

Medical Licensing Assessment (MLA)

Applied knowledge test (AKT) - GMC's compliance decision

School of Medicine, Cardiff University

This document records the General Medical Council's (GMC) decision* on whether an assessment provider† is compliant by meeting the applied knowledge test (AKT) requirements annexed to the GMC's MLA framework: [Assuring readiness for practice: a framework for the MLA](#).

Assessment provider	School of Medicine, Cardiff University
GMC's decision	Compliant with the AKT requirements
Date of decision	14/06/2024

Legislation and guidance

The Medical Act 1983, as amended, gives the GMC the function of promoting high standards in, and co-ordinating all stages of, medical education. The Act requires‡ the GMC to:

- determine the extent of the knowledge and skill required to obtain a primary UK qualification (PMQ) and secure that the instruction given is sufficient to equip candidates with that knowledge and skill, and
- determine the standard of proficiency required from candidates during examinations leading to a UK PMQ and secure the maintenance of that standard.

[Assuring readiness for practice: a framework for the MLA[§] \(the MLA framework\)](#) was first published in March 2021 and updated and reissued in November 2023. The MLA framework requires that, from the academic year 2024-25, a medical degree awarded by a UK university on the GMC's list of awarding bodies (the list) must include a pass in the MLA to be recognised as a PMQ.

The MLA framework stipulates that, from 1 May 2024, for a university to be able to be included

* The decision is made by a GMC Assistant Registrar, under delegated authority from the Registrar to act as an MLA decision maker.

† Assessment provider: either a UK awarding body offering a primary medical qualification (PMQ) or the GMC as a provider of the MLA to international medical graduates.

‡ Sections 5(2)(a) and (b).

§ Issued by the Registrar under his powers set out in sections 5(2)(a) and (b) of the Act.

in the list:

- medical degree programmes leading to a medical degree awarded from academic year 2024/25 must include the MLA
- the MLA must have two parts – an applied knowledge test (AKT) and a clinical professional skills assessment (CPSA)
- each AKT must meet our AKT requirements
- each CPSA must meet our CPSA requirements
- the content of all AKTs and CPSAs must derive from the *MLA content map* and
- medical degree programmes must meet the GMC’s published standards, requirements and outcomes relating to undergraduate medical education and training.

The AKT requirements, CPSA requirements and MLA content map are annexed to the MLA framework.

Compliance with the requirements must be maintained in order for an assessment provider’s AKT and CPSA to count towards a candidate’s MLA.

Context

In June 2021, GMC Council approved the proposal for a collaboration between UK medical schools and the Medical Schools Council (MSC) to cooperate to set and deliver a GMC regulated national assessment of applied knowledge to meet the requirements of the MLA framework – the MS AKT. The MS AKT was proposed as a centrally created, locally administered AKT for all students graduating from UK medical schools from academic year 2024/25.

This report identifies whether the assessment provider meets the AKT requirements through the MS AKT.

Compliance process

Whilst each medical school is individually responsible for meeting the AKT requirements, there are elements of the MS AKT that are being centrally co-ordinated by the MSC. As a consequence, the MSC provided submissions and evidence on behalf of all medical schools (‘the central submissions’) about how the central elements of the MS AKT meet the AKT requirements.

Each medical school provided submissions and evidence (‘the local submissions’) seeking to demonstrate how the MS AKT delivered to their students meets the AKT requirements.

Where required, independent expert assessment advice was sought from the GMC’s AKT advisers* to inform the GMC’s review and consideration of the central submissions and/or the

* GMC associates appointed following an open recruitment campaign for their expertise, experience, and credibility in relation to assessment and a lay associate to provide public and patient perspective. All associates undertook bespoke Equality, Diversity, and Inclusion (ED&I) training at the GMC before starting their role. Checks were completed for any conflicts of interest.

GMC requested further information and clarifications from MSC or the medical school. These requests were to obtain the evidence necessary to finalise the GMC's considerations and were not an indication of whether or not the assessment provider was considered to have met the AKT requirements.

Annex A is a copy of the compliance report containing details of the GMC's consideration of the submissions and evidence provided by, or on behalf of, the School of Medicine, Cardiff University. The assessment provider was sent a draft of the compliance report to enable it to respond and to check for factual accuracies. Their response is also included at Annex A.

In addition to setting out the reasons for a decision as to whether the assessment provider has met each requirement, the compliance report also details recommended changes to the assessment provider's AKT, future action required and further information that should be provided in the next submission.

Decision

GMC MLA decision maker's decision and reasons for decision

Documents considered in reaching decision

In reaching my decision I have considered the following documents:

- The local submissions - the assessment provider's submission and supporting evidence
- The central submissions – the submissions and supporting evidence provided by the MSC on behalf of all medical schools
- [Guidance to assessment providers on creating a submission against the AKT requirements](#), which also contains the AKT requirements
- MLA AKT assessment – guidance for MLA decision makers.

Decision

As set out in the compliance report I am satisfied that the School of Medicine, Cardiff University (the assessment provider) was compliant with and met the AKT requirements annexed to the GMC's MLA framework: [Assuring readiness for practice: a framework for the MLA](#) by 1 May 2024.

I make recommendations to the assessment provider, set out in the recommendation section below and for the reasons detailed in the compliance report.

I am NOT making any recommendations to the assessment provider for the reasons detailed in the compliance report.

I advise the assessment provider to make [add number] mandatory changes in order to be compliant with and meet the AKT requirements. I am satisfied that the School of Medicine, Cardiff University (the assessment provider) will be compliant with and meet the AKT requirements annexed to the GMC's MLA framework: [Assuring readiness for practice: a framework for the MLA](#)

subject to implementing the mandatory changes listed below by 1 May 2024. If it is not possible to implement the changes then this should be escalated to the Registrar.

Based on the detail set out in the compliance report, I have formed a provisional opinion that the School of Medicine, Cardiff University (the assessment provider) is not compliant and does not meet the AKT requirements annexed to the GMC's MLA framework: [Assuring readiness for practice: a framework for the MLA](#). I am escalating this to the Registrar for further consideration.

Mandatory changes

None

Recommendations

Requirement 12 (local submission): The assessment provider should confirm, the venues and devices it will use for the MS AKT, describing and demonstrating how they are appropriate for a high stakes assessment.

Requirement 12 (local submission): If using BYOD for the MS AKT, the assessment provider must demonstrate how it has kept itself up to date about the risks to security presented by an online exam, particularly in respect of students being required to use their own devices, and how these are being mitigated. Any changes made to its policies, particularly its BYOD policy, should be provided.

Requirement 12 (local submission): If using BYOD for the MS AKT, the assessment provider's policy/processes should be updated to ensure that there is: clear support for candidates who need to install SEB, checks in place that the SEB has been correctly installed, enhanced training and guidance for invigilators in monitoring the BYOD policy, including ensuring that screen shots and recordings are not possible.

Requirement 14 (central submissions): Consideration should be given to putting a process into place for monitoring emerging threats and exploits to the software deployed to secure the exam system and item bank e.g. secure browsers.

Requirement 14 (local submission): If using BYOD for the MS AKT, the assessment provider should confirm that the monitoring of students using a text reader app without SEB is acceptable under the central MS AKT security requirements.

Requirement 16 (central submissions): Plans to update the invigilator guidance following the pilots should be pursued to include guidance on minimum standards, numbers and training for invigilators of the AKT to support standardisation and minimise the risk of variability.

Requirement 22 (central submissions): Consideration should be given to increasing the breadth of different perspectives within the AKT operational groups and governance structure to reflect the stakeholder environment of the AKT and its role as a requirement for a PMQ and progression to the medical register.

Reasons for the decision

My decision, including the recommendations I make above, is based on the detailed reasons I have set out in the annexed compliance report, and informed by my review of the evidence and

information received through the compliance process set out and followed above.

The assessment provider has been given an opportunity to respond and to highlight any factual inaccuracies on a draft of my report and I have taken into account their response in finalising my decision.

Signed

Keren Millea, Assistant Registrar

Date

14/06/2024

Annex A

Medical Licensing Assessment (MLA)

Applied knowledge test (AKT) - GMC's compliance report

School of Medicine, Cardiff University

Medical Licensing Assessment (MLA)

Applied knowledge test (AKT) - GMC's compliance report

School of Medicine, Cardiff University

This compliance report contains the reasons for the decision that - following a review of the information and evidence submitted by, and on behalf of, the School of Medicine, Cardiff University (the assessment provider*) - the assessment provider complies with and meets the AKT requirements annexed to the General Medical Council's (GMC) MLA framework: [Assuring readiness for practice: a framework for the MLA](#).

By meeting these requirements, an assessment provider is demonstrating the quality, consistency and fairness of their AKT to a standard that the GMC requires for the AKT to count towards a candidate's MLA.

The full report constitutes the reasoning for the GMC Assistant Registrar (AR) compliance decision and will be published on the GMC website, along with the compliance record of decision[†].

* Assessment provider: either a UK awarding body offering a primary medical qualification (PMQ), or the GMC as a provider of the MLA to international medical graduates.

[†] Any factual inaccuracies identified by the assessment provider will be addressed and rectified prior to the decision being made and published.

Overview

Overall statement

I consider that the School of Medicine, Cardiff University (the assessment provider) meets the AKT requirements annexed to the GMC's MLA framework: [*Assuring readiness for practice: a framework for the MLA*](#).

While not impacting on the overall conclusion that the assessment provider meets the AKT requirements, a number of recommendations and requests for further information have been made. Some of these relate to the central elements and others are specific to this assessment provider.

Recognising that the submissions and evidence were prepared in anticipation of the live delivery of the MS AKT later this year, the collective submissions and local submission were reviewed acknowledging that they identify what the assessment provider intends and plans for its MS AKT, and recognising that piloting and the initial summative sittings of the test are likely to prompt changes and adaptations to the design or delivery of the MS AKT. The assessment provider will need to report on any changes as part of ongoing quality assurance of the MS AKT. In particular, the assessment provider should consider the following points:

Keeping the GMC updated: As or when further changes to reflect the introduction of the MS AKT are made – for example to assessment strategies, student familiarisation, venues, invigilator guidance materials, processes for release of results, processes around missing data – updates should be provided to the GMC as part of the next submission.

National policy framework: As detailed in the central submissions, there is a policy framework which all medical schools have collaboratively developed to support the delivery of the MS AKT within medical schools. This will, understandably, need to adapt to the university regulations applicable to each school, but the GMC would welcome hearing of the efforts to continue to progress the ambition for a common policy framework to underpin the development and delivery of the MS AKT, as set out in the collaborative proposal approved by GMC Council in June 2021*. The GMC should be kept updated on how the assessment provider's suite of local policies and procedures align with the national policy framework, including any changes made locally to reflect the introduction of the national MS AKT – including as part of the next submission.

Exam security and contingency planning: The GMC is having conversations with each medical school about exam security and contingency planning, and is keen to continue working on this with schools and the MSC. In addition to these discussions, the assessment provider should let the GMC know about

* Under section 4(4) of the Medical Act 1983

any updates or issues arising as part of the next submission.

These points, and the considerations and conclusions that follow in this report, are based solely on a review of the written information and evidence submitted by the assessment provider and by the MSC on behalf of all medical schools. This includes any clarifications or further information requested as part of that process and the assessment provider's response to a draft of the compliance report which was shared with them prior to the final decision being made.

Individual AKT requirements

1	<p>Assessment strategy</p> <p><i>The AKT is one of the elements through which passing candidates demonstrate to the GMC their eligibility to join the medical register.</i></p> <p>Describe and demonstrate how the AKT sits within the overall assessment strategy.</p>
Met?	<p>Yes</p> <p>Through its local submission the assessment provider has appropriately described and demonstrated how the AKT sits within the overall assessment strategy for the final and penultimate years of its medical degree (leading to a UKPMQ), showing the progression points and eligibility criteria for the AKT.</p>
Central submissions	
N/A	
Local submission	
<p>The assessment provider is adopting the MS AKT, to be sat as a summative exam in the final year of their programme.</p> <p>The assessment provider has set out an overview of their curriculum and assessment strategy. They state that the purpose of their curriculum is to embed the values of teaching excellence, service, science, scholarship and patient safety into a world-leading medical programme. It aims to provide high quality teaching and an inspiring learning experience based around increased clinical contact to train the very best doctors for Wales and the UK. They describe how their assessment strategy was updated in 2016 to provide a practical plan for undergraduate assessment, following the principles agreed in their original strategy but with reference to the GMC's Outcomes for graduates and Promoting excellence. They note that their internal process ensures that their assessment strategy is reviewed at the end of each academic year, to ensure that it is current and complies with any change in regulation.</p> <p>The assessment provider has detailed the formative and summative assessments delivered through the course of the programme. Students must meet all of the criteria outlined in the assessment and progression guide for each year in order to progress to the next year of study. This includes</p>	

satisfactory attendance and engagement, satisfactory completion of all ‘patient safety engagement contact points’ and passing all summative assessments.

Students in the final year (year 5) of the programme will sit the MS AKT as a summative knowledge exam in late January / early February of the academic year, with a first resit opportunity in the May of that year.

2	AKT design <i>The design of the AKT must enable effective assessment of the learning outcomes required to demonstrate professional medical knowledge as applied to the care of patients, at the level expected of a doctor ready for safe practice at the relevant point of registration.</i> Describe the rationale for the design of the AKT.
Met?	Yes Through the central submissions, the assessment provider has sufficiently described the rationale for the design of the AKT and demonstrated that this will enable effective assessment of the learning outcomes required to demonstrate professional medical knowledge as applied to the care of patients, at the level expected of a doctor ready for safe practice with provisional registration.

Central submissions

The MS AKT exam consists of two computer-delivered papers of 100 single best answer (SBA) items (questions) each. All exams in an assessment cycle (a single academic year) contain items known as common content items.

The papers are taken on consecutive days. Each paper lasts two hours. The rationale for the MS AKT design is that it is familiar to medical schools and SBA items have been shared by medical schools through the Medical Schools Council Assessment Alliance (MSCAA) for a number of years. The timing for each item was derived from a survey of all participating medical schools of the time they allowed for knowledge tests in finals exams, 72 seconds being the median.

To pass the MS AKT, candidates must meet or exceed the pass score across the two papers. The passing standard is set at that of a week 1 Foundation Year 1 (F1) doctor, which is the standard that is appropriate to the point of registration for which it is designed – namely, a national standard for

provisional registration for all UK students. The standard is set centrally by the MSC’s Standard Setting Group using the Angoff method, which is the most commonly used method in UK medical knowledge tests. Further information on how scoring works is outlined under requirement 3 (Scoring), and how the standard is set under requirements 4 and 5 (Standard setting).

Candidates take the MS AKT using the MSC-provided exam delivery platform, with the papers being supplied centrally by the MSC.

Following feedback from the GMC’s AKT advisers, high-level information was provided in the central submissions about the piloting and how this has informed the design – for example, the overall pass rate from the first round of piloting was around 92%, which is in line with expectations based on pass rates at finals. With a further round of piloting having been undertaken and the live AKT for penultimate year assessment providers in June 2024, additional insight will be obtained to confirm, or otherwise, the design of the MS AKT. It is recognised that the MS AKT follows a standard design approach and therefore major design changes are unlikely. However, elements which support the design may still evolve. These elements are identified in the following requirements.

While the modelling supplied to date to support the design is high level, much of the evidence for the design of the MS AKT draws on the previous work of the MSCAA and the assessment provider’s own experiences of knowledge testing and, through the central submissions, the assessment provider has sufficiently described the rationale for the design of the MS AKT to meet the requirement. This includes how the design enables effective assessment of the learning outcomes required to demonstrate professional medical knowledge as applied to the care of patients at the level expected of a doctor ready for safe practice at the relevant point of registration.

Local submission	
N/A	
3	<p>Scoring</p> <p><i>The scoring approach must enable fair and consistent pass/fail decisions on candidate performance.</i></p> <p>Describe the approach to scoring candidate performance at item level and overall, including any score conversions and rounding protocols.</p>
Met?	Yes

	Through the central submissions, the assessment provider has sufficiently described the approach to scoring candidate performance at item level and overall to meet the requirement. The scoring approach will enable fair and consistent pass/fail decisions on candidate performance.
Central submissions	
<p>Each paper has 100 items, each worth one mark, meaning that there are 200 marks available in total in the MS AKT. A candidate's score on the MS AKT is the sum of the total number of correct responses across the two papers. Each score is a whole number, with a maximum achievable score of 200. Scores are not converted to percentages, or other types of scores, and, as such, there is no requirement for the assessment provider to have a policy, or protocol, for rounding scores to the nearest integer (as could be the case if percentage scores were used).</p> <p>Scores are automatically generated. This ensures that the calculations (the summing of scores across the two papers) will not be subject to human error.</p>	
Local submission	
N/A	
4	<p>Standard setting</p> <p><i>The AKT must be set at a standard that is appropriate to the point of registration for which it is designed (a national standard for provisional registration for all UK students, or a national standard for full registration for IMGs). The standard for the AKT must be created through the use of a recognised methodology and procedures. The standard setting processes must include a mechanism for maintaining a consistent level of challenge for each administration within a single year and over time.</i></p> <p>Describe and demonstrate how the national standard is determined, including input from stakeholders, piloting and review of outcomes.</p>
Met?	<p>Yes – with a point for future action</p> <p>Through the central submissions, the assessment provider has described and demonstrated how the national standard is determined,</p>

including input from stakeholders, piloting and review of outcomes.

Central submissions

As identified above (see requirement 2), the passing standard is set at that of a week 1 Foundation Year 1 (F1) doctor, which is the standard that is appropriate to the point of registration for which it is designed – namely a national standard for provisional registration for all UK students.

The development of the national standard for the MS AKT builds on a project which was commissioned by the MSCAA in 2010 and has involved increasing numbers of medical schools. This project introduced common questions into medical schools' finals-level knowledge-based assessments in order to provide data and feedback to medical schools about the comparability of standards nationally.

There are several strands of work related to creating the national standard for the MS AKT which are outlined in the submissions and are summarised here:

- 1) There is an 'anchor' statement which articulates the standard required for the MS AKT, the national standard. This is used as a reference point for all standard setting activity.
- 2) The work of creating the standard for each MS AKT (the pass mark for each paper) is led by a panel of medical school representatives, who oversee several standard setting groups with responsibility for making decisions about the standard of individual questions in a paper (also known as items).
- 3) There is a standard operating procedure (SOP) for standard setting.
- 4) Standard setters are required to complete training (onscreen and in person) before they can participate in standard setting.
- 5) The application of the national standard has been trialled during piloting of two MS AKT papers in the academic year 2021-22. This provided the opportunity for a test-run of the SOPs for creating papers and the standard, and to explore candidate results. The central submissions present the overall pass mark (92%) and further piloting will be conducted in the academic year 2023-24 which will offer further insight into the performance across papers. The timing means the outcomes of the pilot could not be included in the central submissions, but there is sufficient reassurance to see that the assessment provider – through the MSC – will be building on the learning from the earlier pilot.

In relation to stakeholder input beyond medical schools, the central submissions indicate that, in future, representatives of the UK Foundation Programme (UKFPO) will be included in the standard setting process. This is a welcome development.

The processes and resources referred to above will support the maintenance of a consistent standard. In addition, the standard setting panel will, with the support of two psychometricians (data analysts) analyse, review and monitor the performance of test items after the MS AKT papers have been taken by students, including common content items. The expectation is that this monitoring will provide further insight into how a consistent level of challenge is maintained across MS AKT papers.

Future action: In future quality assurance cycles, the assessment provider will need to confirm that the national standard is being created and applied consistently and that there is a consistent level of challenge for each administration within a single year and over time.

Local submission

N/A

5	<p>Standard setting</p> <p><i>The AKT must be set at a standard that is appropriate to the point of registration for which it is designed (a national standard for provisional registration for all UK students, or a national standard for full registration for IMGs). The standard for the AKT must be created through the use of a recognised methodology and procedures. The standard setting processes must include a mechanism for maintaining a consistent level of challenge for each administration within a single year and over time.</i></p> <p>Describe and demonstrate the underlying rationale for the chosen method and how the national standard is set and maintained, including any conjunctive standards.</p>
Met?	<p>Yes</p> <p>Through the central submissions, the assessment provider has described and demonstrated the underlying rationale for the chosen method and how the national standard is set and maintained, including any conjunctive standards (of which there are none at present).</p>

Central submissions

The standard is set using a method known as the Angoff method. This is a recognised and commonly used method for setting the pass marks for knowledge tests and is an appropriate method for setting the pass marks for MS AKT papers. The method uses the judgements of individual trained

raters, who are subject matter experts. Each rater makes a judgement about how many ‘borderline’ students would get each item correct (taking into account the difficulty or easiness of the item content).

The rationale for using the Angoff method is that it’s familiar to most assessment providers and was used in the common content project that fed into the development of the MS AKT.

There are no plans to apply conjunctive standard for the MS AKT, meaning that there are no additional requirements for candidates to meet, other than the overall pass mark. The AKT requirement does not necessitate a conjunctive standard however, as the MS AKT develops, the assessment provider, through the MSC, will wish to keep this under review.

The narrative for requirement 18 (Production of results) describes how a second standard setting method – known as the Hofstee method – will also be used as part of the post-test analysis to give additional assurance about the pass mark created using the Angoff method. The Hofstee method is also a recognised method and the submission states that it will be used when pass rates are markedly outside predicted parameters with reference to historical performance. It is noted as being unlikely to be used in favour of the Angoff pass mark.

The assessment provider – through the MSC – has described and demonstrated the underlying rationale for the chosen method and how the national standard is set and maintained. As with requirement 4, there are elements that will need to be monitored and, if necessary, refined as the MS AKT is run.

Local submission

N/A

6

Sampling

The MLA content map is informed by Outcomes for graduates, the Foundation Programme training outcomes, the Generic professional capabilities framework and Good medical practice. All AKT content must be derived from the MLA content map, and the sampling criteria (the sampling grid and any further dimensions) must demonstrate how this is achieved and applied consistently in each test administration. The sampling criteria must be approved by the GMC.

Describe and demonstrate how the sampling approach aligns with the MLA content map, including the extent to which the sampling criteria reflect the three overarching themes and the individual domains of the content map.

	<p>a. Describe the rationale for the themes/ categories of the sampling grid, including the weightings/ proportions and any other factors that are applied to enable effective test construction and reporting.</p> <p>b. Describe the sampling criteria and demonstrate how these are used to create a technical algorithm for item selection that produces consistent and comparable tests.</p> <p>c. Describe how the sampling approach is reviewed and kept up to date to reflect updates to the MLA content map.</p>
Met?	<p>Yes - with a point for future action</p> <p>Through the central submissions, the assessment provider has described and demonstrated how the sampling approach aligns with the <i>MLA content map</i>.</p>

Central submissions

The central submissions explain the process by which the content of the MS AKT papers is selected and there is assurance that the MS AKT content relates to the themes and domains of the *MLA content map*.

An MS AKT sampling grid has been developed which specifies the proportion of items that must be selected from across different areas of clinical practice, applied knowledge, and care settings. The submission states that the views of stakeholders were sought to ensure that the approach to content sampling will produce MS AKT papers that reflect what newly qualified doctors will encounter in Foundation practice.

In order to automate the selection of items for each MS AKT paper, a computer exam construction algorithm has been created based on the 'rules' specified in the sampling grid (how many items per topic area etc.). This means that the selection of content for the first draft of each MS AKT paper is computer-generated. This process has been tested during the piloting phase, with ongoing monitoring and annual reviews planned. Annual reviews are to take place and will provide an opportunity to ensure that the sampling approach (the grid and algorithm) continues to be aligned to the *MLA content map*, which will be updated periodically to ensure it reflects day-to-day medical practice*.

A description and outline of the MS AKT sampling grid was approved as part of the collaborative proposal by GMC Council.

* The GMC plans to review the *MLA content map*, which was published in September 2019, and updated and reissued in March 2021, later in 2024.

Future action: Following the completion of piloting and any updates to the MLA content map following the GMC’s review in 2024/25, the sampling criteria and grid should be reviewed to ensure they remain aligned to the content map and any changes sent to the GMC for approval.

Local submission

N/A

7	<p>Quality management</p> <p><i>The AKT question bank must be secure, current, of high quality and its content must be derived from the MLA content map. Test items must be developed, managed and reviewed through fair and effective processes.</i></p> <p>Describe and demonstrate how items are created, reviewed and quality assured in a consistent and timely manner.</p>
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Met?	<p>Yes</p> <p>Through the central submissions, the assessment provider has described and demonstrated how items for the AKT question bank are created, reviewed and quality assured in a consistent and timely manner.</p>
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Central submissions

The central submissions detail the processes involved in creating, approving, evaluating, and maintaining quality items for the MS AKT, ensuring authenticity and appropriate challenge levels. Items are collaboratively created by a longstanding partnership of UK universities (as described at requirements 2 (Design) and 4 (Standard setting)), following an agreed style guide and peer review principles. Expert item writers (the MSC’s Item Writing Group) oversee item creation, growth of the item bank, and maintenance of quality, including style guide updates and recruitment/training of new writers.

Item writers, recruited from UK medical schools, undergo training that includes a ‘How to’ video, submission of sample items, attendance at an item review event, and a bespoke session on equality, diversity, and inclusion (ED&I). The assessment provider outlines steps for producing new items, involving review stages and using item performance analysis to inform revisions and guidelines.

Local submission	
N/A	
8	<p>Quality management</p> <p><i>Each test must be created through operationally effective test construction methodology supported by expert review and quality checking processes to ensure consistent application of the sampling criteria.</i></p> <p>Describe and demonstrate how tests are created, reviewed and quality assured in a consistent and timely manner.</p>
Met?	<p>Yes</p> <p>Though the central submissions, the assessment provider has described and demonstrated the processes to create quality tests that consistently reflect the sampling criteria.</p>
Central submissions	
<p>As described under requirement 6 (Sampling), the sampling criteria are used to create an exam construction algorithm to produce versions of the MS AKT automatically within the exam delivery platform. Papers are then manually checked by members of the MSC’s Exam Construction Group. This is a process largely designed to identify potentially problematic items that haven’t been picked up through quality assurance processes at other stages of test development, including item writing and standard setting.</p> <p>Within the central submissions it is stated that any differences in performance relating to which version of the paper was sat will be reviewed at post-assessment review and that performance of the algorithm that operationalises the sampling grid will be monitored on an annual basis.</p> <p>The assessment provider – through the central submissions – has described and demonstrated how tests are created, reviewed and quality assured.</p>	
Local submission	
N/A	

9	<p>Familiarisation</p> <p><i>Candidates must be given appropriate and timely information about the AKT, including: the test format, mode, testing time and sample content; arrangements for running the test on the day; and relevant local regulations.</i></p> <p>Describe and demonstrate how candidates have been familiarised with the AKT and how the AKT will be run on the day.</p>
Met?	<p>Yes</p> <p>Through both the central submissions and the local submission, the assessment provider has described and demonstrated how candidates are familiarised with the AKT and how it will be run on the day. This includes information about the test format, mode, testing time and sample content, arrangements for running the test on the day, and relevant local regulations.</p> <p>The assessment provider has shown how they provide appropriate and timely information to candidates to prepare them to take the AKT and inform them of what to expect.</p>
<p>Central submissions</p>	
<p>The central submissions set out how candidates are familiarised with the format and expectations using webinars, FAQs available on the MSC website, a candidate guide and two kinds of practice papers. Four 50 item practice papers on the exam delivery platform are available to help candidates familiarise themselves with the platform. These papers consist of previously used items which are not necessarily mapped to the <i>MLA content map</i> but are similar in style and format.</p> <p>In addition, the MSC hosts a 200 item exam on its website, consisting of two 100 item papers, constructed according to the exam construction procedure outlined in requirement 6 (Sampling). Unlike the 50 item papers, the 200 item exam is mapped to the <i>MLA content map</i>. It is not standard set but reflects a similar level of difficulty to the live MS AKT.</p>	
<p>Local submission</p>	
<p>The assessment provider has described a variety of resources and support available to students, which are shared via their Virtual Learning Environment (VLE) platform and/or by email. Resources include an assessment and progression guide, knowledge booklet, assessment calendar,</p>	

assessment overview lecture, and policies and procedures. Students are also sent monthly update emails. The assessment provider has delivered talks to students covering the introduction of the MLA and MS AKT, as well as signposting MSC and GMC information and resources (including webinars).

Candidates are provided with information on exam logistics for knowledge tests approximately three weeks in advance, through the VLE and by email. They are advised of the venue and required arrival time, all the information they need about the exam and any action they need to take in preparation for it. This includes a copy of the SEB instructions for the day and the invigilator announcement that will be read out.

Students can access practice papers provided by the MSC, as well as being able to write their own SBA questions or answer questions written by peers. The assessment provider also has a question bank that students can use for AKT preparation.

The assessment provider has described how students are familiarised with the format of, and delivery platform for, the MS AKT from the outset of their programme. SBA format tests are taken in each year of the programme, with formative and summative assessments being taken on the MS AKT exam delivery platform from year 1. Additionally, students in years 2–5 sit progress tests comprising 125 SBA questions which the assessment provider blueprints and formats to mirror the MS AKT exam.

10	Results and feedback <i>Timely and appropriately detailed feedback must be provided to individuals with their AKT results to enable unsuccessful candidates to identify and target specific areas of development prior to their next attempt or to enable successful candidates to reflect on their performance.</i> Demonstrate what results and feedback are given to candidates, as well as what support is available to unsuccessful candidates.
Met?	Yes Through both the central submissions and the local submission, the assessment provider has described and demonstrated what results and feedback are generated to be given to candidates. The assessment provider has described the information and support they give to candidates about their results and performance.

Central submissions

The central submissions explain that the central MS AKT Exam Board will share individual candidate scores (by area of clinical practice and area of

applied knowledge, alongside their overall numerical score), pass/fail result and the pass mark for the exam, with the assessment provider. This will allow the assessment provider's own exam board to review the results alongside other finals assessments. The assessment provider won't be able to make changes to the MS AKT results at their exam board because the standard is set nationally. Following the assessment provider's exam board, the results will be released to the candidates by the medical school at a time agreed with the assessment provider.

All candidates, whether they've passed or failed, will receive the same level of feedback directly through the exam delivery platform from the MSC on behalf of the assessment provider.

The central submissions also provide a description of the quality assurance steps taken to ensure that each candidate receives the correct results.

The level of feedback is designed to give the candidate sufficient information to permit remediation from the assessment provider, while minimising the risk to item and exam security.

Local submission

The assessment provider has described how students are provided with an assessment calendar at the start of the year which will include the planned release date of all assessments and feedback, including the MS AKT. Year directors are also aware of these dates and contact the students to arrange support. Students who fail the MLA AKT will be asked to return from their elective early.

After each written exam, candidates receive a mark and grade via a local platform. This includes detailed feedback on their performance (an example of which has been provided and covers domain scores, skills scores and learning points) and information on how they performed in comparison to the rest of the cohort. The knowledge booklet provided to students at the start of each year contains example feedback and information on interpreting the results, so that students know what to expect.

Personal tutors are informed of exam results dates and students are emailed the day before results are released to notify them to expect this information. Results are never released on a Friday, to ensure that immediate support is available for students.

Once results are released, the assessment provider's year directors and other academic staff are available to talk to students, and students who receive an unsatisfactory grade must meet with a member of staff. Students who receive a borderline pass are also offered a meeting. Guidance has been developed to support staff with these discussions.

Students are encouraged to share their feedback with their personal tutors and are referred to a learning support service if additional support is needed. The assessment provider also notifies the learning support service of any students who have failed and may require support. The assessment provider has recently introduced post-exam drop in sessions to allow students the opportunity to ask any questions they have regarding the assessments directly to the assessment team and senior faculty staff.

Remediation is available in the form of groups sessions, podcasts and an interactive online tool. The assessment provider also notes that, in earlier years of the programme, they have an academic near-peer mentoring scheme - where year 3 students are paired with year 5 students - which is aimed at students who do not have informal mentors in higher years.

The assessment provider has set out effective processes for providing results to students. They have also confirmed that, following the introduction of the MS AKT, they plan to still adhere to the 20 day turnaround of results that their university requests.

As identified in the overview section above, processes for the release of results is an area where the assessment provider should update the GMC as further changes are made to reflect the introduction of the MS AKT. This could include details of the timing of central and local release of AKT results to candidates, any changes they will have had to make to their results and feedback processes to reflect the introduction of the national MS AKT, and at what point support will be offered to unsuccessful candidates.

11	<p>Policies and procedures</p> <p><i>The AKT must be supported by policies and procedures for conduct and administration embedding fairness and ED&I principles for reasonable adjustments, mitigating circumstances, number of attempts or resits, exam misconduct, complaints and appeals. The policies and procedures must be approved by the GMC.</i></p> <p>Demonstrate and describe that there are policies and procedures in place to ensure a fair and comparable test experience for candidates.</p>
Met?	<p>Yes – with further information to be provided at the next submission</p> <p>Through both the central submissions and the local submission, the assessment provider has described how policies and procedures operate at a local level.</p>
Central submissions	

The central submissions described how the MS AKT could operate within the context of a policy framework and that these policies and procedures ensure a fair and comparable test experience within the context of a centrally designed assessment delivered locally at universities with individual sets of policies.

Through the central submissions, the policy framework has been provided. The central submission states that this is the policy framework that all medical schools have collaboratively developed to support the delivery of the MS AKT within medical schools. There will currently be local variation on how the policy framework is applied: the national policy framework will need to adapt to the university regulations applicable to each school. The policy framework covers:

- Number of attempts
- Appeals and complaints
- Mitigating circumstances
- Reasonable adjustments
- Exam misconduct

The policy framework has been developed with a view to providing an overarching framework that will contribute to the comparability of candidate experience between medical schools, drive up consistency of candidate experience across schools, and provide candidates with a framework within which they can demonstrate they meet the standard of proficiency.

Concerns were raised by some AKT advisers about variations in policies, such as in relation to the number of attempts. However, the GMC has approved the policy framework and accepted that, although there will not immediately be consistency across all medical schools on the MS AKT in the way in which they apply the policy framework, there will be consistency within a medical school. In other words, a candidate will have the same experience across the other exams they sit within their medical degree – including the MLA CPSA.

The central submissions noted that the Office of the Independent Adjudicator (OIA) had confirmed, during a workshop, that the fact that a student in one medical school was offered a different number of attempts to pass the MS AKT from a student in another medical school was not legally an issue as the student signs up to the rules applied by individual institutions when they join that medical school.

The GMC recognises that requests for reasonable adjustments, applications for mitigating circumstances, appeals, and fitness to practise concerns need to be considered holistically by the assessment provider locally, in the context of an individual student's circumstances, academic or otherwise. The GMC's acceptance of the policy framework being locally administered is based on medical schools' commitment, made through the MSC, to move

towards greater consistency in the future. The central submissions identify that proactive steps to encourage a move to greater consistency have been taken, including workshops, surveying medical schools, sharing information and specialist information, and conducting follow-up surveys. Sufficient progress has been made at this stage.

The central submissions stated that the policies were developed collaboratively to gain wider views across a range of stakeholders and listed the following groups being represented:

- medical school staff including assessment experts and those in charge of the design and delivery of undergraduate medicine programmes
- university registrars who set, apply and amend university policies
- foundation school directors
- medical students
- recently qualified doctors
- the GMC.

The central submissions identify that an additional meeting with the BMA Medical Students Committee was held to refine examples to be included in the policy on mitigating circumstances. Additionally, the MSC's AKT Policy Group includes a medical student representative.

Local submission

The assessment provider has described how their assessment team has several Standard Operating Procedures (SOPs) and work instructions, which are reviewed regularly. They have a knowledge group panel which is responsible for all written assessments and meets approximately six times a year. This panel has responsibility for quality assurance of each examination and written assessment strategy, including review and consideration of the previous year's feedback from staff, students and external examiners before making any required changes.

The assessment provider has referenced university policies and procedures on appeals and complaints, extenuating circumstances, reasonable adjustments and misconduct in an exam (unfair practice). They note that these policies are updated at the beginning of each academic year and are made available to staff and students via their intranet, with training sessions provided when significant changes have been made. As identified in the overview section above, alignment of local policies with the national policy framework, including any changes made locally to reflect the introduction of the national MS AKT, is an area where the assessment provider should keep the GMC updated (including as part of the next submission).

The assessment provider has recently established a reasonable adjustments committee. The role of this group is to have oversight of adjustments across admissions, assessments, placement and curriculum, and to monitor the process and procedures relating to reasonable adjustments. The university's reasonable adjustments policy sets out how assessments should be inclusive by design (via their inclusive assessment policy) and outlines the procedure for identifying and implementing reasonable adjustments. Reasonable adjustments will be considered on an individual basis, with the university's student disability service completing an initial assessment which is then reviewed by the assessment provider. Uncommon requests may also be considered at an assessment management meeting or knowledge group panel. Invigilators at the relevant venues are notified in writing of any required adjustments for individual students. The assessment provider also writes to students ahead of the exam, confirming the provisions in place, to allow time to resolve any discrepancies before the day of the exam.

The extenuating circumstances policy sets out scenarios where a student may have mitigating factors affecting their ability to complete an assessment, the eligibility criteria for this and the potential remedies. This includes situations where the circumstances relate to a protected characteristic (under the Equality Act, 2010), a long-term health condition or caring responsibilities. All submissions are determined by the extenuating circumstances panel and the decision is communicated to the student within seven days of the application. Decisions are escalated to the exam board, who make a final decision on the remedy.

The university's student guide to academic appeals includes a flowchart setting out the process stages and decision points leading to an appeal being accepted or rejected. The document also notes how extenuating circumstances may be a factor in the decision.

The assessment and progression guide provided to students references a student complaints procedure available on the student intranet, though a copy of this has not been provided.

The assessment provider has described how they are guided by the university's misconduct procedure. This sets out the process to be followed if it is alleged that a student cheated during an examination, including escalation and investigation steps, as well as possible outcomes.

The assessment provider has also described how they have put in place additional guidance for the running of online exams, as they are one of the only schools in the university to deliver online exams in a face-to-face setting. This guidance includes instructions on how to manage various incidents that can arise and the remedy that should be applied, as well as what to do if an incident occurs that is not listed in the guidance document. All incidents are reviewed at post-test meetings and decisions are made as to whether they require no further action or an additional exam board remedy.

The assessment provider has set out (under requirement 1 in their submission) that candidates are permitted three attempts of all assessments (bar progress tests in years 2-4), with two attempts per academic year.

The assessment provider has provided a copy of the university’s complaints guidance for students. This clearly sets out the principles and process for making a complaint, confirming the grounds on which a complaint can be made (failure by the university to meet its obligations, concerns about the delivery of a programme, and issues relating to the quality of facilities, learning resources or services provided). The assessment provider has also noted that, in addition to this, students are able to notify them of any concerns/incidents relating to an exam within five days of the exam taking place. Any issues raised are discussed at post-test meetings (example minutes provided), where a decision is made and students are notified of the decision either the same day or the day after.

The assessment provider has explained that they ensure fairness through the use of reasonable adjustments, the post-test meetings that take place during each exam review and a demographic analysis. In addition to this, they have a differential attainment working group which covers curriculum, placements, behaviour and assessments. . We would welcome receiving an update on this work to support our own work in seeking to element difference, discrimination and unfairness in medical education by 2031.

Next submission: The assessment provider should provide further detail on how fairness and ED&I principles are embedded in their policies and processes – this could be through describing how the principles in [Welcomed and valued](#) are applied when determining the necessary support for candidates or through case studies showing how policies and procedure are implemented (see [Guidance to assessment providers on creating a submission against the AKT requirements](#)).

12	<p>Resources and space</p> <p><i>The AKT must be delivered in a suitable environment for a high stakes assessment for all candidates.</i></p> <p>Demonstrate that the AKT takes place in a space appropriate for a high stakes assessment with suitable provision for the delivery method.</p>
Met?	<p>Yes – with three recommendations and further evidence to be provided at the next submission</p> <p>Through both the central submissions and the local submission, the assessment provider has described the appropriateness of the venues in which they deliver the AKT and the suitability of the delivery method.</p>

Central submissions

The central submissions describe how the MS AKT will be delivered on an electronic exam delivery platform. The platform has been developed with the aim of ensuring that all students across UK medical schools receive a comparable test experience.

The exam delivery platform allows the assessment provider to make alterations to some aspects of the exam delivery. For example, in adding extra time or rest breaks in the case of reasonable adjustments. Candidates are also able to make some changes themselves within the delivery platform. For example, the text on the delivery platform can be adjusted including magnification and coloured filters can be applied to the screen. The central submissions state that the text size/ colour can be optimised to meet specific requirements on request.

Local submission

The assessment provider described how they will deliver MS AKT exams in-person in invigilated exam venues and said that their team works closely with the university's registry to organise the exams. At the start of the year, the number of students to accommodate is confirmed and the number of venues required is agreed. They have criteria on essential requirements for exams including sufficient wifi provision (checked by the university's IT team), accessibility, quiet spaces, adequate lighting and ventilation, charging points and quarantining space where needed. Fortnightly meetings are held with registry and IT during the year to discuss logistics and to check on venue bookings, invigilator bookings and reasonable adjustment resources.

In their response to the draft version of this report, the assessment provider described how they are working closely with their central university and now have agreement to use university computer rooms for the MS AKT for the first few years. They are in the process of securing these rooms for the first sitting at the end of January 2025. They confirmed that all university computer rooms will be checked in advance to ensure SEB has been installed and tested. In the meantime, they will continue to work on their 'bring your own device' (BYOD) policy and continue to update it to ensure the security risk is minimal (as they continue to use BYOD for their other knowledge exams).

In their submission, the assessment provider detailed their processes for BYOD exams. Venues are checked by the assessment team or IT team the day before the exam to check the setup of wifi connections and access to the MS AKT exam delivery platform using Safe Exam Browser (SEB) on both a Windows and Apple device. This gives the opportunity to identify and resolve issues ahead of the exam taking place. Each exam venue is also provided with guest wifi accounts, in case students have any issue accessing the main wifi for any reason.

Students use their own devices in exams providing they have a compatible device. Compatibility is confirmed via a device survey at the start of the academic year. Exams are hosted on SEB, which the student downloads. Further information on SEB is available to students in guidance documents and the assessment provider has noted that they will continue to work on their policy to ensure that it is clear to students what support is on offer for them. They also noted that they review their training and guidance policies annually.

Students without compatible devices are allocated either a computer room or a university device. As a further contingency, the assessment provider also ensures that there are spare devices available on the day of exams.

The assessment provider states that they are enhancing the security of the exam through a configuration (config) file, which can prevent unsolicited access to the exam via remote machines/devices. They note that this risk has been previously discussed with the GMC and MSC, and that, when example config files are provided by the GMC/MS, they will compare to their own config file once. They hope their configuration will match or exceed the minimum requirements and have provided a summary of what their config file includes, as set out in the university's 'process of utilising Safe Exam Browser in order for students to undertake examinations on their personal devices', a copy of which has been provided. This process sets out the student process and technical process overview. The technical process overview details how an SEB configuration file is generated and its setting – which include administration password protection, opening in full screen kiosk mode (which created a new desktop), forbids being ran in a virtual machine, clearing and disabling the clipboard, disabling function keys and most shortcuts, blocking programs that allow screensharing/ remote access, disabling the web address bar (so URLs cannot be viewed, other than allowed URLs such as the register webpage and the exam delivery platform) and setting the exit URL to the exam completion URL.

The university's guidance states that there will need to be a minimum of two invigilators per venue, plus an additional invigilator for every 50 students over 100. The assessment provider has stated that they normally source more than this, especially in large venues. University provided invigilators are used for exams. Invigilation/proctoring for each exam is also undertaken by a member of the assessment provider's staff and at least one IT staff member. An academic is present at large venues and can be contacted by admin leads from other venues if needed.

Recommendation: The assessment provider should confirm, the venues and devices it will use for the MS AKT, describing and demonstrating how they are appropriate for a high stakes assessment.

Recommendation: If using BYOD for the MS AKT, the assessment provider must demonstrate how it has kept itself up to date about the risks to security presented by an online exam, particularly in respect of students being required to use their own devices, and how these are being mitigated. Any changes made to its policies, particularly its BYOD policy, should be provided.

Next submission: If using BYOD for the MS AKT, the assessment provider should provide an update on comparison of config files with any MSC/GMC examples provided, to ensure that theirs matches or exceeds the minimum requirements.

Recommendation: If using BYOD for the MS AKT, the assessment provider’s policy/processes should be updated to ensure that there is: clear support for candidates who need to install SEB, checks in place that the SEB has been correctly installed, enhanced training and guidance for invigilators in monitoring the BYOD policy, including ensuring that screen shots and recordings are not possible.

13	<p>Security</p> <p><i>The AKT must be developed and delivered within secure environments with appropriate measures in place across systems, venues and processes to prevent security breaches including leakage of test material and access to assessment content by unauthorised individuals.</i></p> <p>Describe and demonstrate how the security of the question bank and test papers is maintained.</p>
Met?	<p>Yes</p> <p>Through both the central submissions and the local submission, the assessment provider has described and demonstrated how the security of the question bank and test papers is maintained and that there are appropriate measures in place across local systems, venues, and processes to maintain the security of the AKT papers.</p>

Central submissions

As part of the central submissions, a security breach policy and guidance material were provided. Information was provided about SOPs for monitoring performance data for item leakage and for monitoring social media for MS AKT references.

Items for the MS AKT are stored in a secure item bank with restricted access permissions.

There are appropriate policies and documents, which must be signed by the relevant people involved, such as the MSC Anti-Fraud, Anti-bribery policy, Confidentiality Agreement and Conflict of Interest policy.

Students are warned against the sharing of information when they log on to the exam delivery platform and student noticeboards and social media are monitored.

The policy on exam misconduct provided with the central submissions as part of the national policy framework also expressly includes sharing, or attempting to share, any MS AKT exam content not published in formative material, as an example of exam misconduct.

The item bank and the exam delivery platform meet industry security standards and are protected by several layers of security controls determined by the software developers, relating to access, data, network and server security, and vulnerability management including penetration testing by accredited suppliers. Further, there are regular routine checks through the year of user rights at a medical school level to allow accounts to be activated or changed, and an automatic deactivation of a user after a specified period of inactivity.

The central submissions recognise that exam security is an issue spanning across multiple elements of the MS AKT. An 'AKT Security Group' has been established to respond to the emerging threat of artificial intelligence (AI) to exams (and hence the integrity of the results of individual candidates) and in light of the risk that the candidates may be able to breach the integrity of the item bank and share MS AKT items with the wider community, therefore affecting the results of larger numbers of candidates.

There is an intention to maintain the Security Group in the long term and to develop formal terms of reference. There are plans to broaden the membership – such as representation from the 'Secure Exam Browser Alliance' and the Universities and Colleges Admissions Service (UCAS) – to keep pace with changes in security issues in assessment, particularly regarding the rapid advances in technology. The central submissions demonstrate an increasing recognition of the risks of security breaches including leakage of test material and access to assessment content by unauthorised individuals requiring mitigation.

Local submission

The assessment provider has described how they use the MSC question bank to construct their knowledge exams, how they limit access to relevant members of staff, and measures in place for maintaining security and confidentiality. This will not be directly relevant to the MS AKT exam, for which content structure and delivery is coordinated centrally by the MSC.

The assessment provider has confirmed that they will not have access to the MS AKT exam in advance, as the specific exam content for delivery on the day is held by the MSC. They have also stated that their wifi has strict IT and internet security, including firewalls.

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Security

	<p><i>The AKT must be developed and delivered within secure environments with appropriate measures in place across systems, venues and processes to prevent security breaches including leakage of test material and access to assessment content by unauthorised individuals.</i></p> <p>Describe and demonstrate how exam materials (digital and/or paper) are prepared, stored and delivered.</p>
Met?	<p>Yes - with two recommendations</p> <p>Through both the central submissions and the local submission, the assessment provider has described and demonstrated how exam materials are securely prepared, stored and delivered.</p>
Central submissions	
<p>The central submissions describe and demonstrate how exam materials are prepared, stored and delivered in a secure environment with appropriate measures in place to prevent security breaches.</p> <p>The experience of, and lessons learned from, delivering online exams (such as the Prescribing Safety Assessment) during the Covid-19 pandemic have been drawn upon in considering security. Lockdown browser software will be mandatory for the delivery of the MS AKT.</p> <p>As a security measure, the sequencing of items within a paper will differ for each candidate. The Exam Board plans to investigate computer programs that could be run to proactively identify evidence of cheating and collusion. Efforts to minimise the risk of cheating, including this deterrent measure, are to be encouraged.</p> <p>The standardised Invigilators Guide sets out security requirements immediately before and during the MS AKT, such as forbidding mobile phones within the exam environment. There is further centralised guidance on how to handle local data breaches, including the assessment provider's responsibility to report breaches to the MSC (as central coordinator), and the support available to the assessment provider for issues requiring urgent escalation.</p> <p>Recommendation: Consideration should be given to putting a process into place for monitoring emerging threats and exploits to the software deployed to secure the exam system and item bank e.g. secure browsers.</p>	
Local submission	

As detailed under requirement 12, students primarily sit exams using their own devices and the assessment provider has security safeguarding procedures in place to mitigate the risks linked to this, including supported use of SEB. Approximately three days before the exam, students are allocated to the exam and venue, and are then notified by email. Students are asked to log in and check that they can see the exam link but they have no way of accessing the exam paper in advance of the exam starting.

To ensure that all students are using SEB, the assessment provider undertakes several checks during and after the exam. Within five minutes of the exam starting, designated invigilators check the platform to ensure that all students are using SEB as their browser. Any student identified as not using SEB would be asked to exit the exam on their device and re-enter using the SEB, with a check of their device also being carried out.

The assessment provider has described two further checks that are carried out as part of their data validation process. A spreadsheet is downloaded from the MSC which confirms the browser used by the student (an example spreadsheet has been evidenced). Additionally, a 'splash screen' is provided by the university's IT department (an example of which has been evidenced), which logs whether students accessed the exam via SEB. If it is identified that a student did not use SEB, they will be reported for unfair practice and an investigation will be carried out.

The assessment provider's assessment and progression guide notes that mobile phones and electronic devices not needed for the purpose of the exam (including smartwatches) are forbidden. Any infringement of this could be interpreted as cheating, for which the misconduct policy would apply. The assessment provider also notes that a clear-desk policy is part of their exam conditions - with students only allowed their ID badge, a pen/pencil, blank paper (provided by the assessment provider) and a drink. Students are not permitted to take home any written notes – these are collected at the end of the exam.

Only the lead invigilator at each venue has access to the exam PIN, which is shared with students ten minutes before the exam starts. Students cannot enter the PIN until they are logged onto the MS AKT exam delivery platform via SEB and the lead invigilator has pressed the 'allow students to enter PIN' button. When students have entered the PIN they can only start the exam once the lead invigilator has pressed the 'start exam' button on the system.

Invigilators must carry out candidate ID checks and candidates are not permitted to leave early. Students can arrive up to 45 minutes late but no additional time will be given at the end. It is also noted that invigilators should spread out across a room. Invigilators are provided with standardised announcements for delivery before, during and after the exam (with examples having been provided). Any incidents arising should be escalated to the assessment manager or assessment lead, who will provide advice. All incidents are logged and presented to the post test meeting of the assessment provider's knowledge group, which has responsibility for quality assurance of each exam.

The assessment provider has also described their security arrangements around reasonable adjustments. Students requiring ear plugs as part of an agreed reasonable adjustment are only permitted to use the mouldable plugs, which are checked on entry to the venue. Students requiring the use of the text reader app are provided with one-on-one invigilation. These students aren't able to use the SEB but are monitored closely throughout the duration of the exam.

In relation to dealing with any issues arising during an exam, the assessment provider has explained how, where possible, they remedy incidents on the day - which minimises the incidents that require a remedy by the exam board. For example, if a device fails and the student has to move to a new device, extra time is provided. They have described how, after the exam, any incidents are discussed, a decision is agreed and changes are implemented for the next exams - to ensure there isn't a repeat of the same issue. These are added to an action log to ensure they are followed up and the necessary changes are made. The assessment provider has noted that, for the MS AKT, they are aware that any potential breach of security should be reported to the MSC as soon as possible.

Recommendation: If using BYOD for the MS AKT, the assessment provider should confirm that the monitoring of students using a text reader app without SEB is acceptable under the central MS AKT security requirements.

15	<p>Security</p> <p><i>The AKT must be developed and delivered within secure environments with appropriate measures in place across systems, venues and processes to prevent security breaches including leakage of test material and access to assessment content by unauthorised individuals.</i></p> <p>Describe and demonstrate the arrangements for AKTs delivered in multiple venues or over multiple sittings.</p>
Met?	<p>Yes - with a point for future action and further information to be provided at the next submission</p> <p>Through both the central submissions and the local submission, the assessment provider has described and demonstrated the arrangements for security across its local venues.</p>

Central submissions

The central submissions describe and demonstrate the measures used to ensure the security of MS AKT materials across multiple sessions and venues. They have also shown how they monitor results across sittings for evidence of security breach, and how this is followed up.

The exam software platform on which the MS AKT is delivered to all medical schools is able to accommodate sittings in multiple venues concurrently. The standardised central guidance for invigilators and administrators provides clear instructions for setting up multiple sittings.

The assessment provider's local invigilator has control of the venue enabling them to deal with local interruptions (for example, fire alarms) during the exam.

Options are being explored to deliver the MS AKT offline, in order to accommodate internet outages.

Future action: Submit an update of the actions taken to remain alert to potential new security threats and also informed of developments in monitoring and preventing security breaches.

Local submission

The assessment provider notes that using BYOD for the MS AKT would mean that they will not require multiple sittings of the exam. However, if they are required to provide devices for students, then they will need multiple sittings and any necessary quarantining arrangements will be set up.

The assessment provider has detailed how it runs multiple sittings when students in years 2-5 sit the same progress test on the same day and exams are delivered across up to 17 venues, with morning and afternoon sittings. All morning venues start at the same time and students are not allowed to leave early. Students taking the exam in the afternoon are asked to arrive within 15 minutes of the morning exam ending which, the assessment provider notes, gives no time for information to be passed between students.

Students within a cohort are always allocated to sit their exam at the same time (for example year 4 in the morning and year 5 in the afternoon), except students with reasonable adjustments, who normally all sit in the morning. Students are seated at a minimum of 1.5 metres apart and exam questions are randomised for each student. This minimises the risk of students memorising questions for use/sharing post exam and reduces the risk of students trying to look at other students' screens.

Students are asked to complete a form at the start of the academic year asking them to confirm that they are aware of the unfair practice policy and to confirm that the exam will be all their own work.

Next submission: The assessment provider should confirm their arrangements for devices, venue(s) and sitting(s) of the MS AKT.

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Security

	<p><i>The AKT must be developed and delivered within secure environments with appropriate measures in place across systems, venues and processes to prevent security breaches including leakage of test material and access to assessment content by unauthorised individuals.</i></p> <p>Describe and demonstrate how invigilators are trained and briefed.</p>
Met?	<p>Yes - with a recommendation</p> <p>Through both the central submissions and the local submission, the assessment provider has described and demonstrated how invigilators are trained and briefed.</p>
Central submissions	
<p>As part of the central submissions, an invigilator guide was provided. This supports the delivery of the MS AKT across UK medical schools by providing standardised guidance. The guidance relates to the MS AKT pilots and will be updated once the assessment goes live and on an annual basis.</p> <p>The guidance provides step by step advice for several areas such as to how to start the exam or assist students who are experiencing difficulties. The central submissions state that the guidance will be updated for the live exam. To minimise variability between assessment providers, the guidance should include further advice on matters such as minimum standards for invigilation, including numbers and training for invigilators.</p> <p>Training and practice opportunities are available for invigilators, covering key areas such as delivery procedures, demonstration of the exam delivery platform and making adjustments, including extra time and rest periods.</p> <p>Guidelines have been developed for managing data breaches in the exam environment, which include that an individual medical school should lead on handling breaches that can resolved locally, but must notify the MSC as quickly as feasible. MSC staff and employees of the software company that manages the exam delivery platform are available for every assessment and a 'rapid response team' is being established to handle situations requiring immediate escalation.</p> <p>There is guidance for reporting security breaches and local invigilators are also required to report any issues that arose during the testing session and how these were handled. Where an instance of exam misconduct or breach of cyber security occurs, this will be fed back to assessment providers by the MSC and passed on by them to invigilators.</p> <p>Any adjustments that are made around delivery as a result of issues, such as system crashes, are to be declared by each assessment provider and</p>	

reviewed for consistency by the AKT Exam Board as part of standard quality assurance processes.

Recommendation: Plans to update the invigilator guidance following the pilots should be pursued to include guidance on minimum standards, numbers and training for invigilators of the MS AKT to support standardisation and minimise the risk of variability.

Local submission

The assessment provider's university recruits and trains all exam invigilators. Invigilators are employed as casual workers and are required to complete data protection training and annual ED&I training.

The assessment provider has described how, a day or two before an exam, they deliver a briefing session to all invigilators which includes information on venues and setup, timings, and management of incidents. This session is recorded and shared with those unable to attend. Invigilators in charge of the exam platform - including starting of the exam, ending of the exam and adding extra time - have additional training provided.

A detailed training pack is also provided to invigilators (of which an example has been evidenced). This includes details of times and venues for upcoming exams, guidance on venue setup and seating of students, delivery of exams on BYOD using the MS AKT exam delivery platform through SEB, and instructions for invigilation during the exam. There is a section on incident recording, which notes the importance of recording all incidents at the time of the exam, and that incidents may be used for appeals or in relation to any exam irregularity raised by a candidate.

17	Data acquisition <i>There must be secure and robust processes in place to capture and check assessment data.</i> Describe and demonstrate the approach to collecting or uploading candidates' responses on the day and dealing with missing data identified at the end of the test.
Met?	Yes Through both the central submissions and the local submission, the assessment provider has appropriately described how assessment data are captured and the processes in place to ensure these are accurate and complete.

Central submissions

Candidates will take the MS AKT on-screen using the MSC-provided exam delivery platform. The MS AKT will be delivered online, meaning there is live data capture and candidates' responses to the items are recorded on the server. The functionality of the exam delivery platform is being developed to ensure that during any periods of internet connectivity loss, candidates' responses continue to be captured and will be automatically uploaded when the connection is restored.

Candidates receive automatic warnings if they risk losing their responses, prompting them to take necessary actions. The system highlights all unanswered items for candidates to review. Candidate response data are securely stored on a server for quality assurance, analysis, and future requirements.

The approach to data acquisition includes processes for identifying possible causes for, and dealing with, missing responses, and processing candidates' results. The AKT Exam Board will be notified immediately if a technical failure is identified.

Local submission

The assessment provider has noted that student responses to exam questions are captured on the MS AKT exam delivery platform. They have described how, once the exam has finished, the lead administrator closes the exam and the results are calculated. Data is extracted from the bank and undergoes a validation process which includes checking that the correct number of students have sat the exam (noting any absences), student names and numbers match, students have the correct number of item responses, correct exam scores are made by the platform, as well as verification that all students have used the SEB. Exam data from all venues is merged and validated for each cohort. The exam and exam results are validated at a post-test meeting attended by assessment experts and year directors. The meeting also considers any reported incidents or irregularities and whether further action is required. We are unclear as to whether this process will be feasible when the MS AKT goes live and would encourage the assessment provider to liaise with the MSC in this respect.

The assessment provider has stated that, since using the MS AKT exam delivery platform for exams, they have not experienced any loss of data. They note that, if a student was to report a data loss, they would investigate with a view to retrieving the data from the student's device, and would also work closely with MSC to retrieve the data before making any decisions. We are unclear whether retrieving data from a student's device will be feasible when the MS AKT goes live and, again, would encourage the assessment provider to liaise with the MSC about this.

The assessment provider has set out a robust approach to data checking and dealing with any issues arising. However, we're not clear whether it will be possible for all of these processes to be applied to the centrally delivered MS AKT.

The assessment provider has also described a previous issue, in an exam held in November 2023, where some students using Mac computers noticed that their answers were not saving. The students were asked to log out of the exam, given an alternative device and were provided with the time lost so that they could redo the questions. This was reported back to the MSC for further investigation. Since they were able to apply a remedy, no post exam modelling of results was required.

As identified in the overview section above, processes for missing data is an area where the assessment provider should update the GMC as further changes are made to reflect the introduction of the MS AKT.

<p>18</p>	<p>Production of results</p> <p><i>Performance metrics must be used to support decision-making and ensure the standard of proficiency is being met.</i></p> <p>Demonstrate how results data are processed, checked and analysed after the AKT, including criteria for making post-test adjustments, to produce test outcomes for ratification by the relevant exam board.</p>
<p>Met?</p>	<p>Yes</p> <p>Through the central submissions, the assessment provider has appropriately described how results data are processed, checked and analysed after the AKT.</p>

Central submissions

The central submissions set out how data are processed for operational, quality assurance and research purposes. MS AKT results data will be captured by the exam delivery platform and stored in a secure MSC assessment data storage system.

The central submissions detail the integrity checks that are performed, including checks regarding correct number of students and missing data. Post-test analysis is also detailed with two standard methods – classical test theory and Rasch – being used to understand how well the test and items within the test have performed. Items requiring further review are identified for the AKT Exam Board to consider.

Where an item, or items, is found not to have performed as intended (for example, where the analysis suggests that there could be more than one correct response; an item flaw which would disadvantage students) a panel of at least five members of the Standard Setting Group is convened. The panel will review the item/s and analysis and make recommendations to the AKT Exam Board for retaining, adjusting, or removing questions from the

assessment. The AKT Exam Board, SSG panel and psychometricians will work together to make any post-test changes and ensure the completeness and accuracy of results prior to release to medical schools.

Local submission

N/A

19	<p>Psychometric analysis</p> <p><i>Assessment providers must demonstrate that the AKT is operating as intended. This includes evaluation of test performance and outcomes. Reports, data and information must be provided to the GMC for quality assurance purposes.</i></p> <p>Describe and demonstrate how the post-test analyses feed into decision-making and quality improvement.</p>
Met?	<p>Yes</p> <p>Through the central submissions, the assessment provider has set out how the post-test analyses feed into decision-making and quality improvement.</p>

Central submissions

The central submission outlines the post-test analysis process for decision-making and quality improvement. This includes a range of psychometric and operational analyses that are conducted after each assessment and on an annual cycle. This analysis will be used to produce a report for each medical school, detailing MS AKT performance among their students, and also as compared to the national performance profile of all medical schools combined. In addition, the MS AKT results data will also be matched with student demographic data and analysed to identify potential award gaps, including analysis by protected characteristics.

The central submissions outline the use of psychometric analysis to identify item leakage (which occurs when items, and their correct answers, are shared, or 'leaked' and become common knowledge among students). This includes analysing the performance of the common items over time to detect possible changes in accessibility (change in the number of candidates getting the item/s correct), which could be evidence of item leakage. The submission also highlights preventive measures such as online delivery, the use of safe exam browsers, item randomisation, and effective invigilation.

While this approach appears robust, the effectiveness of the proposed measures in addressing potential item leakage should be monitored. Item performance data will be shared with the Item Writing Group who will edit, update and improve items accordingly. Data will also be shared with the Standard Setting Group and panels to help inform their discussions about the performance of borderline candidates (which is important for maintaining the national standard). The psychometric analysis processes will help to enhance item, and test, quality and ensure that standard setters have insight to the appropriateness and consistency of the standard applied to the MS AKT.

Local submission

N/A

20	<p>Governance and fairness</p> <p><i>The AKT must be set and delivered through governance structures approved by the GMC. The AKT must embed legal requirements, principles and good practice of equality, diversity and inclusion in its development, delivery, monitoring and review, to ensure a fair and comparable test experience for all candidates.</i></p> <p>Describe the boards and operational groups involved in the governance of the AKT.</p>
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Met?	<p>Yes</p> <p>Through the central submissions and the local submission, the assessment provider has appropriately described the roles and responsibilities of the groups governing the AKT and how they interact with and contribute to AKT governance structures.</p>
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Central submissions

The central submissions describe the governance and operations for delivering and overseeing the MS AKT. This comprises the MS AKT Board, which is attended by all Heads of UK medical schools, the MS AKT Exam Board, four operational groups with responsibility for technical aspects of MS AKT development (item development, standard setting, exam construction and policy), and the panels or groups who deliver on practical aspects of the MS AKT, such as writing the test items.

The MSC have developed terms of reference which specify the purpose and objectives of each group or board and how each is expected to promote equality and diversity in their particular operational domain.

Each board or panel position has been recruited on the basis of a job description and advert and selected via a competency-based panel interview. All stages of selection ensured consideration of EDI principles, such as ensuring access for applicants with disabilities, and actively encouraging applications from individuals from groups sharing protected characteristics. The central submissions states that the recruitment and selection processes go beyond the legal responsibilities under the Equality Act 2010.

To demonstrate the impact of this approach to recruitment and selection, MSC provide analysis of the demographic profile of the applicants and those appointed to the MS AKT governance and operational groups combined. This analysis shows that the diversity among applications is mirrored in the diversity of those appointed. Some protected characteristics were not represented within the applications, and hence, among those appointed to the governance and operational groups.

The central submissions outline that medical schools view UKFPO as the key stakeholder for the MS AKT, and, as such, ensure that the UKFPO representative/s have full voting rights as part of the MS AKT Board.

Local submission

The assessment provider has set out key elements of its governance structures, groups, committees and roles. They have included details of their representatives on the central MS AKT exam board, MS AKT item writing group, MSCAA reference group and MSC education leads committee.

The assessment provider also notes that their assessment lead has attended several of the central Q&A sessions and earlier development consultation meetings, as well as two recent workshops looking at extenuating circumstances and reasonable adjustments.

21

Governance and fairness

The AKT must be set and delivered through governance structures approved by the GMC. The AKT must embed legal requirements, principles and good practice of equality, diversity and inclusion in its development, delivery, monitoring and review, to ensure a fair and comparable test experience for all candidates.

Describe and demonstrate how ED&I considerations are applied across processes and decision-making.

Met?	<p>Yes</p> <p>Through the central submissions, the assessment provider has described how ED&I considerations are applied across processes and decision-making.</p>
Central submissions	
<p>On behalf of the assessment provider, and all other medical schools, the MSC has undertaken an equality analysis. A number of groups were represented on a working group overseeing the development of the Equality Analysis and the national policy framework including assessment experts, university registrars, foundation school directors, medical students, recently qualified doctors and the GMC.</p> <p>The MSC's AKT Policy Group (see requirement 20) is responsible, through its terms of reference, for ED&I in respect of the MS AKT. It will in due course be responsible for updating the equality analysis and the action plan. MS AKT performance data and demographic data will be collected to identify award gaps between students who share protected characteristics and those who do not. The first collection took place during the 2022/23 pilot. The data will be reported to both the MS AKT Board and the MS AKT Exam Board. It will also be fed back to the MSC EDI Alliance who plan to use this information to identify areas of work that need initiating or prioritising. The AKT Board plan to make recommendations as to whether they feel there are particular areas the EDI Alliance should focus on.</p> <p>The assessment provider will also receive their own data which will allow them to put interventions in place to address any award gaps. The data can then be used to evaluate these interventions as it will be collected and shared on an annual basis.</p>	
Local submission	
N/A	
22	<p>Governance and fairness</p> <p><i>The AKT must be set and delivered through governance structures approved by the GMC. The AKT must embed legal requirements, principles and good practice of equality, diversity and inclusion in its development, delivery, monitoring and review, to ensure a fair and comparable test experience for all candidates.</i></p>

	Describe and demonstrate how stakeholders are involved across the AKT's governance.
Met?	<p>Yes - with a recommendation</p> <p>Through the central submissions, the assessment provider has provided sufficient information to show the requirement has been met although there are opportunities to strengthen stakeholder involvement as the assessment develops and there is a future intention to increase the range of views and stakeholders involved.</p>
Central submissions	
<p>The central submission describes those involved in the development, delivery and evaluation of the MS AKT and identifies the key stakeholder groups as UK medical schools and the UKFPO. The submission states that the majority of people involved in the development of the MS AKT are working clinicians who have contact with F1 doctors throughout the UK on a day-to-day basis.</p> <p>As identified in the GMC's documentation to accompany the AKT requirements,* the requirement expects that different stakeholder groups will be involved and contribute to the AKT and that the views of stakeholders and ED&I considerations have been taken into account and informed the AKT. Concerns were raised by AKT advisers that the representation of lay and other stakeholders was too limited, too insular and too focused on the involvement of medical academic stakeholders. There were some concerns that there was no clear evidence about the range and distribution of schools involved in the MS AKT development.</p> <p>The central submissions identify an intention – following the piloting – to encourage junior doctors to take part in the governance and operational processes. The plan is that this is achieved through competency-based recruitment.</p> <p>The central submission contains evidence of the way in which medical schools or the medical profession have been invited to join the governance of the MS AKT. The perspective this offers is important and the plans to expand beyond the narrow focus on medical school involvement is welcome.</p> <p>Recommendation: Consideration should be given to increasing the breadth of different perspectives within the MS AKT operational groups and governance structure to reflect the stakeholder environment of the MS AKT and its role as a requirement for a PMQ and progression to the medical register.</p>	

* [Guidance to assessment providers on creating a submission against the AKT requirements](#)

Local submission
N/A

Assessment provider's response

The assessment provider has the opportunity to provide an overall response:

Assessment provider's response
<p>The assessment provider confirmed that they had read the draft report and agreed that it was an accurate account. They said that, as they move closer to the MS AKT, they will continue to review their policies/processes and procedures, as well as continue to ensure that students are supported in their preparation for the exam.</p> <p>They provided some points of clarification and additional information, which are reflected in this final version of the report under the relevant requirements.</p>