

Medical Licensing Assessment (MLA)

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

School of Clinical Medicine, University of Cambridge

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 Clinical Medicine, University of Cambridge
GMC's decision	Compliant with the AKT requirements
Date of decision	17/06/2024

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 Clinical Medicine, University of Cambridge. 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 Clinical Medicine, University of Cambridge (the assessment provider) complied 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 Clinical Medicine, University of Cambridge (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 Clinical Medicine, University of Cambridge (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 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 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

Judith Chrystie, Assistant Registrar

Date

17/04/2024

Annex A

Medical Licensing Assessment (MLA)

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

School of Clinical Medicine, University of Cambridge

Medical Licensing Assessment (MLA)

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

School of Clinical Medicine, University of Cambridge

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 Clinical Medicine, University of Cambridge (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 Clinical Medicine, University of Cambridge (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>Cambridge students are enrolled into either the standard 6-year course (CSC) or the 4-year Cambridge Graduate Course (CGC). The assessment provider has submitted a list of its Summative Examinations, which shows that its AKT is undertaken in the final year of the course (CSC6 or CGC4) as part of the Final MB Part III summative exams together with a short answer question (SAQ) paper (improving health, ethics and law) and a clinical examination. The assessment provider's existing AKT will be replaced by the MS AKT. The assessment provider has explained that students who successfully complete the Final MB Part III summative assessments proceed to a six-week student apprenticeship, which must be completed satisfactorily to be eligible to graduate.</p> <p>Students also sit a series of summative exams in their first and second clinical years (Final MB Parts I and II – years 4 and 5 of the standard course).</p> <p>Practical skills are taught throughout the clinic course and students will also complete a number of formative assessments, including SBAs, SAQs, work-based assessments (WPBA), simulated clinical encounter examination (SCEE), objective structured clinical examination stations (OCSE) and practical skills, as they progress. Key themes (e.g., communication and practical skills, professionalism) are integrated throughout the course. Final</p>	

year students will also undertake the Prescribing Safety Assessment (PSA), which is a requirement for successful completion of the course. [At the time of submission, students were also required to sit the Situational Judgement Test (SJT) but, in their response to the draft version of this report, the assessment provider stated that this is no longer a requirement.]

To be eligible to sit Final MB examinations, students must satisfactorily complete all clinical placements/attachments and meet any other defined course objectives (e.g., assignments).

<p>2</p>	<p>AKT design</p> <p><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></p> <p>Describe the rationale for the design of the AKT.</p>
<p>Met?</p>	<p>Yes</p> <p>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.</p>

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

Scoring

The scoring approach must enable fair and consistent pass/fail decisions on candidate performance.

Describe the approach to scoring candidate performance at item level and overall, including any score conversions and rounding protocols.

Met?	<p>Yes</p> <p>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.</p>
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, including input from stakeholders, piloting and review of outcomes.</p>
Central submissions	
<p>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.</p> <p>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.</p> <p>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:</p> <ol style="list-style-type: none"> 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.

	<p>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> <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	
<p>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 <i>MLA content map</i>.</p> <p>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.</p> <p>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 <i>MLA content map</i>, which will be updated periodically to ensure it reflects day-to-day medical practice*.</p>	

* 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.

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

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>
----------	---

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>
-------------	--

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

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.

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.

The assessment provider – through the central submissions – has described and demonstrated how tests are created, reviewed and quality assured.

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>
Central submissions	
<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>	

Local submission

The assessment provider confirms that students have been regularly updated about the introduction and format of the MLA since entering their clinical training years (CSC4 or CGC2).

The assessment provider had supplied documents which demonstrate the range of additional materials and support students are offered. This includes: generic tips for approaching SBAs; formative SBA questions; interactive revision sessions with SBAs throughout each year; MLA/AKT drop-in Q&A sessions; referring students to the MSC website. Presentations have been provided from academic year 2022/23 but will need to be update for the MS AKT when this is relevant. [In response to the draft version of this report, the assessment provider confirmed that they update their presentations, and add to their bank of formative material, every year.] Students have participated in the pilots for the MS AKT.

Students sit summative SBA examinations from year 4 (or CGC2) of the course, which uses content from the MSC question bank meaning questions are in the same style and standard as the MS AKT. The assessment provider has advised that any questions authored by its staff are written in the same 'house style' as the question in the MS AKT. The assessment provider has explained that these steps mean that students will therefore be familiar with the format and question style of the MS AKT and learn appropriate exam technique.

The presentations referred to above identify that the current written exam sat in the final year gives students 1m 12s per question – this reflects the timing per item in the MS AKT.

The assessment provider noted that, given it has previously delivered its written exams on paper, it has invested a significant amount of time familiarising final year students with the exam delivery platform to be used for the MS AKT. This includes offering 50 item practice papers which students could take in their own time. However, the assessment provider has stated that students have been advised to attempt the MS AKT practice papers on the platform – and provided emails to student to demonstrate this. It has explained that any students who had not attempted at least one paper before the exam was followed up. In response to the draft version of this report, the assessment provider confirmed that they will adopt a similar approach for student in advance of the MS AKT and plan to follow up students who do not attempt at least one practice paper on the platform in advance of the MS AKT.

Students are emailed (examples submitted) specific information about the times and dates of their exams and reminded of what is permitted to be brought into the exam room.

Where applicable, students will receive an email confirming any reasonable adjustments that have previously been discussed at the reasonable adjustments panel and approved before the exam. These students are invited to trial the software and set-up in the room they will be using for the exam at least a week before they sit the exam.

The assessment provider has identified the individuals with responsibility for overseeing the delivery of their exams. There are three assessment administrators and two senior administrators who email students, book rooms for exam briefings, exams and revision sessions, and communicate information to students (for example dates, times and venues).

10	<p>Results and feedback</p> <p><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></p> <p>Demonstrate what results and feedback are given to candidates, as well as what support is available to unsuccessful candidates.</p>
Met?	<p>Yes</p> <p>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.</p> <p>The assessment provider has described the information and support they give to candidates about their results and performance.</p>

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

Currently, students receive their results through the University of Cambridge's central results reporting system (CamSIS), following approval by the relevant Exam Board. When the MS AKT is live, the assessment provider will need to liaise with MSC when the results will be available and ensure its processes reflect the availability of the results through the exam delivery platform used for the MS AKT and to not significantly reduce the time available for students to remediate before their resit. In response to the draft version of this report, the assessment provider expressed their agreement and willingness to do so, noting that it is of the utmost importance for students requiring remediation. They also noted that they anticipate being able to offer the same level of support to unsuccessful candidates as they do now, but are always improving their remediation processes where possible.

As identified in the overview section above, this is an area where the assessment provider should update the GMC as 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.

The assessment provider has advised that the feedback currently provided to all students on their performance in each summative knowledge test (example submitted) is very similar to the feedback proposed by the MSC for the MS AKT.

Through its submission and evidence, the assessment provider has explained that any student who fails the exam is contacted via email by the Deputy Lead for Assessment within 48 hours of receiving their exam results and will have a one-to-one meeting with one of the assessment leads (usually within a week). The example email sent to students is written in compassionate terms recognising the stressful circumstances for the student and includes details of remedial teaching sessions, dates for the resit exam and reassurance that they will be excused from placement to attend remedial teaching sessions.

The assessment provider has advised that the meeting with an assessment lead is an opportunity to co-create a revision plan to address deficiencies as well as to discuss the student’s mental health, study skills, time management and feedback. Following this meeting, students are expected to attend a programme of revision sessions face-to-face, led by the assessment leads, where they will sit short mock exam papers, containing questions from an internal item bank, which the assessment provider has stated are carefully calibrated at the level used for the AKT. In addition, students may meet with the welfare leads (if there are welfare concerns) or receive further mental health support, e.g., referral to the Clinical School’s mental health service. The assessment provider notes that students are aware that they can seek pastoral support from their Director of Studies or College Tutor if required, and colleges have internal pathways to provide support out of hours if needed and will fund urgent assessments educational psychology assessments.

<p>11</p>	<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>
<p>Met?</p>	<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 local policies and procedures operate within the regulatory framework of their parent university.

In respect of reasonable adjustments, the assessment provider has provided a flow chart for creating and sharing receive a Student Support document ('SSD' –examples have been submitted). It has advised that SSDs are put in place for students with a disability, neurodiversity or specific learning difficulty following an assessment by an educational psychologist or occupational health physician. The SSD outlines the adjustments recommended for that student in delivering teaching and assessments. These recommendations are discussed at the Reasonable Adjustments Panel with the Disability Resource Centre. The assessment provider has advised that a Student Academic Support Lead with experience with students with neurodiversity have been recently appointed who attends the Panel to contribute to discussion. Students are invited to discuss any concerns they have and co-create a plan to take their exams.

The assessment provider has identified that useful alterations to support students - such as changing the colours and font size - are also possible through the exam delivery platform used for the MS AKT.

The assessment provider has set out three short case studies to demonstrate the range of reasonable adjustments put in place for their students, including those with a back injury, ADHD and anxiety. It has also advised that – as recommended in the GMC's guidance, Welcome and valued – they are retained to ensure a secured stored audit trail of the reasonable adjustments put in place for their students.

The assessment provider states that students are advised in advance that if they're unwell on the day of the exam and unable to sit it, they should email the welfare and assessment teams to let them know. These students are rescheduled to take the exam on the Clinical School's second sitting, which is counted as their first attempt.

Unexpected circumstances are dealt with on the day by assessment leads and assessment administrators, depending on the circumstance. Where possible, the assessment provider follows the guidance disseminated by the MSC, but also recognises that some circumstances may occur locally that are not covered by national guidance. For example, if any illness occurs during the exam, the assessment team will inform the welfare team and the student's director of studies for pastoral input.

In respect of number of attempts, the assessment provider has specified that current regulations dictate that students are only allowed two sittings of any examination; failure to pass a summative examination on the second sitting means the student is unable to continue the course unless a request for mitigating circumstances or other exceptional circumstances are accepted. The assessment provider has advised that, if a student is experiencing challenging circumstances which have adversely affected their examination performance, they must liaise with their Director of Studies who will submit a request for mitigating circumstances.

In respect of complaints and appeals, the assessment provider has advised that the assessment lead reviews and addresses any complaint or appeal submitted by a student. Unresolved complaints can be escalated to the Clinical Dean and may be raised with the Exam Board. The assessment provider has identified that concerns can also be raised centrally through the Office of Student Conduct, Complaints and Appeals (OSCCA).

Responses to requirements 14 and 16 further outline the local exam misconduct policy/process that is followed but limited detail is provided about the policy.

Although the assessment provider has provided information out how it operates policies for reasonable adjustments (and offered some useful case studies to demonstrate their implementation), mitigating circumstances, illness on the day, number of attempts, appeals and complaints), it has not provided copies of the policies and the procedures nor set out how these will function when the MS AKT is implemented and the national policy framework is in place. As identified in the overview section above, this is an area where the assessment provider should update the GMC as further changes are made to reflect the introduction of the MS AKT.

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</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’s MS AKT will be held in two University venues (Department of Zoology and Clinical School). It has described these venues as well-lit with a temperature-controlled environment, abundant power outlets and fast, robust Wi-Fi. The assessment provided has stated that they locations were used, without event, for the pilot in 2022/23.

The assessment provider has stated that corridors outside exam rooms will be sectioned off to reduce the risk of noise pollution and both exam centres have toilet facilities close to the exam rooms. Students with reasonable adjustments will be accommodated in an e-learning suite but other rooms are also available where minimal distractions are needed, and additional rooms will be made available for students with special rest break requirements.

Each venue is overseen by one academic assessment lead and two assessment administrators (to manage any unexpected incidents and ensure consistency and fairness), in addition to a team of central university invigilators.

Students will sit the AKT on an identical laptop supplied by the university, which will have Safe Exam Browser (SEB) installed. Those with specific reasonable adjustments have the option to use their own keyboard if required.

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

Response combined with requirement 14 on submission form - please see below.

14	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 a recommendation 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 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	

The assessment provider has noted that because each MS AKT is set up by the central MSC team and is only made accessible on the day, no exam material is stored on university devices/drives. The assessment provider should advise if any member of staff has been provided with a user-right and an account at a local level relating to the MS AKT (see central submission) – in this regard, I note from other parts of the assessment provider’s submission that assessment administrators and senior exam leads are present at the MS AKT and monitor students’ progress.

As identified above (requirement 12), each university laptop used for the MS AKT has SEB software pre-loaded, which the assessment provider has explained means students are unable to access a web browser or take screenshots and all students receive a personal password in advance to log into the exam delivery platform when the exam is launched. As below (requirement 17), an assessment administrator present at the MS AKT can check that all candidates are logged in through the exam delivery platform, and this has been accessed via SEB.

Invigilators conduct ID checks and students are required to bring their university photograph ID.

Electronic devices or other personal possessions are not permitted and must be left in a separate secure space.

Two sheets of blank paper and a pencil are permitted for rough working; these are counted back in at the end before any student can leave.

Any student who requires a rest or toilet breaks is escorted by an attendant/room monitor to ensure exam security is maintained.

A student that arrives more than 30 minutes late to the exam is not permitted to sit it.

An MS AKT specific announcement which invigilators make to candidates at the start of an exam expressly states that the content of the exam is confidential and that no part should be reproduced or shared. It also identifies that student access the exam by logging on to the exam platform and entering the PIN.

Both university invigilators and members of the Clinical School Assessment Team are present during the exam (see requirement 16 for further details about their appointment and training) with the responsibility to ensure appropriate exam conduct and the maintenance of security in each exam room. The assessment provider describes a ‘high density’ of invigilators at each site.

The assessment provider has advised that if there is a reasonable suspicion that examination material could have been compromised, an immediate local investigation is undertaken in line with MSC central policy, and the MSC notified.

In response to the draft version of this report, the assessment provider detailed how they have four members of assessment staff who have been granted access to the portal, with plans to increase this to six to ensure sufficient contingency cover. They confirmed that none of their staff are able to access the questions on the paper but they can view how far students have progressed through the paper, whether they have logged into the

platform and started answering questions, and other details useful when running the exam.

Next submission: The assessment provider should describe and document more fully how incidents and technical issues on the day of an MS AKT will be dealt with, including escalating to the MSC as quickly as feasible.

15	Security <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> Describe and demonstrate the arrangements for AKTs delivered in multiple venues or over multiple sittings.
Met?	Yes - with a point for future action Through both the central submissions and the local submission, the assessment provider has described and demonstrated the arrangements for security across its local venues.

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 has confirmed that all students can sit the exam at the same time so quarantining arrangements are not required.

The assessment provider did not expressly specify whether each site is being treated as a 'separate sitting' but advised that there is an assessment lead in each venue, along with at least two assessment administrators, to ensure consistency across the two sites and has noted that, should there be an interruption that affects all students in a venue, the exam delivery platform used for the MS AKT allows for the exam to be paused while the issue is addressed. In response to the draft version of this report, the assessment provider confirmed that each venue is treated as a separate sitting, so if the exam is paused in one venue it is not paused in the other venue, as they do not anticipate any breach in security.

The assessment provider has noted the post-test analyses being undertaken by MSC to detect evidence of misconduct or security breaches.

16

Security

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.

Describe and demonstrate how invigilators are trained and briefed.

Met?

Yes - with a recommendation and two areas of further information to be provided at the next submission

Through both the central submissions and the local submission, the assessment provider has described and demonstrated how invigilators are trained and briefed.

Central submissions

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.

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.

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.

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 be 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.

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.

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 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 has advised that invigilators are appointed and trained by the university. Training is delivered in person and through an online training module.

The assessment provider has shared copies of a number of relevant documents: the generic instructions for invigilators, invigilator guidelines, and exam announcements or all university invigilators. These are not MS AKT specific documents. However, an example invigilator briefing does outline specific instructions for the MS AKT exam and the role of the assessment team in supporting.

The assessment provider has set out that the student: invigilator ratio depends on the layout of an exam room but that all exams have at least one university trained invigilator per 80 students and room monitors/attendants are also supplied by the university to supervise students needing

bathroom breaks. There is a higher invigilator to student ratio in the smaller rooms for students requiring reasonable adjustments to allow them to facilitate rest breaks and ensure there is sufficient invigilation.

Assessment administrators and senior exam leads are also present at each venue to assess and events that may impact the delivery or compromise the integrity of the exam, for example fire alarms, power outages or concerns regarding potential malpractice. In the event of concerns regarding potential malpractice, all information/evidence will be gathered in a time sensitive manner before a formal clinical school or university investigation is conducted. There is no information provided about the briefings or debriefings that take place between the invigilation/assessment team.

The assessment provider notes that candidates are aware that they should raise their hand to alert an invigilator should they have any queries during an exam; if an invigilator is unable to deal with a query, it's escalated to the assessment administrators, assessment leads or the Computing Service team, who are on site and available to deal with any problems or technology issues.

In a document containing instructions for invigilators document, invigilators are instructed to be vigilant during every examination for students cheating (noting that this is unusual) and specifies that the exam's supervisor should be contacted who will attend and who may decide to contact the Office of Student Conduct, Complaints and Appeals (OSCCA). No reference is made to the MSC (see requirement 14 above) nor the steps that will be taken to prevent, if possible, a repeat of the issues.

Next submission: The assessment provider should describe more fully the training that invigilators are required to undertake prior to invigilating the MS AKT and how they ensure that invigilators are up to date with any mandatory training required.

Next submission: The assessment provider should describe how incident reporting on the day feeds into quality assurance or other processes with a view to preventing recurrence where practicable and necessary.

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 advised that student progress will be monitored by the assessment administrators so concerns can be identified and checked. The assessment provider can also ensure that all candidates are logged in through the exam delivery platform and have access via SEB.

The assessment adviser has noted that data is continuously saved on the exam delivery platform used for the MS AKT so if the student experienced any technical issues, for example a laptop malfunction, the data will be saved, and they can continue from the same point.

The assessment provider notes that the exam delivery platform is also being refined to allow off-line delivery, providing added reassurance in case of Wi-Fi connectivity issues.

The assessment provider has set out that it is the responsibility of the assessment administrative team to check that all candidates have completed the assessment and submitted their answers to ensure there is no missing data.

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.

18	<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>
Met?	<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	
<p>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.</p> <p>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.</p> <p>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</p>	

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

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 the boards and operational groups involved in the governance of the AKT.

Met?

Yes

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.

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 advised that several staff hold key roles in the operational groups, including within the MS AKT Exam Board (with the same individual being a member of the operational group), the item development group, EDI training, item writing and standard setting groups.

The assessment provider notes they have also been actively involved in establishing the governance structures for the AKT and envisage this continuing moving forward.

It appears that six members of staff are currently involved in the central governance and operational groups for the MS AKT which is described by the assessment provider as active involvement, which they anticipate continuing in the future.

21	<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 and demonstrate how ED&I considerations are applied across processes and decision-making.</p>
Met?	<p>Yes</p> <p>Through the central submissions, the assessment provider has described how ED&I considerations are applied across processes and</p>

	decision-making.
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> <p>Describe and demonstrate how stakeholders are involved across the AKT's governance.</p>
Met?	Yes - with a recommendation

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.

Central submissions

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.

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.

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.

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.

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.

Local submission

N/A

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

Assessment provider's response

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

Assessment provider's response

The assessment provider expressed thanks for the thorough and detailed review of their submission, and for the feedback provided, noting that it had clearly taken a great deal of time. They stated that they were pleased to meet the criteria for the requirements, grateful for some useful points provided, and plan to take these forward to improve their assessment procedures and processes.

The assessment provider also confirmed that they will provide the requested updates and additional information in their next submission. Where additional details were provided, this final version of the report has been updated to reflect those under the relevant requirements.