



T Level Technical Qualification in Healthcare Science

Occupational specialism assessment (OSA)

Assisting with Healthcare Science

Assignment 1 - Distinction

Guide standard exemplification materials

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Guide standard exemplification materials

Assisting with Healthcare Science

Assignment 1

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Introduction

The material within this document relates to the Assisting with Healthcare Science occupational specialism sample assessment. These exemplification materials are designed to give providers and students an indication of what would be expected for the lowest level of attainment required to achieve a pass or distinction grade.

The examiner commentary is provided to detail the judgements examiners will undertake when examining the student work. This is not intended to replace the information within the qualification specification and providers must refer to this for the content.

In assignment 1, the student must assist with physiological measurements.

After each live assessment series, authentic student evidence will be published with examiner commentary across the range of achievement.

Task 1: assist with physiological measurements

Brief

You are working as healthcare science assistant in the respiratory department of a hospital. You are supporting your respiratory team lead scientist and are about to see your next patient.

You meet with your next patient, who has been complaining of shortness of breath when completing everyday tasks; their GP has referred them to your department after noticing a fall in the peak flow measurements, which the patient has been using at home. Your patient has some issues regarding their hearing which is noted in their patient record.

Task

You must assist with the assessment of the patient by completing the following:

- (a) prepare for peak expiratory flow, blood pressure and spirometry measurements including record keeping
- (b)(i) perform and record peak expiratory flow measurement
- (b)(ii) carry out a manual blood pressure measurement on the patient and update records
- (b)(iii) assist the practitioner with the spirometry measurement on the patient and record findings accordingly
- (c) carry out post-measurement cleaning and storage of equipment

(77 marks)

Conditions of the assessment:

- task 1 must be completed in supervised conditions
- you will only have access to materials permitted by your tutor and those available in the designated assessment area
- you will have a maximum of 1 hour to complete this task

This is the end of the practical skills assessment

Student evidence

Observation record form

Descriptive information and evidence of student's skills during the practical assignment. Even though evidence of the quality of skills demonstrated should support decisions against the mark scheme, the notes should follow the flow of the tasks and how students are expected to complete them, rather than attempting to assign evidence against the criteria at this stage.

To be completed by the provider appointed assessor:

Area/objective - the following areas/objectives can cover a broad range of skills or actions which should be considered when adding notes. The text below each area/objective is an example of what should be observed and is not exhaustive.	Comments - identifying student's areas of strengths and weaknesses through the use of thorough and precise notes that differentiate between a range of students' practical skills. This will be used to support accurate and consistent allocation of marks once all evidence has been generated.
Hand hygiene: describe how well the student prepares for and maintains hand hygiene to include techniques and any risks to hygiene.	The student demonstrated good infection control measures, all procedures were followed including the 5 steps of hand hygiene.
Preparation: describe how well the student collects appropriate equipment, such as the sphygmomanometer, cuffs and stethoscope.	<p>The student clearly identified all of the correct equipment required to perform the peak flow, blood pressure and spirometry investigations without prompting.</p> <p>They gathered the equipment quickly and efficiently with one trip to the cupboard, ensuring they had a tray to transport the equipment to the patient area</p> <p>They confirmed with their supervisor and via their own physical checks that the equipment was fit for purpose, calibrated and ready for use on patients (for example, sphygmomanometer required calibrating using a certified calibrated 3 litre syringe prior to each clinic/session or after every 10th patient with results being logged).</p> <p>They also reported or actioned any discrepancies/faults appropriately (for example, blood pressure cuff is not frayed, rubber tubing is not perished, sphygmomanometer software up to date).</p>
Health and safety - equipment: describe how well the student checks that equipment is safe for use on the patient.	The student carried out health and safety checks for all medical device equipment, they performed visual checks for damage, calibration and ensured a valid medical device/electrical safety check had been performed and reported or actioned any discrepancies/faults appropriately.
Health and safety - personal protective equipment (PPE): describe how well the student uses PPE for	The student selected the correct PPE for each procedure; apron, gloves, face mask, visor. During the

<p>each procedure including PPE required for respiratory clinics due to Covid-19.</p>	<p>procedure the student complied with the Infection Control Policy and the wearing of PPE, disposing of all PPE into the appropriate clinical waste receptacles after the procedures.</p>
<p>Health and safety – environment: describe how well the student maintains the work environment to include infection control.</p>	<p>The student cleaned the clinical area, using the appropriate disinfectants, disposed of clinical waste correctly with no prompting.</p>
<p>Person-centred care – confirmation: describe how well the student confirms patient identity and consent.</p>	<p>The student checked the patient’s ID (name, DOB) against the test request to confirm they were correct in a polite, friendly and approachable manner. The student in a clear concise manner confirmed with the patient that they understand what test is being performed to ensure patient consent is given</p>
<p>Person-centred care – communication: describe how well the student interacts with the patient to include communication skills and patient comfort, dignity and respect.</p>	<p>The student gave a comprehensive explanation of the test process in an approachable, polite and clear manner with the opportunity for the patient to ask questions which were answered confidently.</p> <p>The student adapted their communication (volume of voice, tone and eye contact) to the hard of hearing patient to ensure the patient received maximum communication and understanding.</p> <p>The student ensured that the patient had time to recover normal breathing between attempts at the peak flow measurement.</p> <p>The student thanked the patient for their cooperation.</p> <p>The student removed the blood pressure cuff from the patient while simultaneously checking the patients’ comfort and thanked them for their cooperation.</p>
<p>Person-centred care - patient comfort: describe how well the student prepares the patient for each procedure.</p>	<p>The student moved the patient into a comfortable position, advising that they would prefer the patient to stand if comfortable to do so, but saying they can remain seated if this is more preferable to them.</p> <p>The patient was hard of hearing, the student ensured full communication/understanding of procedure and instructions, by altering the tone and volume of their voice and checking that the patient had heard and understood.</p> <p>The student showed a good friendly manner throughout, assisted the patient with removing clothes, and with their mobility as needed.</p> <p>The student clarified and confirmed that the patient understood what they needed to do. The student offered a demonstration of the peak flow and</p>

	<p>spirometry technique to the patient without any prompting.</p> <p>The student prepared the patient by measuring and recording the patient’s height, minus footwear, and weight.</p> <p>For the peak flow measure the student ensured the patient was, standing and had no restrictive clothing.</p> <p>For the blood pressure the student ensured access to patient’s upper arm and ensured no restrictive clothing, they asked the patient to remove clothing from their arm. They asked the patient to support their arm on a desk.</p> <p>For spirometry the student ensured the patient was seated upright with no restrictive clothing, patient dentures are left in place unless loose fitting. This was checked by the student without prompting.</p>
<p>Procedure - peak expiratory flow: describe how well the student guides the patient through the procedure, to include the following:</p> <ul style="list-style-type: none"> • patient is in a seated position • peak expiratory flow meter is set to zero • patient is instructed to maximally inhale • patient is instructed to form a tight seal around the mouthpiece (whilst maintaining breath hold) • patient instructed to blow as hard as they can into the peak expiratory flow meter maintaining a tight seal at the mouthpiece • result is correctly noted • pointer is reset to zero and the process is repeated on 2 more occasions • best effort of the 3 attempts is reported in the correct format in the patients notes 	<p>The student set the peak flow meter, so the pointer is pushed back to zero.</p> <p>The student asked the patient to: ‘Hold the peak flow meter, so it is horizontal and make sure that your fingers are not obstructing the measurement scale. Breathe in as deeply as you can and place your lips tightly around the mouthpiece then breathe out as quickly and as hard as you can.’ The student performed a demonstration using a separate sterile mouthpiece.</p> <p>When the patient had finished breathing out, the student made a note of the reading.</p> <p>They asked the patient to repeat this process a further 2 times ensuring that the peak flow meter was returned to zero each time. The highest of the 3 measurements is recorded as the peak flow score in the patient’s notes. They encouraged the patient when performing the test and had a fresh glass of water and tissues to hand should the patient need them.</p> <p>The student ensures that the patient had time to recover normal breathing between attempts. Reassuring them to take their time and not rush the test.</p> <p>The student thanked the patient for their cooperation and asked if they have any questions regarding next steps.</p>
<p>Procedure - blood pressure: describe how well the student carries out the procedure to include the</p>	<p>The student gave a clear explanation of the test process, allowing the patient to ask any questions and</p>

<p>following:</p> <ul style="list-style-type: none"> • applies correct sized cuff • appropriate arm chosen to obtain a valid measurement and maintain patient comfort (for example, arm with cannular in situ not used) • lower edge of cuff 2 to 3cm above the brachial artery • locates the radial pulse • inflates the cuff using the bulb • when pulse no longer felt inflates cuff by another 20mmhg • places stethoscope in ears and with the diaphragm over the brachial artery • deflates the cuff noting the point where pulse is detectable (systolic) and when it disappears (diastolic) • documents measurement and reports to nurse in charge 	<p>answered with confidence.</p> <p>The student communicated with the patient throughout the investigation explaining what was happening, putting the patient at ease.</p> <p>The student competently took the blood pressure measurement, making sure the arm was in the correct position, the correct cuff size was selected, the radial pulse was located, and the cuff was correctly inflated and deflated to obtain the measurement.</p> <p>The student correctly identified and recorded blood pressure measurement in the patient’s records and was able to interpret the result, reporting the results to the nurse in charge</p> <p>The student removed the cuff from the patient while simultaneously checking the patients’ comfort and thanked them for their cooperation.</p>
<p>Procedure – spirometry: describe how well the student carries out the procedure to include the following:</p> <ul style="list-style-type: none"> • accurately records height and weight • enters the correct patient demographics (name, DOB, gender at birth) • patient is correctly positioned (seated position, sitting straight, legs uncrossed) • measurements in relaxed vital capacity and forced vital capacity are obtained in accordance with Association of Respiratory Technology & Physiology (ARTP) guidelines • relaxed vital capacity (VC): patient is asked to steadily exhale fully from a position of full inspiration to full expiration - minimum of 3 efforts required within 5% or 100ml of each other • forced VC: patient inhales fully then immediately exhales with maximum effort to empty - minimum of 3 efforts required within 5% or 100ml of each other - must not exceed 8 efforts • error in patient technique is identified and corrected • results for reporting are correctly selected in accordance with ARTP guidelines (5% or 100ml) 	<p>The student independently obtained and recorded the relevant demographics to obtain valid results (height - no shoes, birth gender, ethnicity, weight and date of birth) of the patient</p> <p>The student gave the patient a comprehensive explanation of the test procedure, highlighting the importance of patient effort to obtain valid results, the patient was given the opportunity to ask questions and the student answered confidently.</p> <p>The student, with no assistance, asked the patient about any contraindications (such as, use of an inhaler, smoking). Patient consent was obtained.</p> <p>The student ensured the patient was made comfortable and seated during the test.</p> <p>The student explained that a soft clip will be placed on their nose to stop air escaping from it.</p> <p>They explained to the patient what they needed to do with a demonstration and asked if they have any questions. They then offered the patient a practice run.</p> <p>When the patient confirmed they were ready for the test, the student asked the patient to:</p> <ul style="list-style-type: none"> • inhale fully, so their lungs are completely filled with air • close their lips tightly around the mouthpiece to

	<p>make a seal</p> <ul style="list-style-type: none"> • exhale as quickly and forcefully as they can, making sure they empty their lungs fully <p>The student repeated the test with the patient a further 2 times to ensure a reliable result.</p> <p>The spirometry test was performed to a good standard with valid results, obtained and recorded in accordance with the Association for Respiratory, Technology & Physiology (ARTP) guidelines with no assistance required.</p> <p>The student communicated with the patient throughout the testing procedure, re-instructing where required, (for example, when the patient accidentally coughed during an exhalation, and reassuring the patient). Following the procedure, the student thanked the patient for their cooperation.</p>
<p>Recording/reporting: describe how the student updates the relevant paper-based logs.</p>	<p>The student recorded all task results using paper-based logs which are included in the patient notes, scribing results in black ink, (for example, abnormal results). Writing was clear and legible at all times, with entries time dated and initialled by the student. The student used the correct units of measurements for each task/activity (for example, blood pressure mmHg).</p> <p>The highest of the 3 peak flow measurements were recorded as the peak flow score in the patient's notes.</p> <p>The student correctly identified and recorded blood pressure measurement in the patient's records and was able to interpret the result, reporting the results to the nurse in charge.</p> <p>The student reported the best of 3 consistent spirometry values with the normal reference range for the patient.</p> <p>The student identified the correct results to report without assistance and recorded them in the patient's notes.</p>
<p>Post-procedure: describe how well the student disposes of PPE and cleans down equipment.</p>	<p>The student removed and disposed of PPE after the procedure; gloves, mask, visor and apron into appropriate waste streams, washes hands following the 5 steps of hand hygiene.</p> <p>Using fresh PPE the student disposed of any clinical waste from the investigations, without any assistance, into the correct clinical waste bins. Orange/yellow bags for infectious clinical waste or yellow bags with black</p>

	<p>stripes for non-infectious offensive waste.</p> <p>The student cleaned the patient area effectively with disinfectant and disposed of material and PPE (gloves/apron), into the correct clinical waste bag, in readiness for the next patient.</p> <p>The student competently cleaned the equipment (as per manufacturer guidelines) without prompting and returned it to the correct place of storage.</p> <p>The student followed infection control procedures when removing PPE, without assistance, following the 5 steps of hand hygiene.</p>
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Examiner commentary

The student has performed the overall assessment to a high standard excellent understanding and knowledge of the investigation with no assistance required. The student demonstrates they can perform all tasks consistently well with no prompting or assistance. They demonstrated extra knowledge and skills of the subject above the acceptable standard.

This student worked confidently and independently throughout the assessment, showing excellent communication skills with both the patient and supervisor. The student performed the investigations with no assistance or corrections required, ensuring patient comfort throughout and no concerns over patient safety were seen. The student could correctly identify valid and non-valid results and record them correctly in the patient's records. The student showed an excellent level of understanding in regard to the equipment required, calibration pre-usage requirements and post-usage cleaning. Good infection control and hand hygiene was followed throughout.

Overall grade descriptors

The performance outcomes form the basis of the overall grading descriptors for pass and distinction grades.

These grading descriptors have been developed to reflect the appropriate level of demand for students of other level 3 qualifications, the threshold competence requirements of the role and have been validated with employers within the sector to describe achievement appropriate to the role.

Occupational specialism overall grade descriptors:

Assisting with Healthcare Science occupational specialism grade descriptors

Grade

Demonstration of attainment

Pass

The student demonstrates good knowledge and understanding of the topics and the healthcare context in which it lies.

The student demonstrates professional practice whilst carrying out tasks/activities showing respect to safety, care and confidentiality for patients, colleagues and oneself.

The student has an appreciation of action to be taken when errors occur.

The student demonstrates a good understanding of their own development with some learning through reflective practice.

The student may not always connect learning to work in practice.

Distinction

The student demonstrates excellent knowledge and understanding of the topics and appreciation of the healthcare context in which it lies. The student demonstrates excellent understanding of professional practice whilst carrying out tasks/activities applying them in the healthcare context.

The student shows respect for safety, care and confidentiality for patients, colleagues and oneself.

The student fully acknowledges when errors occur and the reporting process.

The student demonstrates a good insight to their own development, demonstrating significant learning through reflective practice.

The student draws on reflective practice and relates their development and learning to work in practice.

Document information

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Change History Record

Version	Description of change	Approval	Date of Issue
v1.0	Published final version.		June 2021
v1.1	NCFE rebrand		September 2021