External Examiners Report

GMC PLAB 2022

Introduction

The Professional and Linguistic Assessments Board (PLAB) is a high stakes, two part assessment, with the aim to make sure doctors who qualified abroad, have the right knowledge and skills to practise medicine in the UK (General Medical Council, 2022). Part 1 is a written, multiple-choice exam, part 2, an objective structured clinical exam (OSCE). On passing both parts of the assessment, candidates can apply for registration with a licence to practise medicine in the UK (General Medical Council, 2022).
As external examiners we have been able to attend a range of sessions throughout 2022 relating to both part 1 and 2 of the PLAB assessment summarised in the table below.

Meeting	Natalie Cope	Adrian Freeman
PLAB Part 2 Pilot Day	17/06/2022 Manchester	
PLAB Part 1 Panel Meeting	24/06/2022 Online	
PLAB Part 2 Observation	01/07/2022 Manchester	02/08/2022 Manchester
PLAB Part 2 Panel Meeting	14/09/2022 Manchester	
PLAB Part 1 QS Meeting	25/10/2022 London	
PLAB Part 1 QMG Meeting	18/11/2022 Manchester	
PLAB Part 2 Locum Examiner		03-04/08/2022 09-11/08/2022 Manchester

Content (General Medical Council , 2022)

The blueprint for the PLAB assessment is available through the GMC PLAB website (General Medical Council , 2022) and has been comprehensively aligned to the GMC Good Medical Practice, Outcomes for provisionally registered doctors and the UK Foundation Programme Curriculum 2021. Guidance is given to candidates (and employers) on how to use the blueprint (General Medical Council , 2022).

Part 1

Work has been ongoing through the year to modify the tagging of MCQs to align part 1 with the Applied Knowledge Test (AKT) part of the Medical Licensing Assessment (MLA) being introduced in 2024 (General Medical Council, 2023). Questions are tagged to align to the PLAB blueprint based on Good Medical Practice Guidance, Outcomes for provisionally

registered doctors and the UK Foundation Programme Curriculum (General Medical Council , 2022). In addition, to align questions with the AKT great effort has been seen in new tags being assigned to questions to allow alignment with the MLA Content Map, which has been based upon GMC Outcomes for Graduates, Generical Professional Capabilities Framework, and Foundation Programme Curriculum (General Medical Council, 2019). Further, questions are being tagged to a patient journey to ensure content tested covers the life-span from new-born, through to old age to ensure exams cover the full patient journey through life.

Internal Structure

Part 1

The structure of PLAB 1 is clearly described to candidates on the website (General Medical Council, 2022) and comprises, 180 multiple choice items, answered in 1 paper over 3 hours (1 minute per question). This is a shorter time than will be available for UK medical graduates sitting the AKT in 2024, where 200 items will be sat over 2 papers, each of 2 hours duration (1 minute 20 per question). **It might be useful to think about how changes in time to answer questions in the AKT will affect the outcomes made from the assessment moving forward to 2024.**

Items are single best answer style with 5 options. There is a single correct answer and no negative marking. In question management group meetings, item writers were given clear guidelines on style and structure of the questions as well as comprehensive guidance on accepted abbreviations. Newly written questions were discussed thoroughly in relation to content, level (FY2) and style. It was made clear throughout the session by the chair, that items were to be set for FY2 level rather than UK medical school graduation level (start of FY1).

Item writers in the question management panel (QMG) have been selected through a clear process, based on their knowledge and expertise. A variety of medical specialties were represented on the panel, and experience of writing questions was shared with newer members of the group. Members had been asked to write questions on a number of topics to ensure sufficient questions were being added to the item bank across all aspects of the blueprint. The movement of the meetings back to in situ meetings was clearly welcomed by the group, who were enthusiastic and keen to strengthen the questions written.

In question setting (QS) panels, it was clear that members were happy to be back face-to-face for the sessions, resulting in very productive sessions. Panel members had had secure access to the paper being discussed prior to the session and had reviewed questions. It was very good to see panel members with a pharmacy background being part of the emendation session. They brought a very different view to items and were excellent at advising on guidance changes, differences between trusts in first line treatment – often impacting on the correct answer. Maintenance of the standard of the assessment was emphasised throughout this panel too. Explanations of the difference between FY1 and FY2 level and experiences were often mentioned. All items were tagged thoroughly with PLAB tags and new AKT tags.

Psychometric performance of items was available for some questions and was fed into the session appropriately. The recent increase in suppression of items from exams based on post-exam psychometric analysis was raised and as a consequence some questions were removed and highlighted to go back to the QMG panel to be refined. **In some instances, it was difficult for the panel to understand what the original aim and/or justification of the item was, which made making amendments difficult, especially if the item author was not present. To help panel members understand what, specifically, is being tested by questions, it would be useful to include a detailed justification comment for each question when new questions are written, and for it to be available to the QS and QMG panels.**

Awareness of differential attainment was a prominent feature of the QS group. Questions were scrutinised for possible issues and the paper as a whole was reviewed.

Standard setting for written papers, using a Modified Angoff methodology, has historically taken place face-to-face with online meetings taking place during the restrictions on meeting during the COVID-19 pandemic. Online, this usually involved standard setters receiving items prior to the session, standard setting them, and in the online meeting, discussing those items where there was a large difference in the standard set for an item between standard setters. Unfortunately, due to last minute train strikes, a face-to-face session was moved quickly online. Standard setters viewed and set and initial standard to items in the session, not the standard practice for online events, having not had the time prior to the session to set the standard at home. They then discussed those with large differences. **When online, it is important to remind standard setters, at the start of the session, of the standard being set and to highlight the difference between what borderline candidates 'should' and 'would' know. Discussion of what a borderline candidate looks like would also be useful.**

Part 2

PLAB Part 2 is an Objective Structured Clinical Exam (OSCE). Candidates encounter 16 scenarios, each lasting 8 minutes. Scenarios reflect real life settings and encounters that you may expect of a FY2 doctor on day 1. The OSCE lasts around 3 hours and includes 2 rest stations. Examiners mark candidates on 3 domains per station, data gathering and technical and assessment skills, clinical management skills and interpersonal skills. Marking uses a domain-based mark scheme with clear anchors and descriptors for examiners.

At the start of the OSCE, briefings are held for candidates and examiners and questions can be asked. A chief invigilator (CI) is assigned for each day. Facilities are excellent, with each station taking place in a separate room. All stations have a video link to a central control room where invigilators can watch any station. Problems can be highlighted to the CI who can watch a performance or track a candidate/examiner. CI were prompt to respond to issues on the day. Notes of incidents are recorded and discussed within panel meetings.

Examiners mark on an iPad and total scores and standard setting scores appear live in the control room. The CI can monitor any inconsistencies in scoring live. CI's were aware that their raising of issues within the OSCE could influence results and thus were very considered

in when it was appropriate to talk with examiners. New examiners were monitored well and supported by the CI.

Where multiple circuits were taking place on the same day, there was time at the start of the OSCE for examiners and role players to calibrate performance and expectations. In addition, there was time for examiners and role players to run through the station before the OSCE started to highlight issues which needed to be calibrated.

Role players were excellent, both in terms of calibrating their performance between circuits but in consistency between candidates in the same circuit. The information given to role players was sufficient for them to play the role and included key information to disclose, how to act towards the candidates questions and what to ask a candidate if appropriate. Standard opening statements are given.

The pass mark is set using a borderline regression method (BRM). There is a conjunctive standard to pass the exam, a total score plus 1 standard error of measurement (SEM) and a minimum of 10/14 stations. Standard setting grades awarded to a candidates and their total scores are monitored, for each examiner, live by the CI. Post-exam psychometric analysis of the BRM is performed, including comparison of the regression lines between the same station over two circuits.

It is noteworthy that during the pandemic the GMC was able to make arrangements to continue to examine PLAB part 2 in a socially distanced format. This allowed the UK to continue to recruit doctors although in reduced numbers.
Demand for PLAB remains very high and the GMC is working hard to keep up with that demand.
There was a brief period in the height of summer where emergency arrangements had to be made to engage a few suitably qualified "locum" examiners. There has been a new round of examiner recruitment which should provide sufficient capacity to deliver the exam to the increasing demand.

Response Process

Part 1

The website for PLAB (General Medical Council, 2022) has 30 example items, which are written in the same style as those written in the QMG sessions. There are good examples of items from a number of areas of the blueprint and includes items requiring the interpretation of investigation results. **It may be useful to have an example of an item where there is an image to interpret for example, to show candidates that there are**

questions which require the use of an image. This may help in aiding candidates in deciding whether they need to apply for reasonable adjustments.
The process for applying for reasonable adjustments is clear and transparent and good use is made of examples of adjustments made in the past, which are fair and appropriate.

Part 2

Observing a Part 2 OSCE day, showed that it was run efficiently and fluently. Examiners and candidates were briefed before the start of the OSCE and the CI was introduced. There was time for examiners to calibrate their stations between lanes and with the role players. All candidates were well briefed on what to expect and when they could leave after the OSCE – this included quarantine time between circuits to stop leakage of stations on the day. Examiners are all expected to be practising clinicians at consultant level or equivalent. They are expected to have knowledge and understanding of the roles and responsibilities of a successful foundation doctor completing year 1, and also have an understanding of the performance of a minimally competent doctor. During calibration, it was evident that examiners discussed what they were expecting from candidates for anchored points on the marking descriptors, they used example knowledge and/or behaviours to calibrate the standard.

Within panel meetings, there was some discussion of station leakage, with examiner feedback suggesting that some candidates appeared to expect certain stations/scenarios. **In order to ensure that candidates can not predict stations, it would be very useful to expand the number of stations in the item bank to limit cramming of known stations and promote knowledge of foundation year 2 scenarios more generally.**

The information provided to role players was very good and allowed them to act appropriately and consistently through the OSCE. Within calibration, role players were given the opportunity to ask questions, and get clarification of any issues.
Within OSCE pilot days, the comments of the role players were taken and amendments made to the scenario role. Any issues arising which involved role players both in the OSCE and outside of the OSCE were addressed and raised at appropriate panel meetings, ensuring satisfactory outcomes.

The psychometric analysis of Part 2 was presented at the appropriate panel board and showed detailed analysis of the assessment. Attention had been paid to examine the performance of stations where an examiner was present in one lane and absent in another and marked via video. Steps had been taken, including new recruitment, to widen the examiner pool, to try and mitigate against having stations without examiners. This adds to the face validity, even though differences in marking is negligible.

For both Part 1 and Part 2 (General Medicial Council, 2022) there is clear guidance given to candidates on how to prepare, what reasonable adjustments can be made and how they can get them, what happens if you pass/fail the exam, how to raise an appeal and what happened when misconduct is suspected. In addition, it has been good to see reasonable adjustments implemented for examiners/associates too, who are invited to discuss appropriate support to ensure that they can perform their duties to the highest standard.

Consequences

Part 1

Results of Part 1 are released to candidates via an email containing a link to the GMC Online portal. Results are published within 6 weeks of the test date. Each correct answer is worth 1 mark. Percentage results are given in 3 skill areas: applying knowledge and experience to clinical practice; good clinical care - assessment and good clinical care – management (General Medical Council, 2023). Candidates are also given their total score, the score required to pass the exam and the average score for all candidates.

Over the past 5 years, pass rates have dipped from 78.7% pass rate in 2017 to 65.6% in 2018, but recent increases have seen the pass rate rise to 68.6% in 2021 (General Medicial Council, 2022).

Part 2

Feedback is provided to the candidates at a station level and includes for each station: score on each of the 3 domain scores, total station score and the pass mark for the station. Candidates are also given their total score overall and the score required to pass the exam. In addition, for each station, examiners can give pre-set feedback statements to the candidate about their performance.

Results of Part 2 are released to candidates via an email containing a link to the GMC Online portal. Results are published within 4 weeks of the test date.

Within the last 5 years, pass rates were at their highest in 2017, when 78.7% of candidates passed Part 2. Following a dip in 2018, to 65.6%, there has been a very steady increase to 69.6% in 2021 (General Medicial Council, 2022).

Correlation

A comprehensive psychometric analysis has been undertaken examining the pass rates in PLAB, both for Part 1 and 2. Pass rates at first attempt for Part 1 and 2 have been examined and any influences of demographic factors sought. Unlike UK undergraduate medical schools, which select, teach and assess students, PLAB is sat by candidates who have not have not been taught on a course with this assessment specifically in mind. The demographic factors used in the analysis are well chosen and appropriate for this assessment and included gender, age, sexual orientation, ethnic origin, religion, disability, language test type and primary medical qualification (PMQ) country of origin.

Part 1

The largest individual effects on pass rate at first attempt were age, religion and PMQ country of origin. Results from multivariate analysis, controlling for a range of candidate demographics, were broadly in line with individual factors associated with Part 1 outcome.

Part 2

Demographic factors tended to have a stronger association with Part 2 outcome when compared to Part 1. For Part 2, the largest individual effects on pass rate at first attempt were gender, religion and PMQ country of origin. These are largely consistent when included in multivariate analyses.

Analysis for both Part 1 and 2 show differential attainment dependent upon PMQ country of origin, however, there are some countries with very low numbers included in the analysis. Analyses suggest that differences between PMQ country of origin are not driven by demographic factors included in the analysis.

The pass rate for those applicants declaring a disability, is slightly lower than those not declaring a disability in PLAB 1, whilst the pass rate is very similar for both groups in PLAB 2. Collection, if possible, of more granular disability data may allow a more nuanced analysis: it would be interesting to work out whether the difference in PLAB 1 is due to a significant proportion declaring reading disability/dyslexia with it being a more reading heavy section. It might be useful to look at particularly if the introduction of the AKT will alter the length of time a candidate has for the MCQs.

Summary

The PLAB assessment continues to be a well-developed assessment based on robust evidence and thorough analysis of data. Much effort has been placed on returning the assessment to post-COVID procedures, with more meetings and development sessions being held face to face, with much enthusiasm by panel members. Work is continuing to align the assessment with the new MLA to be implemented in 2024, with much effort being placed on blueprinting and tagging items. In addition, work is being undertaken to ensure the finding of the differential attainment work is permeated through each part of the assessment process, from item writing, standard setting and test blueprinting, through to the psychometric analysis of the assessments.

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References

General Medical Council . (2022, 12 14). *Using the blueprint*. Retrieved from General Medical Council : https://www.gmc-uk.org/registration-and-licensing/join-the-register/plab/plab-test-blueprint/using-the-blueprint

General Medical Council. (2019, 09 30). *MLA Content Map*. Retrieved from General Medical Council : https://www.gmc-uk.org/education/medical-licensing-assessment/mla-content-map

General Medical Council. (2022, 12 13). *A guide to the PLAB test*. Retrieved from GMC-UK: https://www.gmc-uk.org/registration-and-licensing/join-the-register/plab/a-guide-to-the-plab-test

General Medical Council. (2022, 12 14). *Medical Licensing Assessment (MLA)*. Retrieved from General Medicial Council: https://www.gmc-uk.org/registration-and-licensing/join-the-register/plab/plab-1-guide/medical-licensing-assessment---mla

General Medical Council. (2022, 12 16). *Sample questions*. Retrieved from General Medical Council : https://www.gmc-uk.org/registration-and-licensing/join-the-register/plab/plab-1-guide/sample-questions

General Medical Council. (2022, 12 14). *What is the PLAB 1 exam?* Retrieved from General medical Council: https://www.gmc-uk.org/registration-and-licensing/join-the-register/plab/plab-1-guide/what-is-plab-1

General Medical Council. (2023, 01 13). *Medical Licensing Assessment*. Retrieved from General Medical Council: https://www.gmc-uk.org/education/medical-licensing-assessment

General Medical Council. (2023, 01 13). *Your Results*. Retrieved from General Medical Council: https://www.gmc-uk.org/registration-and-licensing/join-the-register/plab/plab-1-guide/your-results

General Medicial Council. (2022, 12 14). *Recent pass rates for PLAB 1 and PLAB 2*. Retrieved from General Medicial Council : https://www.gmc-uk.org/registration-and-licensing/join-the-register/plab/recent-pass-rates-for-plab-1-and-plab-2#PLAB1