MRCGP AKT
Fairness Review November 2023

Summary of Action Points

1. AKT Exam content

a. Update and ensure increased clarity of all lead-in questions.
Action – in progress
b. Review use of medical and lay language within question scenarios
Action – in progress
c. Better highlight abnormal test results within questions
Action – review process started
d. Ensure the face validity of data interpretation questions
Action - this is already under review by the Core Group, and being discussed with the GP Curriculum Editors

2. RCGP Exam and Education teams

a. Increase the number of Exam website resources to help GP trainees, including, but not limited to
    i. Example scenarios with an explanation of two-stage items and the meaning of specific lead-in questions
    ii. More example administration section resources, especially on management and leadership training
    iii. Better highlighting of the level of understanding required about, for example, qualitative research, understanding risk and what, if any, risk calculations are expected

    Action – this is scheduled into the coming AKT Core Group work plans. Further video tutorials about data interpretation have already been commissioned
b. Analyse optimum AKT Test length to address the time pressure on candidates, especially those with English as another language (EAL).
Action – this is being done with external expert Psychometric advice, and will require submission to the regulatory body, the General Medical Council
c. RCGP Education revision materials to better align with AKT content
Action – RCGP Exams to liaise more closely with RCGP Education
d. Undertake regular Fairness Reviews
Action – funding achieved for annual Fairness Reviews to ensure broad candidate representation and ongoing review of differential item performance
e. Improve exam venues
Action – quality assurance meetings and contract review with Test Centre provider
f. Move to remote exam testing
Action – much analysis of this was undertaken during the COVID pandemic, with ongoing reviews around test security and deliverability. The RCGP is not currently able to safely provide remote AKT testing.

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3. **Training providers**

    a. How can training schemes better tailor teaching to individual learning needs, as defined by gaps in knowledge and experience?
    b. Early intervention for candidates at higher risk of being unsuccessful first time
    c. Review neurodiversity screening policies
    d. Train the trainer upskilling
    e. Inclusion of data interpretation and basic, relevant statistics interpretation in training scheme educational delivery
    f. Readiness to sit discussions tailored to an individual and not to be based on a generic 'time of year' type discussion

    Action – training provider stakeholders to be informed and involved in high level discussions about the above points, for example at the next Assessment and Curriculum Development committee meeting

Areas unchanged, with rationale for no change at present

We will continue to:

- Test on chronic disease management and other areas. It is important for GPs to have a good awareness of the range of management options, even though detailed management is frequently (but variably) delegated to other members of the primary health care team
- Use 'two-stage' questions (but note above action to improve understanding)
- Test on the broad expectations of what a person being referred might expect of secondary (not tertiary) care management or investigation, as this is an important part of our role explaining this to people we see in primary care
- Test across the breadth of the GP Curriculum, both on common conditions, and on the recognition of rare but serious conditions. This is an important area for patient safety
- Include questions where 'sometimes the correct answer is **not** to investigate, prescribe or refer, as is sometimes the case in clinical practice.

We were asked to consider whether volunteer, qualified non-Trainer GPs could be asked to take the AKT as part of an updated face validity test of question content. This was discussed at senior level. No further action to be taken on the basis that the AKT is a requirement for CCT but not a regulatory GMC requirement once qualified.

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Outline of the day

Background

Over 80 GP Trainees who had passed the AKT responded to a national advert looking for volunteers (expenses remunerated) to attend the October 2023 Fairness Review. 20 were randomly selected based on a spread of demographic and geographic factors to ensure a majority were International Medical Graduates with some Neurodiversity representation too.

This was a routinely scheduled quality assurance review of the fairness of content and question style within the MRCGP AKT assessment.

Agenda

1. Background and rationale for this Fairness Review
2. Psychometric independent expert explanation of differential item analysis and the process of individual item review task for the attendees in two separate groups on the day.
3. Questions and Answers
4. Small group work led by facilitators, recorded with consent, observed by two AKT Core Group members and the independent Psychometric expert
5. Themes and priorities collated by the two small group facilitators and checked with group members
6. Whole group summary of views and action points discussed

The summary and Observer report were subsequently compiled and shared with all attendees for fact checking prior to wider dissemination and public website sharing.

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Observer Report

Nomenclature

IMGs	= International medical graduates
UKGs	= UK graduates
RCGP	= Royal College of General Practitioners
MRCGP	= Membership of the Royal College of General Practitioners
AKT	= Applied knowledge test
CCT	= Certificate of completion of training
ST 1/2/3	= Specialist training (year 1/2/3)

PRIORITY THEMES

- Keep the language of the AKT simple
- Prospectively teach topics that are responsible for differential attainment
- Improve exam venues (and/or move to remote exam testing)
- Allow extra exam time for IMGs/all candidates
- Improve pre-course materials (from all providers)
- Ensure question content (incl. data interpretation) is relevant
- Address cost issues and the advice about optimum time to take the exam

Operational issues

- Exam venues: allow/ provide bottles of water and ensure easily accessible toilet facilities
- Allow exam costs to be paid in instalments.
- Allow last minute withdrawals e.g. due to illness

Group members

- All had passed the AKT
- Were a mix of post-CCT and ST2/3
- Their motivations were universally to improve the exam and educational experience for future registrars, in particular IMGs.

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GROUP DISCUSSION AROUND THE SLIDE PRESENTATION OF DIFFERENTIAL ATTAINMENT: WHAT WERE THE COMMON THEMES?

How experience and exposure affect exam performance

The groups suggested that familiarity with conditions affects exam performance, and that exposure to clinical situations drives learning.

The groups felt that IMGs would be exposed to different medical conditions than UKGs. They may spend more time in a secondary care environment and have greater exposure to some aspects of clinical medicine. They felt that UKGs, on the other hand may have greater exposure to chronic medical conditions.

It was widely agreed that patients, especially female, more frequently attend doctors of the same sex. This preference may be more marked in different patient populations. The group members also suggested that personal health experience, that of close friends and responsibility for family illness also drive knowledge acquisition. This might improve performance on questions relevant to these groups e.g. conditions that affect younger people.

Delegation to other health professionals also reduces GPs exposure to some conditions and could affect registrars unevenly. Examples given by group members included: delegation to asthma nurses and opticians. Subspecialisation and delegation in the UK mean that pathways of care are different, and GPs could become deskilled. Those trained initially in other health systems might broader generalist experience with less delegation, though the group members suggested that overseas training is changing.

How well do mature GPs fare with the AKT?

When discussing the validity of the AKT, the groups wondered how GP principals would fare. Whilst we have no data on the breadth of General Practice, as part of a research project a cohort of (non-AKT) examiners and GP Trainers achieved a 100% pass rate without specific preparation.

How language complexity affects performance

Everyone who attended had been working for several years, or always, in the UK.

Language nuances, however, may cause difficulty for those for whom English is not their ‘first language’. Although we did not formally survey everyone’s past experience a couple of group members’ training journeys reminded us to be mindful of the potential linguistic complications. Two group members disclosed that their university education was in a non-English and non-native language. One thus described English as their “3rd or 4th language”.

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The groups supported the use of simple language and felt complexity led to differential performance. They especially felt that the **lead-in questions** should be clearly and simply phrased. They suggested that some words confuse IMGs:

- 'Single most..' often appears in the AKT
- Other examples such as 'most uncommon' and double negatives might appear in commercially available revision materials, but they will **not** appear in the AKT.
- Terms used to define the questions precisely e.g. 'initial' and 'next' (treatment, management etc) also cause some difficulty.
- On the other hand, it was felt that medical language may be preferable to more lay terms e.g. 'prophylactic' is better than 'reduced frequency'.

The groups supported the use of shorter sentences to promote understanding. More complex language also increases the time for processing information. It appeared that these comments were targeted at the question lead-in more than the clinical scenarios and answer options.

We were advised that questions that require more than one step to determine an answer are especially difficult for those where English is not their 'first language', and for colleagues with neurodiversity.

It was also suggested that abnormal test results be highlighted, as they are shown this way on GP IT systems.

How the style of questions affects performance

It was felt that the preferred type of question for different groups reflected the style of university teaching, postgraduate experience, and language ability. System based training is commoner abroad, so non-factual questions and heterogenous answer options pose more problems for IMGs. The group members also thought that IMGs may be more test-wise having taken more postgraduate exams e.g. PLAB and specialist exams.

In general, group members felt that the AKT should not test on secondary or tertiary care actions and outcomes. They felt that knowing when to refer was the important issue, rather than what might happen. There was a similar discussion on questions that asked about management that is often delegated, and they felt that specific details of subsequent management should not usually be tested.

The groups thought that IMGs had specific difficulties with administration questions on management and leadership training but coped better with operational problems, especially if clinically relevant.

In the data interpretation section, it was felt that IMGs had more difficulty with qualitative compared to quantitative research concepts. We were told that it is important to add context, and that questions should be relevant to practice (e.g. how to use risk rather than calculate it). It was also felt that IMGs had greater difficulty with questions on terminology and with calculations.

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On the other hand, the group members thought that IMGs do better with real-life clinical scenarios and may be less influenced by local variation in pathways and guidance than UKGs.

In the clinical section, it was felt that questions testing straightforward clinical knowledge would suit IMGs, who it was suggested learn from textbooks more than UKGs. Rare diseases are a possible example of this, and the group members had noted differential performance on these questions.

IMGs may also find clinical management harder than diagnostic questions. 'Doing nothing' was, however, a difficult clinical concept for IMGs. This can be the correct approach in General Practice and, therefore, the correct answer in the AKT. The groups thought other medical exams would not test on this approach.

The group members agreed that the appearance of certain specific keywords or patterns in scenarios might of themselves, and to the exclusion of other features, suggest a diagnosis or management step. The groups suggested that IMGs relied more on word association and pattern recognition than UKGs, which helped them cope with time pressures.

UKGs were thought to be better at psychosocial style questions and those analytical style questions (why…?). It was, however, hypothesised that UKGs might overinterpret or overcomplicate these situations and perform less well.

There were specific recommendations: calculations should be checked especially if the answer appears overly complex; revision should target areas where easy gains are most likely; practice tests should better mirror the AKT.

Strategic approaches to maximise marks

Some candidates prospectively adjudged that they might be close to the pass mark and identified areas of the exam that they could strategically target to boost performance.

Some had focused on 'statistics' as they felt this was a time-efficient method to increase overall performance. However, it should be noted that only 20/200 marks are available in the data interpretation section and only some involve simple statistical knowledge.

Another group member felt that their strength was in clinical knowledge and decided to maximise performance in that section to compensate for expected lower performance on the other two sections.

Group members suggested that IMGs tend to look to question data banks to gain knowledge, rather than seeking clinical exposure as a learning tool.

One group member recounted that they had taken the exam at the same time as two siblings. In the past they had all performed very similarly in exams but on this occasion the group member failed whilst their siblings passed. Subsequently the group member was assessed for neurodiversity. After a confirmed diagnosis they had targeted education and extra time in the exam and subsequently passed. A question for us, however, is how did the difference in performance only arise at this point?

How approaches to education and training should change

There was a strong feeling that training schemes should address gaps in knowledge and experience. Although there appear to be specific themes, learning needs are individual, and group members wanted to avoid different groups being stigmatised.

It was felt that knowledge acquired early in one's medical career may be more influential than later learning. If true, it means that proportionally more effort needs to be directed towards pre-vocational training knowledge gaps, especially where undergraduate and postgraduate curricula differ significantly.

The groups wanted training to focus better on the needs of the exam. They also wanted study leave pre-exams, early intervention for potentially failing candidates and neurodiversity screening. Provision of these appeared variable.

They felt the curriculum was too wide and should concentrate more on common conditions.

They felt that there should be more training for the trainers and felt that learning should look beyond the confines of local demography.

Statistics teaching is unusual abroad, unless doctors have a public health training, though this may be changing. The groups felt that statistics and data interpretation teaching should be prospective within training schemes. Currently, they felt it is often reactive or left to other providers.

Some group members felt that they had been under pressure to take the AKT before they were ready. They felt this experience was unhelpful and that the exam should be taken when a candidate had had sufficient experience.

The groups wanted revision materials to be better aligned to the AKT. Apart from its own materials, the RCGP has no ability to influence independent commercial providers. However, it was felt that the RCGP materials should also better reflect the needs of the exam, and the materials that are already available should be better marketed to prospective candidates and training schemes.

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Next steps

- Distribute this analysis
- Ask for comments from those who attended
- Although this is fully anonymised, check that we have all consent forms
- Discuss and plan actions with: AKT core group, relevant departments within RCGP (including exams and curriculum), Deaneries and trainers
- Bid for funding for a routine, annual fairness review

AKT Core Group February 2024

Any comments, suggestions or feedback to:

exams@rcgp.org.uk

Please state 'AKT Fairness review 2023' in the email subject heading

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