

Chief Examiner and Chief Moderator Report

**T Level Technical Qualification
in Healthcare Science
QN:603/7083/X**

**Summer 2025 – occupational
specialism (OS) Assisting with
Healthcare Science**

Introduction

Summer 2025 – occupational specialism (OS) Assisting with Healthcare Science

Assessment dates: **27 March 2025 to 16 May 2025**

Paper number: **P002795, P002796, P002797 and P002798**

This report contains information in relation to the externally assessed component provided by the chief examiner and chief moderator, with an emphasis on the standard of student work within this assessment.

The report is written for providers, with the aim of highlighting how students have performed generally, as well as any areas where further development or guidance may be required to support preparation for future opportunities.

Key points:

- grade boundaries
- standard of student work
- evidence creation
- responses to the external assessment tasks
- administering the external assessment

It is important to note that students should not sit this external assessment until they have received the relevant teaching of the qualification in relation to this component.

Grade boundaries

Grade boundaries for the series are:

	Overall
Max	500
Distinction	364
Merit	294
Pass	225

Grade boundaries are the lowest mark with which a grade is achieved.

For further detail on how raw marks are scaled and the aggregation of the OS element, please refer to the Qualification Specification.

Administering the external assessment

The external assessment is invigilated and must be conducted in line with our [Regulations for the Conduct of External Assessment](#) document. Students may require additional pre-release material to complete the tasks. These must be provided to students in line with our regulations.

Students must be given the resources to carry out the tasks and these are highlighted within the [Qualification Specific Instructions for Delivery](#) (QSID) document.

Standard of student work

External assessment

There was continued improvement in the quality of Assignment 4 in this series. Students were able to access the highest marking bands in all the tasks. It was, however, common for students to achieve a particularly high mark in two or three of the tasks but a much lower mark in the remaining tasks. Perhaps, writing lengthier responses for some tasks left them with limited time to complete the entire assignment to the same high standard. It may be beneficial to continue to work with students on their exam technique, focusing on time management across all four tasks. This should better equip them to access the highest marks possible in the time given.

Most students were able to apply their knowledge and understanding from their clinical practice to the relevant tasks in Assignment 4. They wrote with incredible accuracy about the procedures for maintaining complex medical equipment or how to escalate issues related to equipment.

Moderated assessments

The students have performed well in the three moderated assessment this year.

As a whole, students seemed very confident in performing and recording the procedures. The area where students lost marks seemed to be their confidence in communicating with the patient and in their hygiene / setting up of equipment. Most students, at worst, made minor errors in the procedure, but all demonstrated an understanding of the skills and were able to carry them out. Almost all students were able to show the minimum skills needed for a pass with more students showing the competence to achieve distinction this year.

Most of the tasks in the assignment have been done before under a different context and so providers should be familiar with the Mark Scheme. Students could improve in their ability to put a particular patient into context, for example, supporting the patient with any additional needs they may have in the scenario given. Students currently lack this skill. The new procedure was pulse oximetry, which is a relatively simple procedure, and students were able to perform this with competence.

Evidence creation

External assessment

All tasks within Assignment 4 were presented clearly, with most students typing their answers to all tasks and some written notes on the table / mathematical calculations for task 2. Providers should be commended for uploading all relevant parts of their students' assignments.

Moderated assessments

On the whole, the evidence supplied by providers has been excellent this year. Most submitted detailed commentary and assessor feedback to students with marks applied, along with supporting photo and video evidence. On top of this, some providers asked students to describe the procedures whilst they were carrying them out. This was especially useful in capturing fine details, such as those during calibration and during Assignment 3. In their commentary, some providers also indicated parts in the video where students demonstrated certain marking points / skills, which was excellent practice.

In some cases, the video camera was very far away from the student or at a poor angle which led to a heavy reliance on the written commentary. This highlights the importance of this document alongside the audio-visual footage.

Responses to assessment tasks

Moderated assessment tasks

Assignment 1

In Assignment 1, the students performed pulse oximetry, blood pressure and spirometry tests. They performed these tasks generally well, with patient communication and infection control measures improving this year compared to last year. However, there were areas where this could improve further, particularly in ensuring the patient feels at ease throughout. Students would also do well to consider additional patient-related factors, regardless of the presence of additional needs, and to consider appropriate strategies for support. There was a range of achievement, however, almost all students achieved the minimum pass mark.

Assignment 2

In Assignment 2, students were asked to perform mid-stream urine collection and a blood glucose test. This has been assessed before; therefore, students and providers would be familiar with the tasks involved and the requirements of the Mark Scheme. Again, students performed well overall, showing they could competently carry out these tasks. Where students verbalised and checked patient comfort, they generally scored better. Students that were able to show confidence also did well. In some cases, students lacked good hygiene. For example, they did not wear glasses for the dipstick test or clean up appropriately between and after procedures. Some students struggled to clearly communicate the correct procedure for a mid-stream urine sample to the patient, but most students were able to do this well. Similarly, most students prepared the sample for microbiology correctly.

Assignment 3

In Assignment 3, students carried out a Gram stain and prepared samples for polymerase chain reaction (PCR). On the whole, this was done very well with steps followed correctly. As these tasks are difficult to see on the video, a detailed commentary by the provider or a verbal step by step description of the process followed by the student is very helpful. Most students were able to identify the samples and complete a laboratory information management system (LIMS) document correctly. Students that scored the highest were also able to explain the procedure and the results in detail to the biomedical scientist (BMS).

External assessment tasks

Assignment 4

Task 1: maintenance of complex medical equipment

Students performed well in this task. Almost all students successfully discussed the importance of adhering to a machine maintenance schedule, the risks to clinical staff working in this environment, and patients using the machine.

Not all students were able to provide an accurate description of how the X-ray machine operates and some omitted providing an explanation of how they would respond to a situation where the medical equipment was found to be unfit for its intended purpose.

There were some lovely answers from students where they made clear links between the importance of adhering to the Medical Device Regulation 2017 and the Ionising Radiation (Medical Exposure) Regulations 2017 legislations in protecting both patients and clinical staff from potential harm.

Task 2: testing equipment calibration

Students appeared to struggle with this task the most. The formulae to calculate deviation and accuracy were given; however, students frequently made errors in using the formulae correctly. The most common one was where students incorrectly used the five individual masses rather than the 'mean mass' when calculating accuracy. This resulted in unnecessary additional work for the student, completing calculations for each trial, which were not creditworthy.

The other common error was subtracting the deviation value from mean mass. This was possibly due to the mean mass value being larger and students preferring to avoid an answer which was a negative number.

To access the highest marking band, all calculations shown were expected to be fully correct. However, at all other marking bands, it was permissible for the calculations to have errors or be absent in part. Those students who were able to accurately define accuracy and precision did not always remember to consider how these terms related to the context of measuring mass with digital patient scales. Many students failed to discuss the importance of correct and accurate calibration on patient care and safety within of patient scales used in an outpatient department.

Task 3: escalation of issues related to equipment

Overall, students performed well in this task. Although not explicitly required, it was wonderful to read some strong responses from those students who were able to apply their clinical knowledge, gained from placements, to the task. Accurate information was given relating to infection control procedures with excellent descriptions of the proper disposal method provided.

Students did an excellent job of stating what was within the remit of their role as a healthcare science assistant and what required further support / referral to senior staff.

It was clear that many students were familiar with this task from the previous series. There were frequent definitions of precious samples or reasons given for sample rejection which were not directly relevant to this task. However, where students were able to clearly link their knowledge about precious samples with the specifics of the scenario, they were able to be credited. For example, students discussed which identifiers they would check on the blood sample tubes from the cardiology ward, prior to escalating to a senior colleague. Another example would be students who identified why the samples would not be considered precious and the next steps they would take to request a new one.

Not all students included the importance of adhering to standard operating procedures (SOPs) to support patient care and maintain a safe environment in their answers. Where this was referred to, the answers lacked sufficient depth. Some student responses not only discussed how they would correctly deal with the immediate situation but also thoughtfully considered changes to procedures or practices which would mitigate against this situation recurring in the future.

Task 4: research and innovation

Students continued to perform extremely well in task 4. Most student responses were thoughtfully written, demonstrating a sound understanding of the Health Research Authority (HRA) approval process.

Students who clearly addressed all seven bullet points within the task were most likely to meet all the criteria required, thereby accessing marking band 3 and above.

Many students demonstrated a sensitivity to the types of considerations that would support the patient in making a fully informed decision. These considerations included the additional cost of needing to purchase 200 g of red meat daily for 3 months, the impact of consuming lower quality red meats with a

higher saturated fat content, and potential support required if distressing blood pressure / blood cholesterol results were revealed during the course of the study.

Students continued to demonstrate a broad understanding of inclusivity and accessibility (beyond adjustments for physical needs) and were able to apply this in their written responses.

Providers may benefit from supporting their students develop their understanding of General Data Protection Regulation (GDPR) as it pertains to how data is used in research. Most students only made a general passing reference to this aspect of the task.

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