

Medical Licensing Assessment (MLA)

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

Buckingham Medical School, The University of Buckingham

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	Buckingham Medical School, The University of Buckingham
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, Buckingham Medical School, The University of Buckingham. 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 Buckingham Medical School, The University of Buckingham (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 Buckingham Medical School,

The University of Buckingham (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 Buckingham Medical School, The University of Buckingham (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): Following their final decision, due in September 2024, regarding venues and devices to be used for the MS AKT, the assessment provider should provide an updated submission with supporting documentation, including device security arrangements (eg Safe Exam Browser).

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): As part of the recommendation under requirement 12 to provide an update on which venues and devices they plan to use to deliver the MS AKT, the assessment provider should also provide an update on their lockdown browser security arrangements for BYOD delivery (if this approach is going to be used).

Requirement 15 (local submission): As part of the recommendation under requirement 12 to provide an update on which venues and devices they plan to use to deliver the MS AKT, the assessment provider should also describe and demonstrate suitable quarantining arrangements (if this is going to be necessary).

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 16 (local submission): The assessment provider should consider providing mandatory training for all invigilators, including ED&I training.

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

Buckingham Medical School, The University of Buckingham

Medical Licensing Assessment (MLA)

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

Buckingham Medical School, The University of Buckingham

This compliance report contains the reasons for the decision that - following a review of the information and evidence submitted by, and on behalf of, Buckingham Medical School, The University of Buckingham (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 Buckingham Medical School, The University of Buckingham (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 has provided a copy of their assessment strategy, which has been revised to incorporate the MLA. They have adopted the MS AKT, which will be sat in the final year (year 4) of their four and a half year programme. This will be part of their final exams, known locally as Final Professional Exams (FPE), comprised of the MS AKT (replacing the current written finals) and an objective structured clinical examination (OSCE) which is their CPSA component of the MLA.</p> <p>The assessment strategy details the sequential series of progression points throughout the course and the summative assessments which students must pass at each point. To progress to the final year students must pass their Intermediate Professional Exams (IPE) and Annual Review of the Portfolio of Practice 3 (ARPP3), which are taken at the end of year 3. No student may enter the final year of study with outstanding assessment requirements from earlier years.</p> <p>Students use the NHS eportfolio to provide evidence of learning throughout the course, which must be mapped to the GMC's Outcome for graduates. The eportfolio is summatively assessed at two points during the final year; once at the time of FPE and again at the end of the students' period of</p>	

professional practice, also known as their Final Professional Sign Off (FPSO).

Progression and graduation decisions are made at the FPE and FPSO exam boards and the assessment provider has provided relevant examples of an exam board agenda and minutes. An external examiner must be present at an exam board where progression decisions are taken.

The assessment provider has described how content validity of assessments is assured through systematic blueprinting of assessments across the course. Assessments are blueprinted to Outcome for graduates and to prepare students for common patient presentations. In preparation for the MLA, the assessment provider has revised their blueprint to contain 56 contexts, which encompass the patient presentations and conditions specified in the MLA content map. They have noted that, from the 2023/24 academic year, all cohorts will transition to the new assessment blueprint.

The assessment provider has outlined how their curriculum teaches the areas of clinical practice outlined in the MLA content map over 12 clinical rotation blocks which make up Phase 2 of their programme. They have described how, during the development of the new assessment blueprint, they have reviewed and mapped the presentations and conditions to one or more blocks on the junior or senior rotation so they are confident that the AKT will be aligned with their assessment and curriculum strategy.

2

AKT design

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.

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?	<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</i></p>

	<p><i>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

Standard setting

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.

Describe and demonstrate the underlying rationale for the chosen method and how the national standard is set and maintained, including any conjunctive standards.

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	
<p>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).</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p>	
Local submission	
N/A	

<p>6</p>	<p>Sampling</p> <p><i>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.</i></p> <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>
<p>Met?</p>	<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.

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

* 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.

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

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 *MLA content map* but are similar in style and format.

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 *MLA content map*. It is not standard set but reflects a similar level of difficulty to the live MS AKT.

Local submission

The assessment provider has described how their virtual learning environment (VLE) has a dedicated assessment page for students, which is being updated to incorporate the MS AKT as part of their final exams. They have explained that assessment dates are published approximately a year in advance and that the VLE assessment page also provides a link to their code of practice for assessments, which sets out the details of assessments, including format, scoring and outcomes. They note that the VLE is signposted to students during their induction week talks at the start of each of the two phases of the programme - which also detail the assessments to students.

The assessment lead gives an additional talk to Phase 2 students 3-4 months before the final assessment period, to clarify the format of the assessments (including the MS AKT) and provide an opportunity for any questions. This is followed by an email to students detailing the forthcoming assessments. Another email is sent to students two weeks before an exam, with the logistics of the exam including a seating plan and itinerary. (Example emails have been provided.)

The assessment provider has stated that they have adopted the MSC style guide for written assessments and are increasing the use of the SBA question format across all years (with Phase 2 formative tests currently being updated in this respect), to allow students to become familiar with this style of exam.

The assessment provider has described how MSC resources are highlighted to students, with documents posted to the assessment page on the VLE. The practice paper provided by the MSC is also made available to final students as part of their preparation.

Final year students sit a mock exam on the MS AKT exam delivery platform using Safe Exam Browser (SEB). The assessment provider states that all attempts will be made to make this mock exam as close to the planned MS AKT as possible in terms of site of delivery and devices used. They also note that they will use the MS AKT exam delivery platform to deliver a further test paper for familiarisation purposes.

10

Results and feedback

	<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 – 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 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	
<p>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.</p> <p>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.</p> <p>The central submissions also provide a description of the quality assurance steps taken to ensure that each candidate receives the correct results.</p> <p>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.</p>	
Local submission	

The assessment provider has explained how they currently release finals results to students through SharePoint, within two working days of their exam board meeting. Students receive the overall outcome of an exam and its components. The assessment provider envisages that, for the MS AKT, students will receive notification of their results in this way, as well as through the central release of MS AKT results on the MS AKT exam delivery platform.

The assessment provider has described how feedback received from the MSC for unsuccessful candidates will be viewed by the faculty student support team and disseminated to personal tutors, with the aim of engaging students in the remediation process. They have provided an example of the feedback report currently generated locally and disseminated to personal tutors. They note that, based on their experience from the MS AKT pilot in 2022/23, the centrally produced MS AKT feedback will be similar.

The assessment provider has explained that tutors will be able to draw from their familiarity with their students, and feedback from the MS AKT (alongside the MLA CPSA), to give holistic guidance to unsuccessful candidates. They note that, in addition to this primary support from personal tutors, the majority of candidates also meet with the phase two lead, student support lead, or assessment lead – to develop remediation strategies.

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.

Next submission: The assessment provider should provide further details of the individual support measures offered to unsuccessful candidates. For example, what might be included in a remediation plan and any revision materials or sessions provided, if/when meetings are offered with tutors, further welfare signposting, or any other support and guidance.

11

Policies and procedures

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.

Demonstrate and describe that there are policies and procedures in place to ensure a fair and comparable test experience for candidates.

Met?	<p>Yes – with two areas of 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	
<p>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.</p> <p>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:</p> <ul style="list-style-type: none"> • Number of attempts • Appeals and complaints • Mitigating circumstances • Reasonable adjustments • Exam misconduct <p>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.</p> <p>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.</p>	

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 their commitment to the principle that the healthcare workforce should represent the community it serves, and that they therefore welcome applicants with a passion for their chosen subject or profession regardless of personal characteristics including disabilities. They conduct analysis to identify any factors associated with pass rates in assessment processes and monitor differential attainment.

The assessment provider has described their commitment to equality of opportunity for all, and their encouragement to applicants and students to disclose disabilities at the earliest opportunity so that appropriate support can be identified and put in place to facilitate success. They have provided a copy of their reasonable adjustments policy, which they note is aligned to the principles of GMC Welcome and valued, and should be considered in conjunction with it. They have also described how they already work with the MSC to apply reasonable adjustments to national exams (eg the Prescribing Safety Assessment).

The assessment provider has provided a copy of their mitigating circumstances policy, which they note is designed to support students where exceptional, unforeseeable (in that the student could not reasonably have been expected to avoid them) circumstances have affected their ability to study or take assessments, and as such is aligned to the national policy framework.

The assessment provider has provided a copy of their guidance for students on academic related appeals and confirmed that, in the case of an appeal, this would be directed to their appeals process. They have also confirmed that students with grounds to appeal under the national policy framework will initially direct their appeal to the assessment provider.

In relation to complaints, the assessment provider explained that students are invited to give feedback after every assessment. Complaints can be received and addressed through feedback channels, while more serious complaints are dealt with through the student appeals process. The assessment provider acknowledged the need for continuous improvement and refinement of their procedures and indicated that they are currently reviewing the student appeals process to provide a more defined and transparent pathway for individuals wishing to lodge a complaint arising from the MS AKT. They note that this review underscores their commitment to promoting accountability, fairness, and transparency in addressing student grievances and ensuring that all concerns are handled with the utmost seriousness and care.

The assessment provider has described how incidents of suspected academic misconduct will be investigated under their academic misconduct policy and procedures, of which a copy has been provided. This policy provides a route to bring the matter to the attention of the assessment provider's concerns group, who may start fitness to practise proceedings.

In their response to requirement 1, the assessment provider indicated that students who are unsuccessful in one or more components of their final exams (comprising the MS AKT and the assessment provider's MLA CPSA) will have a resit opportunity. They have confirmed that students who are unsuccessful in their first sitting only need to resit the failed component of any given progression point, including the final professional exam. (In the last update of their Code of Practice for Assessment, following policy review in the light of the MLA and also common practice across the sector, and following consultation with their external examiners, a requirement to resit components already passed was considered unnecessary.)

The assessment provider has also confirmed that there are circumstances in which students may be permitted to repeat the year, which would provide up to two further attempts at the MS AKT – so up to four attempts in total. Students who repeat a year must comply with exactly the same progression rules within the repeat year alone, with no allowance for performance in any core element during their first attempt at the year. Normally no student is permitted more than one repeat year during the course.

Next submission: The assessment provider should provide an update on their review of their student appeals process and pathway for complaints.

Next submission: The assessment provider should provide 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	Resources and space <i>The AKT must be delivered in a suitable environment for a high stakes assessment for all candidates.</i> Demonstrate that the AKT takes place in a space appropriate for a high stakes assessment with suitable provision for the delivery method.
Met?	Yes – with a recommendation 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.

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 has students based at two campuses, one in Buckingham and another in Crewe. (Students affiliated to the Crewe campus but based at local education providers (LEPs) outside of the area will be provided with campus accommodation for exams).

The assessment provider has described how, due to the size of their Buckingham cohort for the MS AKT, they have previously used an offsite venue (having taken part in the MS AKT pilot in 2022/23). The venue is a conference centre, which is the largest space they have identified as being appropriate. It provides a series of large rooms and smaller meeting rooms, allowing one or two large open spaces to be used to accommodate the main cohort and smaller rooms for candidates with reasonable adjustments. There are also lockable meeting rooms which are appropriately sized for use for the storage of exam materials and the delivery of the invigilator briefing. The assessment provider has noted that the university has purchased extra wifi bundles to support the delivery of exams at the venue by ensuring stable internet connection, and that the venue was recently visited by GMC observers as part of the annual quality cycle.

The assessment provider has explained that this may be their venue of choice if using 'bring your own device' (BYOD) delivery. However, recent concerns raised about the exam security of BYOD delivery, as well as wifi accessibility issues during the MS AKT pilot, have led them to explore using university devices in alternative venues. At the time of submission, they had already held a mock exam on hardwired PCs on their Buckingham campus, having identified a sufficient number of PCs to accommodate their Buckingham based students. They planned to use the same arrangement for the 2023/34 MS AKT pilot.

The assessment provider has described two possible arrangements for their Crewe based students to sit the MS AKT. If the assessment provider uses BYOD delivery, the venue will be a campus sports hall with adjacent buildings offering smaller rooms for candidates with reasonable adjustments. If they use university PCs, there is a computer room available on campus, but they are exploring options to increase computing capacity to match their projected cohort size for the first live MS AKT sitting in 2024/25. They note that, if necessary, they can consider two sittings of the exam (as is their current practice with their MLA CPSA), but that this would be a fall back option.

The assessment provider has confirmed (in their response to requirement 14) that their current plan is to deliver the MS AKT on university devices, although reverting to BYOD delivery is still being accounted for. For either delivery method, the assessment provider has confirmed that they have

identified appropriate venues for resits, either using the same campus venues for university devices or a space at the hospital academic centre for BYOD (which has been used for exams previously).

The GMC has previously advised assessment providers, through MSC meetings, that the risk to the integrity of a question bank is exacerbated where a student is able to bring their own device to the test and that, where an assessment provider proposes to continue to use BYOD for the MS ATK, we expect to see a comprehensive BYOD policy. As the assessment provider recognises, allowing BYOD creates an additional local risk that will need to be managed and monitored carefully to avoid exposing the item bank and creating an opportunity for students to gain an unfair advantage. If the assessment provider does adopt a BYOD arrangement, a policy should be prepared, and processes put in place, including specifications around acceptable devices, support to candidates in installing the necessary software, training and guidance for invigilators in monitoring the BYOD policy (collection of exam logs, responding to device related requests on the day etc.), what mitigation is place against screen shots being taken, recordings being made, how the assessment provider will monitor other software being run during an exam, how students are warned about the consequences of exam misconduct and the like. This is not an exhaustive list. In addition, we expect to see a commitment to maintaining an awareness of any exploits relating to the chosen safe exam browser software and review of possible mitigations.

In response to the draft version of this report, the assessment provider provided an update regarding their Crewe campus. Undergraduate teaching and open access to the facilities on the Crewe campus will cease by December 2026. (The GMC has been made aware of this decision by the university.) The university will continue to work with their LEPs in the Crewe area to provide clinical placements to the same projected number of students in Phase 2 of the course beyond December 2026. Current students based at Crewe will complete their Phase I on the Crewe campus before entering Phase II. However, all new students from January 2025 will be based on the Buckingham campus. The university has committed to continue to provide assessments in the Crewe area for Phase II students based at the LEPs close to Crewe. The university will continue to use the Crewe campus facilities until December 2026 and is looking at possible venues beyond then to provide them with a long term sustainable site for assessments – including the MS AKT - close to their northern LEPs. (This might include the possibility of Crewe campus facilities still being available for the university to hire).

The assessment provider has explained that, additionally, the relocation of teaching of all year 1 students to the Buckingham campus from January 2025 has necessitated building works to increase the capacity of teaching space, which may impact the number of student PCs on Buckingham campus too.

In the circumstances, the assessment provider is currently considering their options for delivery at both sites. They have provided reassurance that they are aiming for a solution that is equitable and comparable for students at both the Buckingham area and Crewe area LEPs. Their preference is to

deliver the MS AKT on university devices hard wired into the university network, over which they have full control. However, at this stage they cannot fully discount either use of an alternative venue, in particular for longer term use at Crewe, loan devices or BYOD. They have indicated that they will have reached a final decision by 20 September 2024, for delivery of the MS AKT in the 2024-25 and 2025-26 academic years, and a longer term plan for beyond 2026. They have stated that as soon as this is confirmed, an updated submission along with all necessary supporting documentation (e.g. quarantine SOP, Safe Exam browser configurations if necessary) will be provided to the GMC within two weeks. They also note that this will leave over five months' notice for students regarding arrangements for March 2025 and allow the assessment provider time to schedule an authentic mock exam beforehand.

Recommendation: Following their final decision, due in September 2024, regarding venues and devices to be used for the MS AKT, the assessment provider should provide an updated submission with supporting documentation, including device security arrangements (eg Safe Exam Browser).

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 – 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 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 their assessment unit works in a secure area of the faculty, with swipe card entry and no student access permitted.

All assessment materials are stored on the assessment team's Sharepoint site. Access is limited to members of the assessment team, the phase leads and members of the faculty quality team who manage the faculty's Sharepoint sites. Assessment information is only shared outside of the immediate

team on a need to know basis.

The assessment provider has explained that three members of staff will be permitted to access the test paper: the assessment manager, assessment lead and clinical assessment lead. The assessment manager will usually act as the exam manager and will require access in order to manage any issues arising and report back any issues raised during the delivery of the exam (before, during or after the exam). The assessment and clinical assessment leads, one of whom will be chief invigilator on the day of the exam, will need access in case there is anything which needs to be fed back to the MSC or GMC before, during or after the exam sitting. The assessment and clinical assessment leads will also be required to ensure that the exam meets the assessment provider's course assessment requirements and to be able to report as such to their board of examiners. The assessment provider notes that they would also like their final year external examiners to have access to the exam, to enable them to independently report back to the board of examiners on the appropriateness of the assessment.

Next submission: The assessment provider should provide an update on any additions or changes to members of staff permitted to access the MS AKT test paper before, during and after delivery - including the reasons for, and extent of, their access.

14	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 how exam materials (digital and/or paper) are prepared, stored and delivered.
Met?	Yes - with two recommendations 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 exam materials are securely prepared, stored and delivered.

Central submissions

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.

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.

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.

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.

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.

Local submission

The assessment provider has described how, in relation to their current plans to deliver the MS AKT on university devices, PCs are hardwired into the secure university network to ensure exam security and security of internet connectivity. The university IT team will temporarily restrict access to devices to a password protected exam user login, which is issued to students once they are in the exam room. This will provide access to Safe Exam Browser (SEB), which will be configured to the security settings recommended by the MSC. From SEB, students can then access the MS AKT exam delivery platform using their own personal log in.

The assessment provider has described how, in the event that they revert to BYOD delivery, venues hosting the MS AKT will have password encrypted wifi and candidates will be required to run SEB (or any alternative lockdown arrangement advised by the MSC and/or GMC) on their own device. The assessment provider has noted (in their response to requirement 12) that they worked with the university IT department in the lead up to the 2022/23 MS AKT pilot to ensure that students will be able to install and run SEB on their own devices.

A minimum of two invigilators will be present in each examination room to ensure the smooth running of the examination and to monitor students for breaches of the examination regulations. The national message that sharing of exam content is a fitness to practise issue will be repeated locally. Each student's identity will be checked twice during the exam, by two invigilators, against the student's university identity card or another piece of official

photo ID. No written materials will be allowed to enter or leave the examination room.

Either the assessment lead, phase two lead or phase two deputy lead will be on hand at each site to act as chief invigilator and as a point of referral should there be any concerns about exam security.

Recommendation: As part of the recommendation under requirement 12 to provide an update on which venues and devices they plan to use to deliver the MS AKT, the assessment provider should also provide an update on their lockdown browser security arrangements for BYOD delivery (if this approach is going to be used).

Next submission: The assessment provider should explain how incidents and technical issues on the day should be dealt with, including escalating to the MSC as quickly as feasible.

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.

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 and a recommendation 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

As noted under previous requirements, the assessment provider currently plans for the MS AKT to be delivered in one sitting, run simultaneously at its two campuses. Each venue will be managed by a member of the assessment team - either the assessment manager, who will normally double as the exam manager, or an assessment coordinator - who will be in contact with each other over MS Teams or WhatsApp to ensure coordination between sites.

Either the assessment lead, phase two lead or phase two deputy lead will be on hand at each site to act as chief invigilator and as a point of referral should there be any concerns about exam security.

The assessment provider has confirmed that, in the event that university device availability means two sittings are required for the MS AKT, they will use appropriate quarantine, as is their current practice with their MLA CPSA.

Recommendation: As part of the recommendation under requirement 12 to provide an update on which venues and devices they plan to use to deliver the MS AKT, the assessment provider should also describe and demonstrate suitable quarantining arrangements (if this is going to be necessary).

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 two recommendations Through both the central submissions and the local submission, the assessment provider has described and demonstrated how invigilators are trained and briefed.
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 reviewed for consistency by the AKT Exam Board as part of standard quality assurance processes.</p> <p>Recommendation: Plans to update the invigilator guidance following the pilots should be pursued to include guidance on minimum standards,</p>	

numbers and training for invigilators of the MS AKT to support standardisation and minimise the risk of variability.

Local submission

The assessment provider has described how they use members of their assessment team, university staff and a pool of invigilators to invigilate exams. Invigilators external to the university are invited to observe an assessment and are talked through the process, including the importance of fairness and inclusion. They are provided with the assessment provider's guidance on the duties of invigilators, a copy of which has been provided.

The assessment provider has described how their assessment manager will usually be the MS AKT exam manager, supported by other members of the assessment team – all of whom have had additional training on the invigilation of the MS AKT exam delivery platform. A senior academic or clinician will also be available on the day as a chief invigilator and to act as a point of escalation for any issues arising. Each venue will be managed by a member of the assessment team and they will be in contact via MS Team or WhatsApp to allow coordination across sites. The university's IT department will also be aware of the exam dates and the potential need for IT support. At the start and finish of an exam, the exam manager and chief invigilator will be available to support with any issues arising.

On the day of an exam, all invigilators are required to arrive half an hour before the exam start time and are briefed according to the MSC's guidance and the particular requirements of the room they are invigilating. Each room will have an invigilator pack containing all necessary documentation and checklists for the exam. Since all of the assessment provider's written exams are computer based, all invigilators are familiar with this format of exam.

Recommendation: The assessment provider should consider providing mandatory training for all invigilators, including ED&I training.

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 described how, at university venues, they will work with their IT and estates departments to ensure there is adequate internet connectivity. The IT department will be informed of exam dates to ensure secure set up of devices in advance and that there is IT support available to on the day.

If applicable, extra broadband capacity will be purchased at external venues to ensure a password encrypted connection sufficient for the exam to be completed online.

The exam manager will remain alert to the fact that variation in internet connectivity can impact the assessment and will, if necessary, enable offline functionality of the exam. Any potential issues will be flagged to the MSC as soon as possible. We advise that the assessment provider should liaise with the MSC as to whether the MS AKT will be available offline.

A senior academic or clinician will be available on the day of the assessment as a chief invigilator to make strategic decisions in case of an event that impacts the reliability of, or the ability to continue, the examination.

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	
<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	<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>
Met?	<p>Yes – with further information to be provided at the next submission</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>

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 described how their dean of school, assessment lead and clinical assessment lead have all attended meetings regarding the implementation of the national MS AKT and fed back on processes. They have noted that their deputy director of medical education and their clinical assessment lead have applied for roles within the central MS AKT governance structures, and that they will continue to engage with the process of implementation of the MS AKT.

Next submission: The assessment provider should provide an update on any opportunities their staff have had to interact with, and contribute to, the central governance structures for the MS AKT.

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 provided some points of clarification and additional information, which have been reflected in this final version of the report under the relevant requirements.