

T Level Technical Qualification in Health

Occupational specialism assessment (OSA)

Dental Nursing

Assignment 2 - Structured observations

Post observation questions and mark scheme

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Marking guidelines

General guidelines

The structured observations assessment involves 2 separate scenarios. Both scenarios are comprised of 4 stages that each assess specific skills. After the observation of each scenario is completed, assessors ask a **total of 4 questions** (for each scenario) during a conversation with the student (up to 15 minutes per scenario).

Assessors must choose **one** question, for **each** stage of the scenario, from the list provided below. Where appropriate, assessors should select a question that has the most relevance to the nature of the student's observation.

Scenario 1: question options

- stage 1(a) providing and using appropriate personal protective equipment (PPE) whilst preparing for the procedure:
 - can you explain how wearing a mask helps with infection control? (K1.10)
 - can you explain why is it important to remain up to date with infection control? (K1.9)
- stage 1(b) assisting the dentist during the filling procedure, whilst monitoring the patient throughout treatment:
 - the footswitch is part of the dental operation system - can you explain the function of the footswitch? (K1.24)
 - can you explain what a dental nurse should do in the case of an anaphylactic shock? (K1.57)
- stage 1(c) mixing the relevant material to the correct consistency within the required time:
 - can you explain the potential advantages of using composite material for a filling? (K4.3)
 - can you explain the potential disadvantages of using composite material for a filling? (K4.3)
- stage 1(d) processing instruments at the end of the procedure:
 - can you explain why is it important to safely close down the surgery after use? (K1.34)
 - can you explain how the compressed air supply supports the operation of the dental unit? (K1.28)

Scenario 2: question options

- stage 2(a) preparing the surgery and setting up the instrument tray:
 - can you explain how you would manage a sharps injury? (K1.16)
 - can you explain which dental treatment might be affected if a patient is taking blood thinning tablets? (K1.55)
- stage 2(b) updating medical history and contemporaneous note taking
 - can you explain the principles of dental charting? (K3.1)
 - can you explain the principles of soft tissue assessment? (K3.1)
- stage 2(c) charting - basic periodontal examination (BPE)/6PPC/tooth notation
 - can you explain the difference between Palmer charting and FDI charting? (K3.4)
 - can you explain the difference between BPEs and full periodontal screening? (K3.2)
- stage 2(d) explaining why the patient needs to maintain good oral hygiene:
 - can you explain how smoking and high sugar intake may negatively affect a patient's oral health? (K2.5)

- can you explain a method of preventing gum disease? (K2.1)

General guidance for using extended response marking grids

Assessors should use the levels of response marking grid to form a holistic judgement of the student's understanding of knowledge as demonstrated by their responses to all four questions (for each scenario) overall. When determining a level, assessors should use a bottom-up approach for the knowledge being assessed as detailed in the Indicative content and explained at the standardisation training. It is not a requirement that students must cover all of the Indicative contents to be awarded full marks. Assessors should use their professional judgement and adopt a best-fit approach when necessary. It is a requirement that student's verbal response fully matches the Indicative content in an exact manner.

Assessors are reminded that the Indicative contents are there as guides: assessors must credit any other suitable responses a student may provide during the conversation, being mindful of the real-world context.

Scenario 1: mark scheme

Band	Mark	Descriptor
4	7-8	Overall, the student responses to all 4 questions demonstrates: Excellent knowledge, as relevant to the questions asked, that is highly detailed and fully accurate . Supported by highly relevant examples and highly relevant subject terminology.
3	5-6	Overall, the student responses to all 4 questions demonstrates: Good knowledge, as relevant to the questions asked, that is mostly detailed and mostly accurate . Supported by mostly relevant examples and mostly relevant subject terminology.
2	3-4	Overall, the student responses to all 4 questions demonstrates: Reasonable knowledge, as relevant to the questions asked, that is has some detail and some accuracy . Supported by some relevant examples and some subject terminology though, may be less developed .
1	1-2	Overall, the student responses to all 4 questions demonstrates: Basic knowledge, as relevant to the questions asked, that lacks sufficient detail and accuracy . Supported by examples that have little relevancy and little subject terminology.
0	0	No creditworthy response.

Indicative content

Scenario 1: stage 1(a)

Q1: can you explain how wearing a mask helps with infection control?

Typical student responses may include:

- masks are worn to reduce airborne particles/contamination. They should be worn covering the mouth and nose and changed in between patients. This prevents the passage of germs from the nose and mouth from the DHCP going to the patient and also protects the DCHP from splashes and sprays from the patient's mouth
- gloves: to reduce cross-contamination via touch. Gloves prevent contamination of DHCP hands when touching oral tissues or instruments and pieces of equipment soiled with patient blood and saliva. Gloves also reduce the likelihood that microorganisms present on DHCP hands will be transmitted to patients during surgery or patient-care procedures

Q2: can you explain why is it important to remain up to date with infection control?

Typical student responses may include:

- it is a General Dental Council (GDC) requirement - infection control is part of our core CPD, and registrants should receive no less than 5 hours of training in this area in their CPD cycle. The HTM 01:05 memorandum was published and aims to reduce cross infection risks to a minimum; we must all be familiar with this
- to ensure that best practice is maintained - 'putting patients' interests first', patients must be treated in a safe and hygienic environment
- adherence to latest infection control procedures - things are constantly changing and staying up to date with current procedures is important
- to improve and maintain patient and workplace safety (for the dental team and patients) - cross infection control prevents the spreading of infectious diseases from staff to patient, patient to staff and from one patient to another

Scenario 1: stage 1(b)

Q1: the footswitch is part of the dental operation system - can you explain the function of the footswitch?

Typical student responses may include:

- to enable the operation of the handpieces - the foot switch is the control of the handpiece, if this does not work properly the handpiece would not work and the burs will not turn
- in some instances, to enable the three in one syringe - this is the link to the dental cart. Some footswitch/pedals control the water to the handpieces and the three in one syringe

Q2: can you explain what a dental nurse should do in the case of an anaphylactic shock?

Typical student responses may include:

- to lay patient flat and raise their legs
- to retrieve medical emergency drugs, get the EpiPen/adrenalin ready
- to call for help and phone 999 for an ambulance or ask someone to phone for an ambulance
- check patient's medical history for any medical conditions and allergies

Scenario 1: stage 1(c)

Q1: can you explain the potential advantages of using composite material for a filling?

Typical student responses may include:

- the material can be used on any tooth and can be used to close gaps or shape of the tooth without damaging the teeth composite bonding
- the material is tooth coloured so it may be more pleasing to the patient
- the material bonds to the tooth so less enamel is removed
- it is not metal and does not contain mercury, which is highly toxic

Q2: can you explain the potential disadvantages of using composite material for a filling?

Typical student responses may include:

- the material requires significant moisture control when placing, which can take more time
- the material can shrink so margins susceptible to further decay, risk of leakage
- the material is sensitive to light
- placement takes longer than amalgam
- can stain and discolour

Scenario 1: stage 1(d)

Q1: can you explain why is it important to safely close down the surgery after use?

Typical student responses may include:

- to help prevent cross-contamination, making sure everything is sterile and decontaminated
- to ensure electrical air and water safety, everything must be turned off and secured at night, there is a lot of expensive and dangerous equipment that must be turned off correctly. The X-ray machines must be isolated to avoid someone accidentally pressing the button and emitting radiation. Where a piece of equipment heats up, we would not want it to be left on to overheat. These examples could all be potentially dangerous
- this also ensures the safety of out of hours staff

Q2: can you explain how the compressed air supply supports the operation of the dental unit?

Typical student responses may include:

- if the compressor is not maintained and does not work, it can bring a standstill to the practice. Compressed air is used in the 3 in 1 syringe for clearing debris or saliva when working in a patient's mouth. It is used to drive the slow and high-speed handpieces when treating patients having fillings and other dental treatments, and it also provides the suction for aspiration unit (the high volume suction and saliva ejector)

Scenario 2: mark scheme

Band	Mark	Descriptor
4	7-8	Overall, the student responses to all 4 questions demonstrates: Excellent knowledge, as relevant to the questions asked, that is highly detailed and fully accurate . Supported by highly relevant examples and highly relevant subject terminology.
3	5-6	Overall, the student responses to all 4 questions demonstrates: Good knowledge, as relevant to the questions asked, that is mostly detailed and mostly accurate . Supported by mostly relevant examples and mostly relevant subject terminology.
2	3-4	Overall, the student responses to all 4 questions demonstrates: Reasonable knowledge, as relevant to the questions asked, that is has some detail and some accuracy . Supported by some relevant examples and some subject terminology though, may be less developed .
1	1-2	Overall, the student responses to all 4 questions demonstrates: Basic knowledge, as relevant to the questions asked, that lacks sufficient detail and accuracy . Supported by examples that have little relevancy and little subject terminology.
0	0	No creditworthy response.

Indicative content

Scenario 2: stage 2(a)

Q1: can you explain how you would manage a sharps injury?

Typical student responses may include:

- there should be a poster on the wall to show everyone what to do in event of a sharps injury
- if it happens, they must encourage the injury to gently bleed, place the injured area under running water, wash the injury under running water with soap, dry and cover with a plaster/dressing. Enter it into the accident book, check the patient's medical history form and inform the patient. The patient and occupational health must be notified

Q2: can you explain which dental treatment might be affected if a patient is taking blood thinning tablets?

Typical student responses may include:

- can impact on dental treatments such as tooth extraction - blood thinning tablets will thin the blood, and this makes you bleed more because they slow down the clotting of blood. Warfarin is the most common anticoagulant

Scenario 2: stage 2(b)

Q1: can you explain the principles of dental charting?

Typical student responses may include:

- they are taken to record the patient's dentition and previous dental history, to plan further treatment, as required, and to act as a legal record. There are several types of dental charting, these will include a baseline charting, this includes teeth present, decayed, missing or filled. This will also include types of materials used for the fillings and crowns or bridgework. They will also chart if teeth need any treatment and what it will be. Another chart undertaken is for gum health. Either a BPE score or a 6PPC. A BPE will be done at every check up alongside checking the charting at least yearly if score is 0.1. or 2

Q2: can you explain the principles of soft tissue assessment?

Typical student responses may include:

- a soft tissue assessment is when the soft tissues are checked (for example, the inside of the cheeks, lips, tongue and palate). We will record any oral lesions that may or may not require further investigation, such as an ulcer, red patches, white patches, or any other marks present in the mouth

Scenario 2: stage 2(c)

Q1: can you explain the difference between Palmer charting and FDI charting?

Typical student responses may include:

- FDI World Dental Federation notation system is **a commonly used system for the numbering and naming of teeth**. The system uses a 2-number system for the location and naming of each tooth. For example, an upper right central incisor will be number 11, the first number indicates which area in this case upper right quadrant and the second number indicates which tooth it is. So upper right lateral incisor will be 12. Upper left central incisor will be 21 and the lateral incisor will be 22 and so on. Upper right quadrant is represented by the number 1, upper left quadrant by number 2, lower left by the number 3 and lower right by number 4
- Palmer notation: commonly used in the UK, permanent teeth are represented by a number (1 to 8), defined by the quadrant they are in (for example, upper left, upper right, lower left, lower right) - deciduous teeth are recorded A to E in each quadrant (for example, the upper left central incisor would be recorded as upper left A)

Q2: can you explain the difference between BPEs and full periodontal screening?

Typical student responses may include:

- BPEs: carried out during routine dental oral health assessment to measure the deepest pocket in each sextant. For patients with codes 0, 1 or 2, the BPE should be recorded at least annually. For patients with BPE codes of 3 or 4, more detailed periodontal charting is required: Code 3: record full probing depths (6 sites per tooth) in the sextant(s) where the code 3 was recorded, in addition to recording the BPE in those sextants with scores 0, 1 or 2; Code 4: if there is a code 4 in any sextant, then record full probing depths (6 sites per tooth) throughout the entire dentition
- full periodontal screening is carried out where more in-depth investigation is required to measure the loss of periodontal tissue around each individual tooth. A record of probing depth and bleeding on probing (as well as recession, mobility and furcation involvement), at a minimum of all sites $\geq 4\text{mm}$ and bleeding on probing is taken

Scenario 2: stage 2(d)

Q1: can you explain how smoking and a high intake of sugar may negatively affect a patient's oral health?

Typical student responses may include:

- smoking can increase the chances of a gum disease and/or oral cancer. Smoking can also lead to gum disease. People who smoke are more likely to produce bacterial plaque, which leads to gum disease. The gums are affected because smoking causes a lack of oxygen in the bloodstream, so the infected gums don't heal. Smoking weakens your body's immune system this makes it harder to fight off gum infection
- sugar in the diet (intrinsic and extrinsic sugars) can increase the chances of dental bacterial plaque and decay. After eating foods that contain sugar, these molecules combine with saliva and bacteria present in the mouth. This combination leads to plaque on teeth. Left on teeth, plaque can dissolve enamel, which leads to cavities
- may cause bad breath for the individual

Q2: can you explain a method of preventing gum disease?

Typical student responses may include:

- effective toothbrushing twice a day with fluoride toothpaste with either an electric toothbrush or a manual toothbrush, appropriate interdental care (for example, cleaning in between the teeth with floss or interdental brushes daily). Brushing technique - brushing at the gumline. Removing all the plaque effectively
- having regular dental check ups and hygienist visits
- stopping smoking
- using a fluoride mouthwash

Performance outcome mapping

Performance outcome (PO) coverage:

PO	Post-observation questions: PO coverage					
Scenario 1						
PO1	K1.9	K1.10	K1.24	K1.57	K1.34	K1.28
PO2						
PO3						
PO4	K4.3	K4.3				
Scenario 2						
PO1	K1.16	K1.55				
PO2	K2.1	K2.5				
PO3	K3.1	K3.1	K3.2	K3.4		
PO4						

Overall (post-observation questions) *

PO1 marks (%)	PO2 marks (%)	PO3 marks (%)	PO4 marks (%)	Overall (%)
8 marks (50%)	2 marks (12.5%)	4 marks (25%)	2 marks (12.5%)	16 marks (100%)

*Please note: the % of total marks are calculated using 16 marks - the total marks for the post-observation questions only. Information on the observation (both scenarios) are provided in observation mark scheme.

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Change History Record

Version	Description of change	Approval	Date of issue
v1.0	Post approval, updated for publication.		March 2022
v1.1	Rebrand		March 2022