T-LEVELS | Institute for Apprenticeships & Technical Education

T Level Technical Qualification in Healthcare Science

Occupational specialism assessment (OSA)

Assisting with Healthcare Science

Assignment 2 - Distinction

Guide standard exemplification materials

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T Level Technical Qualification in Healthcare Science
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Assisting with Healthcare Science

Assignment 2

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 2, the student must assist with point of care testing.

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

Task 1: assist with specimen collection and point of care test (POCT)

Brief

You are based within an outpatient clinic in the local community hospital working as a healthcare science assistant as part of the multi-disciplinary team.

A patient has been referred to you, who has been requested by the clinician to submit a mid-stream urine sample for investigation of infection.

Task

You must assist by carrying out the following stages:

1(a) Prepare for urine mid-stream specimen collection.

1(b)(i) Complete urine mid-stream specimen collection to include:

- label and register patient samples

1(b)(ii) Complete a urine dipstick test on the collected sample and send another sample for microbiology testing, to include:

- using the sample in the plain sterile container, carry out a POCT and check the sample for protein, haematuria, glucose, ketones and pH
- discussing findings with a senior colleague and record findings in patient details form
- prepare the second collected sample (red topped boric acid container) for transportation to the microbiology department requesting culture and sensitivity testing on the patient's mid-stream urine sample
- carry out a request to the microbiology department for the patient's mid-stream culture and sensitivity before the sample is dispatched

1(c) Record and report the results and carry out post-examination cleaning and storage of equipment.

(58 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 available in the designated assessment area
- you will have a maximum of 30 minutes to complete this task

Task 2: carry out point of care test (POCT)

Brief

You are working as a healthcare science assistant in a busy multidisciplinary general outpatient department and you need to check the blood sugar of a patient with type 1 diabetes before further tests and examinations can be carried out.

Task

Use a blood glucose meter to perform a blood glucose measurement on the patient.

You must assist by carrying out the following stages:

2(a) Prepare for blood glucose test including explaining the procedure to the patient.

2(b) Carry out the blood glucose test including carrying out quality control (QC) on the device.

2(c) Record and report the results and carry out post-examination cleaning and storage of equipment.

(42 marks)

Conditions of the assessment

- task 2 must be completed in supervised conditions
- you will only have access to materials permitted by your tutor and available in the designated assessment area
- you will have a maximum of 25 minutes to complete this task

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:

Task 1: assist with specimen collection and point of care test (POCT)

Area/objective - the following areas/objective 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 students' areas of strengths and weaknesses through the use of thorough and precise notes that differentiate between a range of students' practical skills are required. This will be used to support accurate and consistent allocation of marks once all evidence had 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 washed their hands thoroughly in a timely and appropriate manner, following standard healthcare washing procedures. They dried their hands on paper towels.
Infection control: describe how well the student prepares the equipment, resources and working environment, both before and after the test.	Post examination: The student disposed of the clinical waste in a timely and appropriate manner, using the correct waste container – they disposed of the remaining urine sample from the collection vessel in either a sluice or toilet and then put the container in the clinical waste. The student wiped the workstation down with a detergent wipe and dried it with a paper towel. The student cleaned the equipment and checked for any damage before returning the equipment to the correct place. The student disposed of their PPE in the correct order into the clinical waste – gloves removed first and disposed, then goggles removed and cleaned and then the apron disposed of into clinical waste. The student washed their hands as per hospital handwashing procedures.

Personal protective equipment (PPE): describe how the student uses appropriate PPE.	The student selected the correct PPE for the task and utilised it in the correct order – apron first, goggles and gloves last, with masks as required.
Preparation: describe how well the student collects appropriate equipment, such as different universal containers and urine dipsticks.	The student set up equipment they would require for the POCT urine dipstick task and set up a workstation – they selected the correct urine dipstick strips and checked they were in date. They also selected a white topped universal container and a red topped universal container and a timer, and they also needed some paper towels, detergent wipes and a clinical waste container. When their workstation was set up, the student selected a cardboard urine collection vessel and handed it to the patient and asked them to go to the toilets, giving clear directions to urinate into the container and bring back to them.
Patient-centred care: describe how the student interacts with the patient, including confirming specific patient details.	Pre test: The student introduced themselves to the patient and explained what they were doing. The student asked the patient to confirm their name, hospital number and date of birth. The student asked the patient if they had any questions or concerns and ensured they were happy to continue. The student checked and verified name and date of birth against the details on their medical record. The student verified the patient's clinical details, confirming their long term condition and medication. The student asked the patient if they had any allergies. The student asked the patient if they had any questions or queries and gave time to allow the patient to speak. Post test: The student explained to the patient that they had finished doing the test and a sample had been sent to microbiology – the doctor/nurse would be in touch with regards to the next steps when the results are back. The student advised the patient that they were free to go.

Patient comfort: describe how the student ensures the patient has access to toilet facilities and can communicate a full understanding of the process pre and post collection.	The student explained to the patient what the patient will need to do for the task – 'can you take the urine sample container to the toilet and provide a mid-stream urine sample using this container and return to me'.
Urine dipstick: describe how well the student carries our urine dipstick POCT.	The student received the urine sample from the patient. POCT dipstick examination: The student transferred some of the urine sample into the white topped tube. The student ensured any spills were wiped and the waste disposed of in the clinical waste. The student clearly labelled the white topped tube with the patient's name, date of birth and hospital number – also including the date and time of the sample collection. The student dipped the dipstick into the urine and ensured that all the pads on the dipstick were fully immersed. The student removed the dipstick, turned it on its side and wiped off any excess urine on a paper towel then started the timer. The student started the timer then compared the test pads to the side of the tube and interpreted the results at the correct times. The student recorded the results for all the tests onto the patient's record. Their comments were detailed, accurate and clear. They discussed these with a senior colleague to confirm they were appropriately recorded, and there was no requirement to escalate any abnormal results. The results were written clearly and accurately – information about the colour and the clarity of the urine sample was also recorded along with the student's name and the date and time of the test. The used dipstick was disposed of in the clinical waste. The workstation was cleaned meticulously with attention to detail using a detergent wipe. This was then disposed of in the clinical waste. Microbiology sample preparation: The student transferred the remaining urine sample from the cardboard collection vessel into a red topped boric acid tube. The student ensured any spills were wiped and the waste disposed of in the clinical waste.

Prepare for transport: describe how the student labels and prepares specimens for transport.	The student clearly labelled the red topped tube with the patient's name, date of birth and hospital number – also including the date and time of the sample collection. The student completed the microbiology request form – the student checked that the patient's name, hospital number and date of birth were the same on the tube as on the form. The student dated and signed the form. The student ensured that the dipstick test results were recorded onto the microbiology request form and selected microbiology culture and sensitivity (MCS) test. The student placed the samples into a microbiology sample bag and attached it to the form. The student placed the sample ready to go to the microbiology lab.
Recording/reporting: describe how the student updates the relevant logs.	Post examination: The student explained to the patient that they had finished doing the test and a sample had been sent to microbiology – the doctor/nurse would be in touch with regards to the next steps when the results were back. The student advised the patient that they were free to go. Abnormal signs relating to ketones, blood, protein and glucose were picked up and reported – as the patient is being investigated for UTI, the student identified nitrites and leucocytes to be raised.

Task 2: carry out point of care test (POCT)

Area/objective - the following areas/objective 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 student's practical skills are required. This will be used to support accurate and consistent allocation of marks once all evidence had 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 washed their hands thoroughly following standard healthcare washing procedures. The student dried their hands on paper towels.
Infection control: describe how well the student prepares the equipment, resources and working environment.	Post POCT: Once the test was complete, the student cleaned and dried thoroughly, visually inspected and then returned to the correct location. The student cleaned their workstation and disposed of the contaminated material in the clinical waste. The student removed their PPE in the correct order and disposed of it in the clinical waste. The student correctly washed their hands meticulously as per hospital policy and dried their hands. The student disposed of the contaminated strips in the clinical waste and wiped the workstation down.
Preparation: describe how well the student collects appropriate equipment.	The student selected the equipment they would require for the point of care test (POCT) glucose task and set up a workstation – they selected the correct glucose strips, glucose meter, quality control solutions and record book and calibrator stick. They checked the glucose strips were in date, and also selected a suitable depth lancet, cotton wool, clinical waste, and sharps bin. They also collected detergent wipes and paper towels. When their workstation was set up, the student calibrated the meter and ensured that the lot number on the meter matched that on the glucose strips. The student then performed a quality control check – both levels (low and high) of quality control solution were analysed and the solution was mixed (bottle inverted several times) before being applied – the results were checked against the acceptance limits and were recorded in the quality control record book. The student repeated the quality control test when it failed to meet the acceptance levels.

PPE: describe how the student uses appropriate PPE.	The student selected the correct PPE for the task and utilised it in the correct order – apron first, then glasses and gloves last, in line with government guidelines.
Patient-centred care: describe how the student interacts with the patient, including confirming specific patient details.	Patient-centred care pre-examination: The student read through the instructions for the task. The student introduced themselves to the patient and explained what they were doing. The student explained to the patient what the patient will need to do for the task – they will be required to have a finger lanced and a test performed to check their blood glucose level. They checked that the patient was okay with this and was happy to continue. The student asked the patient if they had any questions or concerns. The student asked the patient to confirm their name and date of birth. The student checked and verified the name and date of birth against the details on their medical record. The student verified the patient's clinical details, confirming long term condition and medication. The student asked the patient if they had any allergies.
Patient comfort: describe how the student makes adjustments to ensure the patient is comfortable.	On completion of the test, the student returned to the patient and checked that the bleeding had stopped. The student explained to the patient that they had finished doing the test and they were free to go.

POCT: describe how the student carries out the POCT.	POCT glucose examination: The student checked the patient's hands to see if they were warm - they advised the patient to rub their hands together briskly to warm them up. The student asked the patient if they had a preference for the test to be done on a particular finger – the patient stated middle finger left hand so the student selected this finger to lance. The student cleaned the patient's hands with a cotton wool ball soaked in warm water and dried thoroughly with another clean cotton wool ball. The student selected a clean unused (single use) lancet and lanced the patient's clean, dry finger – they wiped the first drop of blood away with a clean cotton wool. The student inserted a glucose strip into the glucose meter and used it to test the blood. The glucose meter was placed on a flat surface to perform the test. The student understood that squeezing (milking) the finger excessively could lead to abnormal results – they also understood that if sufficient blood is not obtained then the patient's palm and the base of their finger can be massaged to generate more blood. The used lancet was disposed of in the sharps bin immediately. Once a result was generated, the student recorded this result accurately and clearly and disposed of the used glucose strip in the clinical waste. The student handed a clean cotton wool ball to the patient and asked them to apply pressure to stem the bleeding at the puncture site. They checked the bleeding had stopped before correctly discarding the cotton wool.
Recording/reporting: describe how the student updates the relevant logs.	The student accurately recorded the result in the patient record as a POCT glucose test and included their name, date and time of the test. The student understood whether they needed to escalate the result to a senior member of staff or not, such as, if it is high or low.

Examiner commentary

Task 1

The student paid meticulous attention to the cleaning of the work surfaces, equipment and disposing of contaminated material in a prompt manner. Care and attention were given to PPE application including the order in which it was applied and disposed of. The student washed their hands following standard healthcare handwashing procedure with care and attention given to the task, demonstrating their understanding of the importance of good hand hygiene.

The selection of equipment was well thought out and the workstation was set up in a sensible and practical manner. The student demonstrated robust communication skills, explaining the task clearly and asking suitable questions in an approachable manner. The student was able to put the patient at ease with their manner throughout the assessment. The student demonstrated a clear understanding of the task at hand and paid attention to detail when performing all aspects of the task and recording the results.

Task 2

The student paid meticulous attention to the cleaning of the work surfaces, equipment, and disposal of contaminated material in a prompt manner. Care and attention were given to PPE application including the order in which it was applied and disposed of. They washed their hands following standard healthcare handwashing procedure ensuring care and attention was given to the task, demonstrating their understanding of the importance of good hand hygiene.

The student's selection of equipment showed they understood the task at hand as they were able to correctly identify tools which assisted them in performing the task to a highly accurate level such as SOP, quality control and calibrator. The student asked intelligent and suitable questions to the patient in an approachable manner and put them at ease throughout. The student has shown a strong level of understanding of the task with clear attention to detail in all aspects including recording of the results.

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

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