T-LEVELS | Institute for Apprenticeships & Technical Education

# T Level Technical Qualification in Healthcare Science

Occupational specialism assessment (OSA)

# Assisting with Healthcare Science

Assignment 1 - Pass

Guide standard exemplification materials

v1.1: Specimen assessment materials
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**T Level Technical Qualification in Healthcare Science**
**Occupational specialism assessment**

# Guide standard exemplification materials

## Assisting with Healthcare Science

Assignment 1

# Contents

# 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 a 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 expiratory 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:

1(a) prepare for peak expiratory flow, blood pressure and spirometry measurements including record keeping

1(b)(i) perform and record peak expiratory flow measurement

1(b)(ii) carry out a manual blood pressure measurement on the patient and update records

1(b)(iii) assist the practitioner with the spirometry measurement on the patient and record findings accordingly

1(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 had been generated. |
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| Hand hygiene: describe how well the student prepares for and maintains hand hygiene to include techniques and any risks to hygiene. | The student demonstrated basic infection control procedures, including hand hygiene. |
| Preparation describe how well the student collects appropriate equipment, such as the sphygmomanometer, cuffs and stethoscope. | The student was able to identify the correct equipment required to perform the peak expiratory flow, blood pressure and spirometry investigations with minimal prompting. The student confirmed with the supervisor that the equipment was ready for use on patients. They ensured they had a peak flow meter and disposable mouthpiece, manual blood pressure sphygmomanometer, blood pressure cuffs in a range of sizes (small/medium/large), stethoscope, spirometer, disposable mouthpiece and a clean nose clip. The equipment was calibrated and cleaned. |
| Health and safety – equipment: describe how well the student checks that equipment is safe for use on the patient. | Health and safety – for all medical device equipment, the student performed visual checks for damage, calibration and ensured a valid medical device/electrical safety check had been performed (where required). |
| Health and safety - personal protective equipment (PPE): describe how well the student uses PPE for each procedure, including PPE required for respiratory clinics due to Covid-19. | The correct PPE was selected for the investigations with minimal assistance. |
| Health and safety – environment: describe how well the student maintains the work environment to include infection control. | The student cleaned the clinical area, disposing of clinical waste correctly, with minimal assistance. |
| Person-centred care – confirmation: describe how well the student confirms patient identity and consent. | The student checked the patient's ID, checked and confirmed the patient's name, DOB and address |

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| | against the test request to confirm they are correct. |
| Person-centred care – communication: describe how well the student interacts with the patient to include communication skills and patient comfort, dignity and respect. | The student gave a basic explanation of the peak flow test process.<br><br>The student gave a basic explanation of blood pressure measurement. The student communicated with the patient throughout the investigation with a basic explanation as to what was happening throughout: 'To take your blood pressure, I will ask you to expose your arm and I will place a cuff on your upper arm. The cuff will inflate for a couple of minutes, you may feel some slight discomfort for a few seconds, then the cuff will then deflate. I will need you to keep nice and still and quiet during the test.' |
| Person-centred care - patient comfort: describe how well the student prepares the patient for each procedure. | The patient was hard of hearing, and the student ensured full communication/understanding of procedure and instructions.<br><br>The student clarified and confirmed that the patient understood what they need to do.<br><br>The student prepared the patient by measuring the patient's height.<br><br>For the peak flow measure the student ensured the patient was standing, with no restrictive clothing. The student required prompting to offer a demonstration of the peak flow and spirometry technique to patient.<br><br>For the blood pressure the student ensured access to the 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.<br><br>For spirometry the student ensured the patient was seated upright with no restrictive clothing, with dentures left in. |
| Procedure - peak expiratory flow: describe how well the student guides the patient through the procedure, to include the following:<br>• patient is in a seated position<br>• peak expiratory flow meter is set to zero<br>• patient is instructed to maximally inhale<br>• patient is instructed to form a tight seal around the mouthpiece (whilst maintaining breath hold)<br>• patient is instructed to blow as hard as they can into the peak expiratory flow meter maintaining a tight seal at the mouthpiece<br>• result is correctly noted | The student performed the test asking the patient to blow as hard as they could into the peak expiratory flow meter ensuring the measurement pointer was set to zero for every measurement, with some prompting/assistance. |

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| • pointer is reset to zero and the process is repeated on 2 more occasions<br>• best effort of the 3 attempts is reported in the correct format in the patients notes | |
| Procedure - blood pressure: describe how well the student carries out the procedure to include the following:<br>• applies correct sized cuff<br>• appropriate arm chosen to obtain a valid measurement and maintain patient comfort (for example, arm with cannular in situ not used)<br>• lower edge of cuff 2 to 3cm above the brachial artery<br>• locates the radial pulse<br>• inflates the cuff using the bulb<br>• when pulse no longer felt inflates cuff by another 20mmhg<br>• places stethoscope in ears and with the diaphragm over the brachial artery<br>• deflates the cuff noting the point where pulse is detectable (systolic) and when it disappears (diastolic)<br>• documents measurement and reports to nurse in charge | The student took the blood pressure measurement but required some prompting in making sure the correct cuff size was selected. The student could identify and record a blood pressure measurement. |
| Procedure – spirometry: describe how well the student carries out the procedure to include the following:<br>• accurately records height and weight<br>• enters the correct patient demographics (name, DOB, gender at birth)<br>• patient is correctly positioned (seated position, sitting straight, legs uncrossed)<br>• measurements in relaxed vital capacity and forced vital capacity are obtained in accordance with Association of Respiratory Technology & Physiology (ARTP) guidelines<br>• 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<br>• 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<br>• error in patient technique is identified and corrected<br>• results for reporting are correctly selected in accordance with ARTP guidelines (5% or 100ml) | The student obtained and recorded the relevant demographics to obtain valid results (height - no shoes, birth gender and date of birth). The student gave the patient a basic explanation of the test procedure as follows:<br>‘Spirometry is a simple test used to help diagnose and monitor certain lung conditions by measuring how much air you can breathe out in one forced breath. You'll be seated during the test and a soft clip will be placed on your nose to stop air escaping from it.<br>I will explain what you need to do, and if you wish to, you may have a practise attempt first. When you're ready for the test, you'll be asked to:<br>• inhale fully, so your lungs are completely filled with air<br>• close your lips tightly around the mouthpiece to make a tight seal<br>• exhale as quickly and forcefully as you can, making sure you empty your lungs fully<br>This will normally need to be repeated at least 3 times to ensure a reliable result. In some cases, the test may need to be repeated around 15 minutes after taking |

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| | some inhaled bronchodilator medication. This can show if you have a lung condition that responds to these medications. Overall, your appointment should last around 30 to 90 minutes. You'll be able to go home soon, after the tests have finished and can return to your normal activities.'<br><br>The student, with some assistance, asked the patient about any contraindications (such as, use of an inhaler, smoking). The patient consented to perform the test. The spirometry test was performed to a basic standard with valid results obtained in accordance with ARTP guidelines. The student communicated minimally with the patient throughout the testing procedure, re-instructing where required. The student could identify the correct results to report including checking the quality of the results or sub-maximal results due to patient coughing, technical problems/equipment problems. The student performed the test to an acceptable standard to obtain a valid result. |
| Recording/reporting: describe how the student updates the relevant paper-based logs. | The student reported the best of 3 attempts with the normal reference range for the patient at peak flow measurement in the patient's notes. The student recorded the blood pressure measurement in the patient's notes but could not give an interpretation. The student reported the best of 3 consistent spirometry values with the normal reference range for the patient. |
| Post-procedure: describe how well the student disposes of PPE and cleans down equipment. | The student disposed of any clinical waste from the investigations into the correct clinical waste bins. The student cleaned the equipment as per manufacturer guidelines with prompting regarding using the correct cleaning products. Mouthpieces and PPE were disposed in the clinical waste bin and returned to the correct place of storage. The student followed infection control procedures when removing PPE. |

# Examiner commentary

The student has performed the assessment overall to an acceptable standard of competency, demonstrating a basic understanding and knowledge of the investigations, and required some assistance.

The student worked to a basic level of competency throughout the assessment, showing basic communication skills with both the patient and supervisor. The student performed the investigations with some assistance or corrections required.

There was very little patient interaction during the tests and little or no opportunity for the patient to ask questions. Contraindications are significant as they can alter results, so this is an important area to become confident in, and the student required some prompting here to ask these questions. However, there was at no point any risk to patient safety.

The student could correctly identify, with assistance, valid and non-valid results and record them in the patient's records.

The student showed a basic level of understanding in regard to the equipment required, calibration pre-usage requirements and post-usage cleaning. They required some prompting and reassurance when preparing and carrying out the task. They lacked confidence and, as a result, the task did not flow as well as it could, causing it to take longer than necessary.

Infection control and hand hygiene was followed throughout; however, it was hurried and they could have been more thorough in their preparation.

# 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 and the threshold competence requirements of the role. They 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

The T Level Technical Qualification is a qualification approved and managed by the Institute for Apprenticeships and Technical Education.



Owner: Head of Assessment Design

## Change History Record

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