: Dental Nursing: Intravenous Sedation (SCQF level 8)

Outcome 4

- ◆ describe the properties of midazolam and flumazenil.
- ◆ describe the actions of midazolam and flumazenil.
- ◆ identify the indications and contra-indications of midazolam and flumazenil including dosage.
- ◆ describe other drugs that may be used for IV sedation including their properties and presentation.
- ◆ describe the reversal process and explain how this is administered.
- ◆ describe the process used by the body to metabolise and eliminate sedation drugs.

Outcome 5

- ◆ 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.
 - anaphylaxis
 - intravenous drug reactions/overdosage.
- ◆ demonstrate use of ABCDE approach:
 - establish and maintain airway.
 - demonstrate effective chest compressions during CPR.
 - demonstrate safe use of defibrillator.
 - select emergency drugs and equipment and make ready for use.

The use of simulation is acceptable for this outcome.



Higher National Unit Support Notes

Unit title: Dental Nursing: Intravenous 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

Outcome 1 should include:

- ◆ The role of the DN during the pre-operative assessment
- ◆ The role of the DN during the sedation visit
- ◆ The role of the DN during post-operative care
- ◆ Patient assessment and treatment planning
- ◆ Alternatives techniques to intravenous midazolam (both standard and advanced)
- ◆ American Society of Anesthesiologists (ASA) patient classification
- ◆ Advanced communication skills
- ◆ Manual/Automatic recording of blood pressure
- ◆ Equipment for intravenous sedation
- ◆ Pulse oximeter
- ◆ Clinical monitoring

Outcome 2 should include:

- ◆ GDC Standards Guidance for Dental Professionals
- ◆ GDC Scope of Practice
- ◆ GDC Continual 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, Third Edition 2017
 - Standards for Conscious Sedation in the Provision of Dental Care – Report of the Intercollegiate Advisory Committee for Sedation in Dentistry 2015
 - Sedation in under 19s: using sedation for diagnostic and therapeutic procedures - NICE 2010
 - Standards for Conscious Sedation in Dentistry: Alternative Techniques - The Standing Committee on Sedation for Dentistry 2007
 - Society for the Advancement of Anaesthesia in Dentistry (SAAD)

Higher National Unit Support Notes (cont)

Unit title: Dental Nursing: Intravenous 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
- ◆ Oxygen disassociation curve
- ◆ Cannulation sites used for administration of the drug

Outcome 4 should include:

- ◆ Properties and actions of midazolam
- ◆ Properties and actions of flumazenil
- ◆ Properties and actions of propofol
- ◆ Other IV sedation drugs, eg opioids
- ◆ Indications and contra-indications of sedation drugs
- ◆ Process of removal by the body of sedation drugs

Outcome 5 should include:

- ◆ 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
 - anaphylaxis
 - intravenous drug reactions/overdosage
- ◆ Demonstrate use of ABCDE approach:
 - establish and maintain airway
 - demonstrate effective chest compressions during CPR
 - demonstrate safe use of defibrillator
 - select emergency drugs and equipment and make ready for use

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 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 30 intravenous sedation cases to allow them to gather the practical evidence required.

Higher National Unit Support Notes (cont)

Unit title: Dental Nursing: Intravenous Sedation (SCQF level 8)

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 will be a mixture of observed practice, responses to structured questions, and learner reports based on their research into relevant topics. The cases covered in the assessment of Outcome 1 must be real life patient cases and be witnessed by a dentist who can detail the learners contribution in the procedure. The learner should work in a practice that regularly offers intravenous 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 maintaining the skills developed. Practical exercises (in the case of Outcome 5) may assist in the delivery of this unit.

Outcome 1

Performance evidence for this outcome should come from participation in actual patient cases. A sample 'Record of 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 set questions, eg to explain the advantages and disadvantages of the alternatives to intravenous midazolam (both standard and advanced) and to describe methods of dealing with anxious patients.

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 product evidence from their practice, eg consent documentation, equipment, medicaments/drugs and post-operative instructions.

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.

Outcome 4

This outcome could be assessed by a series of structured extended response questions detailing the presentation and properties of midazolam and flumazenil. The dosage, indications and contra-indications of the midazolam including the elimination of the drug from the body and the use of flumazenil as the reversal agent should be explained. In addition the learner should be able to describe other drugs that may be used for IV sedation, ie opioids.

Higher National Unit Support Notes (cont)

Unit title: Dental Nursing: Intravenous Sedation (SCQF level 8)

Outcome 5

This outcome could be assessed by the observation of the simulated management of sedation related complications.

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* (Oral and Written), *Working with Others* and *Problem Solving* in this unit, although there is no automatic certification of Core Skills or core skill components.

History of changes to unit

Version	Description of change	Date
02	Clarification and standardisation amendments	12/09/2017

© Scottish Qualifications Authority 2017

This publication may be reproduced in whole or in part for educational purposes provided that no profit is derived from reproduction and that, if reproduced in part, the source is acknowledged.

Additional copies of this unit specification can be purchased from the Scottish Qualifications Authority. Please contact the Business Development and Customer Support team, telephone 0303 333 0330.

General information for learners

Unit title: Dental Nursing: Intravenous 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 specialist unit is designed to enable you to work as a second appropriate person during the delivery of intravenous 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 intravenous 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.

On completion of the unit you should be able to:

- 1 Define the role of the dental nurse during the pre-operative visit, the sedation visit and post-operative care
- 2 Explain the current legislation and professional guidance relating to sedation
- 3 Explain the anatomy and physiology relevant to sedation
- 4 Explain the pharmacology of intravenous sedation drugs
- 5 Demonstrate recognition and management of medical emergencies including sedation related complications.

There will also be opportunities to develop your Core Skills in *Communication*, *Working with Others* and *Problem Solving* throughout this unit.