



## Higher National Unit specification: general information

**Unit title:** Dental Nursing: Intravenous Sedation

**Unit code:** H0BP 35

**Superclass:** PF

**Publication date:** January 2012

**Source:** Scottish Qualifications Authority

**Version:** 01

### Unit purpose

This specialist Unit is designed to equip the candidate 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.

On completion of the Unit the candidate 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 relevant to intravenous sedation.
- 3 Explain the anatomy and physiology relevant to sedation
- 4 Explain the pharmacology of intravenous sedation drugs
- 5 Demonstrate the emergency support procedures for sedation related complications

### Recommended prior knowledge and skills

Access to this specialist Unit is only upon the successful completion of a registerable primary Dental Nurse Qualification and registration with the GDC. The candidate 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 candidate 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.

## **General information (cont)**

### **Credit points and level**

2 Higher National Unit credit(s) at SCQF level 8: (16 SCQF credit points at SCQF level 8\*)

*\*SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

### **Core Skills**

Opportunities to develop aspects of Core Skills are highlighted in the Support Notes of 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.

## Higher National Unit specification: statement of standards

**Unit title:** Dental Nursing: Intravenous Sedation

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The sections of the Unit stating the Outcomes, Knowledge and/or Skills, and Evidence Requirements are mandatory.

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. Candidates 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 Anaesthesiologists' (ASA) Patient Classification
- ◆ Alternatives to intravenous midazolam (both basic 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

#### Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ Explain patient assessment procedures
- ◆ Describe the alternatives to intravenous midazolam and their advantages and disadvantages
- ◆ Explain methods for dealing with and supporting anxious patients
- ◆ Explain the American Society of Anaesthesiologists' (ASA) 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

## Higher National Unit specification: statement of standards (cont)

**Unit title:** Dental Nursing: Intravenous Sedation

### 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

#### Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ 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

## Higher National Unit specification: statement of standards (cont)

**Unit title:** Dental Nursing: Intravenous Sedation

### Outcome 3

Explain the anatomy and physiology relevant to intravenous sedation.

#### Knowledge and/or Skills

- ◆ Cardiovascular System
- ◆ Respiratory System
- ◆ Venepuncture Sites

#### Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

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

Venepuncture 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

### 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

#### Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ 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

Demonstrate the emergency support procedures for 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

### Evidence Requirements

Candidates will need to provide evidence to demonstrate their Knowledge and/or Skills by showing that they can:

- ◆ Recognise and assist with the management of:
  - Respiratory depression/arrest
  - Airway obstruction
  - Cardiac arrest
  - Vasovagal attack
  - Diabetic coma
  - Epilepsy
  - Angina
  - Myocardial Infarction
  - Asthma
  - Drug reactions/overdosage
- ◆ Establish and maintain airway
- ◆ Provide Basic Life Support
- ◆ Demonstrate use of defibrillator
- ◆ Select emergency drugs and make ready for use

The use of simulation is acceptable for this Outcome

## Higher National Unit specification: support notes

### Unit title: Dental Nursing: Intravenous Sedation

This part of the Unit specification is offered as guidance. The support notes 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 to intravenous midazolam (both basic and advanced)
- ◆ American Society of Anaesthesiologists (ASA) Grading
- ◆ 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
  - Standards for Conscious Sedation in the Provision of Dental Care - Report of the Intercollegiate Advisory Committee for Sedation in Dentistry 2015
  - Conscious Sedation in Dentistry Dental Clinical Guidance — Scottish Dental Clinical Effectiveness Programme 2006
  - 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 specification: support notes (cont)

### Unit title: Dental Nursing: Intravenous Sedation

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
- ◆ Venepuncture sites used for administration of the drug

Outcome 4 should include:

- ◆ Properties and actions 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 attack
  - Diabetic coma
  - Epilepsy
  - Angina
  - Myocardial Infarction
  - Asthma
  - Drug reactions/overdosage
- ◆ Establish and maintain airway
- ◆ Provide Basic Life Support
- ◆ Demonstrate use of defibrillator
- ◆ Select emergency drugs and make ready for use

### Guidance on the delivery of this Unit

The nature of this Unit requires that it be delivered over a period of time — sufficient for candidates 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 candidates participate in a minimum of 30 intravenous sedation cases to allow them to gather the practical evidence required.

## Higher National Unit specification: support notes (cont)

**Unit title:** Dental Nursing: Intravenous Sedation

### Guidance on the assessment of this Unit

Assessment for this Unit will be a mixture of observed practice, responses to structured questions, and candidate 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 candidates contribution in the procedure. The candidate should work in a practice that regularly offers intravenous sedation to patients, in order for the candidate to develop and cement the skills learned. The nature of this Unit is such that candidates require maintaining the skills developed. Practical exercises (in the case of Outcome 5) may assist in the delivery of this Unit.

### Assessment Guidelines

#### 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 candidate'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 basic and advanced) and to describe methods of dealing with anxious patients.

#### Outcome 2

Candidates should produce a report based on their research into current legislation and professional guidance relating to conscious sedation. The candidate 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 candidate should be able to describe other drugs that may be used for IV sedation ie Opioids.

#### Outcome 5

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

## Higher National Unit specification: support notes (cont)

**Unit title:** Dental Nursing: Intravenous Sedation

### Online and Distance Learning

This Unit is not suitable for online or distance learning due to the practical nature of the content.

### Opportunities for developing Core Skills

There are opportunities to develop the Core Skill(s) 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.

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

## History of changes to Unit

Version	Description of change	Date

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## General information for candidates

### Unit title: Dental Nursing: Intravenous Sedation

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 the emergency support procedures for sedation related complications

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