MRCGP Statistics 2017-2018

Annual Report
(August 2017– July 2018)
on the results of the
AKT and CSA Assessments

Introduction

This Report relates to the formal MRCGP assessments conducted in the academical year 2017-18. It presents statistics summarising the outcomes of all the diets of the MRCGP examinations during that period – the Applied Knowledge Test (AKT) and the Clinical Skills Assessment (CSA) – three diets of the AKT and seven of the CSA.

The Report first presents an updated summary of both of these assessment modalities and their standard-setting procedures, to orientate new readers. Full background information on the MRCGP, the AKT and the CSA (also the largely formative Workplace-Based Assessment component) may be found on the College's website.

There then follows a set of tables, first for the AKT and then for the CSA. These provide information on the candidature and the attempts at the test, for each of them:

- Candidate Demographics: Place of Primary Medical Qualification, Training Deanery, UK Medical School
- Main Results: Overall and by Exam Diet, Year of Training and Attempt; Candidates with Disabilities (candidates on all attempts)
- Results by Individual Demographics including UK Medical School and Country of Primary Medical Qualification (candidates on first attempt)
- Overview of Results by LETB/Training Deanery

And in addition:

- AKT mean sub-component scores, by candidate year of training; correlations between these
- CSA feedback statements for UK candidates and non-UK graduates

Further data are then provided on AKT/CSA correlations and test quality.

The report is descriptive and non-discursive. Data are presented without psychometric comment other than that which follows and at the end of the report, reviewing test precision and reliability.

The content of the Report has been developed following comments from members of the College's Assessment and Curriculum Development Committee, including the Deanery/LETB representatives.

Please Note:

a) Probably associated with changes in the mechanisms for soliciting the data from candidates, **there are large numbers of candidates for whom there are no data available on sex and ethnicity, especially regarding the AKT**. Where potential inferences from the tables might be more than usually misleading, this is highlighted.

b) Confounding of variables: as in previous years, there are many significant performance differences between sub-groups. But variables may well be confounded with others, to potential confusion of the unwary.

c) As increasing use is made by both overseas and UK candidates of **medical schools in countries other than those of their origin or domicile**, 'country of primary medical qualification' should not be equated with 'country of origin/secondary education'. This applies particularly to medical qualifications from certain Caribbean and central- and eastern-European countries. Data from the GMC's PLAB office show that British nationals can be the third commonest group (by nationality) to sit the PLAB assessments.

Acknowledgements:

I thank the two Clinical Assessment Leads (Chris Elfes, AKT & Nicki Williams, CSA) for their support in preparing this report. I am also grateful to the Chief Examiner, MeiLing Denney, for her instructions and advice.

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1: Summary of the Assessments and their Standard-Setting Procedures

The MRCGP and its Function

The MRCGP comprises three sets of assessment procedures whose combined summative function is to assure the Deaneries/LETBs, the College and the GMC of the competence of exiting trainee General Practitioners (GPs) across a broad and carefully-defined three-year (occasionally, four) full-time training curriculum. Satisfactory completion of the three assessment components of the MRCGP renders a trainee (GP Specialist Registrar) eligible to apply both for a Certificate of Completion of Training (CCT) from the GMC (and thus to proceed with her or his career) and for Membership of the Royal College (which will *inter alia* support the doctor's continuing professional development and probable re-validation).

The MRCGP's three assessment components are the following, each of which must be completed to an agreed standard:

a. ***Applied Knowledge Test*** *(largely multi-choice computer-presented assessment, available in test centres throughout the UK)*
b. ***Clinical Skills Assessment*** *(an integrated test of clinical and consulting skills, at the RCGP assessment centre, Euston)*
c. ***Workplace-based Assessments*** *delivered throughout the three-year training programme by Clinical Supervisors, Educational Supervisors and others*

The curriculum, the training and the assessments are based on medical practice in the UK National Health Service. Entry to the assessments is available to doctors undergoing GP training within the UK state health care system or within six months thereafter. Accordingly, no candidates based in other countries take these assessments, as happens in certain other Royal Colleges' examinations. This has implications for the level of the assessments' quality statistics (reliability and accuracy). The College has other arrangements to support GPs practising in other countries and who seek affiliation or Membership through the quite separate 'MRCGP [International]' assessment route, see the College website.

Note that the workplace-based assessments are not covered by this report. These are essentially formative, with candidate performance, development and competence being reviewed annually by the Deaneries and not the College.

Please also note that the report, for convenience of comprehension, reports on the 'Stages' of training as 'Years': for most trainees, the two are operationally synonymous, but for part-time trainees or those provided with additional training, of course, the 'Stages' will be longer.

The Applied Knowledge Test

The multi-choice ***Applied Knowledge Test*** is a 3-hr 10-minute 200-item computer-delivered and marked assessment which is available to trainees in the ST2, ST3 and additional 4th years. Offered three times a year, the AKT is delivered by computer in professional testing centres around the UK run by Pearson VUE.

The test's 200 items are in five formats: single best answer (including images and graphics), extended matching questions, completion of tables/algorithms, and a small number of multiple best answer as well as free text answers. A test specification is used to ensure adequate sampling across the curriculum. 80% of the items are on clinical medicine, and research/evidence-based practice and legal/ethical/administration issues are each represented by 10% of the questions. Irrespective of the question format, candidates are awarded one mark for each item answered correctly. Marks are deducted neither for incorrect answers nor for failure to answer.

The standard for the AKT is set using a modification of the Angoff procedure, where a group of 'judges' periodically estimates the performance of a notional 'just good enough to pass' candidate on each test item. In order to ensure that standards are set at appropriate and realistic levels, a patient representative, newly-qualified GPs, and representatives of bodies with a stake in the outcome of the examination (including the training community) are invited to act either as judges or observers, as appropriate, in the standard-setting process. This standard is maintained between 'Angoffs' by the use of test equating, using sets of items with known performance characteristics.

A 'just passing score' is accordingly determined for the test as a whole, and a statistical review may – rarely – cause the removal of one or two poorly-performing test items on any diet. The measurement error of the resultant test is then calculated, and a passing standard ('pass-mark') set, taking account of this measurement error, as is usual in high stakes testing. The accuracy of the AKT is regularly estimated by calculating Cronbach's *alpha* (reliability), together with the measurement error. Candidates are then provided with their results, and their scores on the test as a whole and on its three sub-sections.

It should be noted that, as the pass-mark varies slightly between diets because of small changes in the overall difficulty of the paper, raw or percentage scores need to be adjusted to a common pass-mark (zero) to permit comparability. This adjusted mark is called the Scaled Mark.

The Clinical Skills Assessment

The **Clinical Skills Assessment** is an OSCE-style assessment using simulated patients or role players that may not be taken before the normal final year of training (Year 3 = ST3). The CSA comprises 13 cases or 'stations' and is delivered in a purpose-built assessment centre in the College's headquarters building in Euston. Up to (and normally) three circuits run simultaneously.

A case is depicted by a role player, and candidate performance assessed by an examiner who accompanies the role player for the day. Each case lasts 10 minutes (plus two minutes marking/changeover time). Candidates have their own 'consulting room', and the role players move around the circuits' consulting rooms like patients, accompanied by their examiner.

Cases, written by dedicated writers who are practising GPs, present typical clinical scenarios that a UK GP will encounter. Cases are written to represent the diversity of the whole UK population. Each case is mapped to a curriculum statement, and a blueprint is used to guide case selection—a complex procedure as the cases necessarily change each day for reasons of security and fairness, yet each day's 'palette' must meet the blueprint's specifications and be equivalently challenging.

The standard-setting method used is the borderline group method, as agreed by the College and the Regulator (the General Medical Council). Each case is graded on three domains: Data Gathering, Technical and Assessment Skills; Clinical Management Skills; and Interpersonal Skills. Each domain is graded as: Clear Fail – Fail – Pass – Clear Pass. For standard-setting purposes only, the examiners also provide a grade to indicate their judgement on that case – in particular if they felt that overall the candidate's performance was borderline.

The domain grades awarded on a case are given a numerical equivalent (zero to three, respectively) and combined to provide a case score: these are summated over the 13 cases to give a final score (which will be between zero and 117). The "cut score" – the half-way point between pass and fail – is established by the normal borderline group method. The final pass score is an adjustment of that score to take account of measurement error, as in the AKT, with the level being confirmed by an adjudicating Board which includes recently-qualified GPs, lay representatives, and key stakeholders from the training community.

The overall standard of the assessment is set by ensuring both that the cases are at an appropriate level of difficulty and challenge and that the examiners are adjudging passing performance on any case at the same, agreed level – appropriate for independent and safe practice as a GP in the NHS. A variety of critical support mechanisms are in place: calibration exercises at the beginning of each day of the CSA; initial and on-going quality assurance and training of examiners; and an annual two-day examiner training conference to calibrate the whole panel regularly and maintain process validity.

The reliability of the CSA is estimated by calculating Cronbach's alpha using the numerical scores and its precision calculated by the Standard Error of Measurement (SEm). Because of daily case and examiner differences, these statistics require to be estimated separately each day, thus on a maximum of 78 candidates. And because of varying candidate numbers and daily variations in the range of candidate ability, the statistics vary, too.

Throughout this report, CSA outcomes used include the result (pass/fail) and scores adjusted to a common pass mark (zero), again referred to as the Scaled Mark.

2: General Notes on the Tables and Statistics

General Notes: Conventions in the Charts and Tables

Tables are accompanied where possible by charts, to assist those who prefer visual summaries of data.

With data protection issues in mind, tables containing personal data have generally been adjusted so as to report results only on 5+ individuals. Where such considerations apply, either the symbol ✪ is entered in the table or the information "n<5" and charts are greyed-out. This also explains the occasional missing entry in error bar charts: the bar would relate to n < 5.

The colour convention generally adopted for the charts is as follows:
BARS etc representing **passing** candidates: **GREEN**
BARS etc representing **failing** candidates: **RED**
Charts which do not distinguish between passing and failing candidates: **GREY**
Charts unrelated to candidate performance: GREEN

A **DOTTED RED LINE** on a histogram denotes the passing standard
A **DOTTED GREEN LINE** on a histogram denotes the mean score for the group whose performance is represented

Some histograms show contrasting distributions of candidates where numbers in a single group are small. To permit visibility of these small groups, the Y-axes of the histograms have been presented in a logarithmic, as opposed to a linear, scale. The relevant charts have a small label to alert the reader, as shown here.

NB Log Scale !

Certain tables contain data customarily also supplied to the GMC, and these are separated out into UK, EEA (plus Switzerland: i.e. those countries whose nationals at the time of writing have the right to work in the UK), and 'rest of the world' graduates (RoW). Elsewhere, the two last groups (EEA and RoW) are conflated into a single group – International Medical Graduates or 'IMGs'; this is due to a similarity in performance (mean and range) between the EEA and RoW groups, small numbers in the former, and increasing practical overlap of the two groups with British and non–EEA students taking EEA qualifications.

Note regarding the Interpretation of the AKT statistics

Some candidates appear twice (441) or three times (36) within this annual database on the AKT, because of retakes. Except in the Summary of Demographic Information, the statistics "for all candidates" aggregate all 3537 candidates' 4014 attempts in this period. However, where the tables present comparisons between candidates on the basis of demographic variables (gender, ethnicity, the origin of candidates' primary medical qualifications, training deanery), they mostly do so on the basis of 'first attempts' only: otherwise re-sitters will bias the results. The groups upon which each table is based are made clear in its heading.

Note regarding the Interpretation of the CSA statistics

Two databases were constructed for the annual examination period: one is candidate-based, including all information about a candidate-attempt at the examination, and is designed to provide generic reporting functionality towards requirements such as this report; the other is candidate-consultation based, and intended to provide QA and developmental information regarding the cases and the examiners: it has been used here to provide the information on 'feedback statements' in the final table of the report and summaries of overall case performance. Some candidates appear twice (438), three times (50) or four times (6) within this database on the CSA, because of retakes. Except in the demographic Information, the statistics "for all candidates" aggregate all 3052 candidates' 3546 attempts in this period.

Data Inconsistencies: Exercise Great Caution when Interpreting Statistics based on Sex and Ethnicity

Minor data inconsistencies result from a variety of causes, inevitably in an undertaking of this complexity that combines 'examination' data with background information from a number of databases. For example:

- Most of the candidates' personal background data is self-reported on registration for assessments. It is thus subject to entry error and omissions
- For the same reason, probably also due to changes in College practice in soliciting the information, certain data can be missing: most notably, 464 AKT (11.6%) candidate-attempts have no ethnicity data and 939 AKT (23.4%) candidate-attempts have no data on candidate sex; and 357 CSA (10.1%) candidate-attempts have no record for candidate ethnicity and 282 (8.0%) candidate-attempts have no record for candidate sex
- Candidates' circumstances change – for example, they may move from one training region to another, within the year, or between part-time and full-time training

3: AKT Statistics

A: Summary of Candidate Demographics

3537 candidates made a total of 4014 attempts at the AKT during 2017-18. The tables below show the origin of the 3537 candidates, by UK medical school or non-UK country of primary medical qualification—and the percentage from each out of the total of that part of the candidature.

Overleaf, the background demographic characteristics of the 3537 are shown, by training LETB/Deanery. Subsequent tables report on the 4014 attempts.

1. Source of Candidates' Primary Medical Qualification

All Graduates: from UK, EEA or Rest of the World		
Group	**N**	**%**
UK graduates	2622	74.1
Graduates from RoW	751	21.2
EEA graduates	164	4.6
Total	**3537**	**100.0**

Graduates of UK Medical Schools		
Medical School	**N**	**%**
Aberdeen	84	3.2
Belfast	77	2.9
Birmingham	133	5.1
Brighton and Sussex	41	1.6
Bristol	77	2.9
Cambridge	27	1.0
Cardiff (prev. Wales)	105	4.0
Dundee	51	1.9
Edinburgh	62	2.4
Glasgow	84	3.2
Hull York	68	2.6
Keele	56	2.1
Leeds	104	4.0
Leicester	106	4.0
Liverpool	146	5.6
London: Barts & the London	145	5.5
London: Imperial College	88	3.4
London: King's College	145	5.5
London: St George's	118	4.5
London: University College	97	3.7
London: unknown school	1	0.0
Manchester	162	6.2
Newcastle	111	4.2
Norwich (UEA)	64	2.4
Nottingham	97	3.7
Oxford	28	1.1
Peninsula	87	3.3
Sheffield	106	4.0
Southampton	91	3.5
Swansea	6	0.2
Warwick	55	2.1
Total	**2622**	**100.0**

EEA Graduates		
Country of PMQ	**N**	**%**
Czech Republic	35	21.3
Germany	8	4.9
Hungary	9	5.5
Ireland	21	12.8
Italy	5	3.0
Latvia	5	3.0
Poland	31	18.9
Romania	25	15.2
Other EEA Countries (< 5 each)	25	15.2
Total	**164**	**100.0**

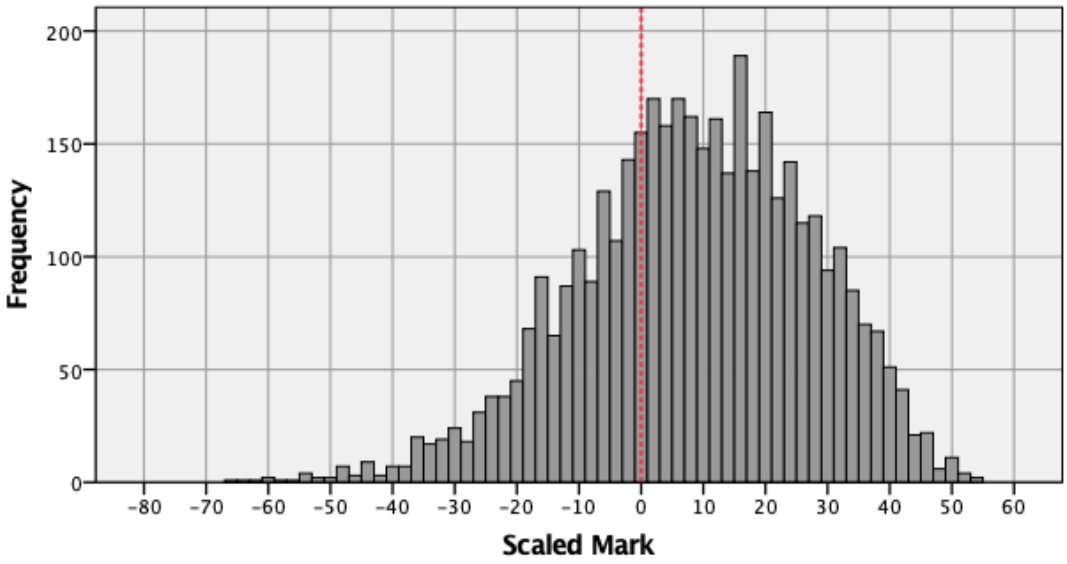
Graduates from the Rest of the World		
Country of PMQ	**N**	**%**
Bangladesh	21	2.8
China	9	1.2
Egypt	13	1.7
Georgia	5	0.7
Ghana	9	1.2
Grenada	5	0.7
India	124	16.5
Iraq	25	3.3
Jordan	5	0.7
Nepal	17	2.3
Nigeria	187	24.9
Pakistan	193	25.7
Russia	22	2.9
South Africa	8	1.1
Sri Lanka	7	0.9
Sudan	22	2.9
Ukraine	9	1.2
Other Countries (< 5 each)	70	8.6
Total	**751**	**100.0**

2. AKT Candidates' Place of PMQ, by Training LETB / Deanery

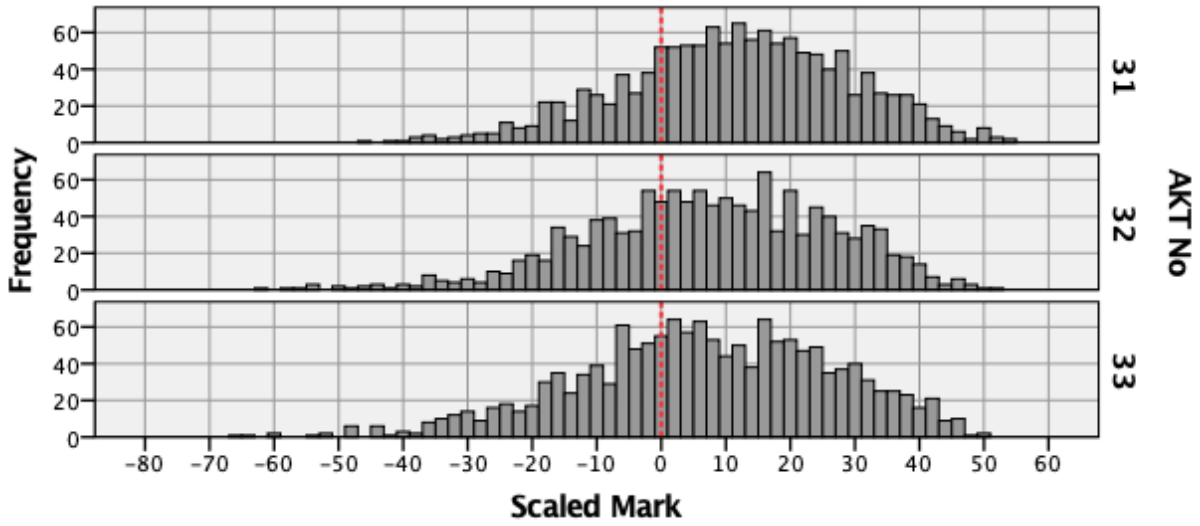
Deanery / LETB	Source of PMQ			Total Candidates
	EEA	RoW	UK	
Armed Forces (Defence)	<5	<5	29	29
	n<5	n<5	100.0%	100.0%
East Midlands	13	92	148	253
	5.1%	36.4%	58.5%	100.0%
East of England	25	132	215	372
	6.7%	35.5%	57.8%	100.0%
East Scotland	<5	<5	21	25
	n<5	n<5	84.0%	100.0%
Kent, Surrey, Sussex	25	90	182	297
	8.4%	30.3%	61.3%	100.0%
London	7	10	418	435
	1.6%	2.3%	96.1%	100.0%
North Scotland	<5	<5	47	51
	n<5	n<5	92.2%	100.0%
North Western	19	104	304	427
	4.4%	24.4%	71.2%	100.0%
Northern	9	50	101	160
	5.6%	31.3%	63.1%	100.0%
Northern Ireland	<5	<5	69	69
	n<5	n<5	100.0%	100.0%
Oxford	6	11	96	113
	5.3%	9.7%	85.0%	100.0%
Severn	8	16	109	133
	6.0%	12.0%	82.0%	100.0%
South East Scotland	<5	<5	72	74
	n<5	n<5	97.3%	100.0%
South West Peninsula	<5	7	88	99
	n<5	7.1%	88.9%	100.0%
Wales	<5	13	97	113
	n<5	11.5%	85.8%	100.0%
Wessex	5	32	99	136
	3.7%	23.5%	72.8%	100.0%
West Midlands	19	109	197	325
	5.8%	33.5%	60.6%	100.0%
West Scotland	<5	17	135	156
	n<5	10.9%	86.5%	100.0%
Yorkshire & The Humber	14	61	195	270
	5.2%	22.6%	72.2%	100.0%
Total	164	**751**	**2622**	**3537**
	4.6%	**21.2%**	**74.1%**	**100.0%**

B: Main Results: Overall, & by Exam Diet, Stage & Attempt (All Candidates)

1. AKT Result & Scores (scaled; pass mark = 0), overall and by exam diet (all candidates)



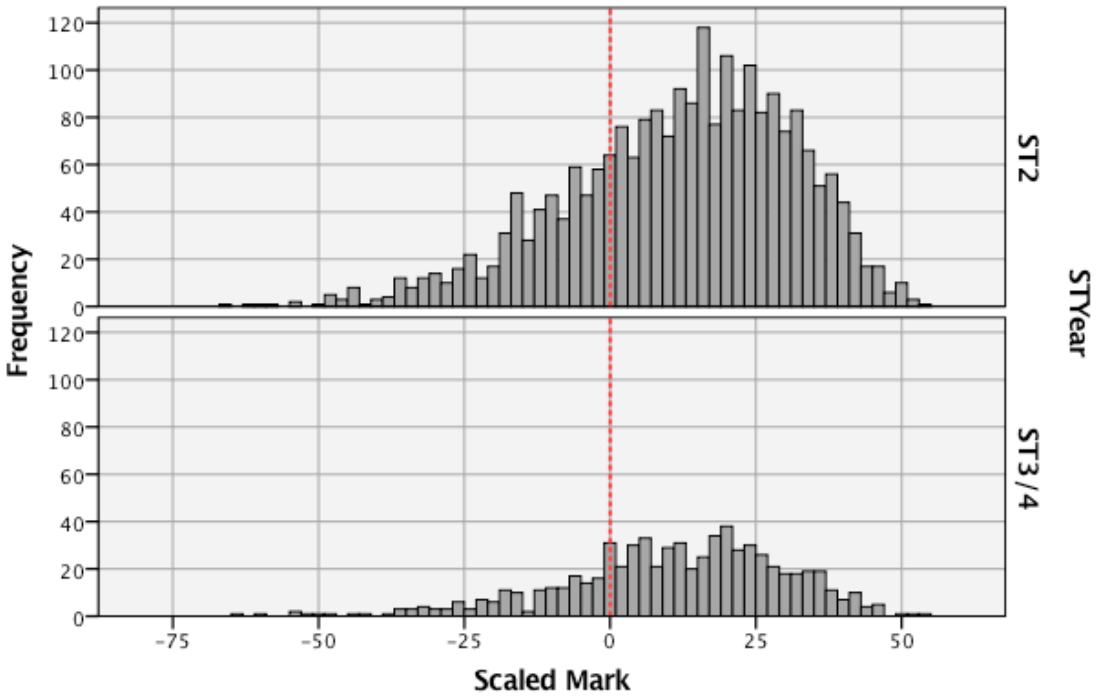
AKT	Result		Total N	Scaled Mark			
	Fail	Pass		Min.	Max.	Mean	SD
All Diets 2017-2018	1261	2753	4014	-66	53	8.0	18.9
	31.4%	68.6%					



AKT Diet	Result		Total N	Scaled Mark			
	Fail	Pass		Min.	Max.	Mean	SD
31	314	991	1305	-46	53	11.0	17.4
	24.1%	75.9%					
32	426	825	1251	-66	49	6.2	19.8
	34.1%	65.9%					
33	521	937	1458	-63	51	6.9	18.9
	35.7%	64.3%					

2. AKT Result and scores, by Stage (Year) of Training (candidates on first attempt)

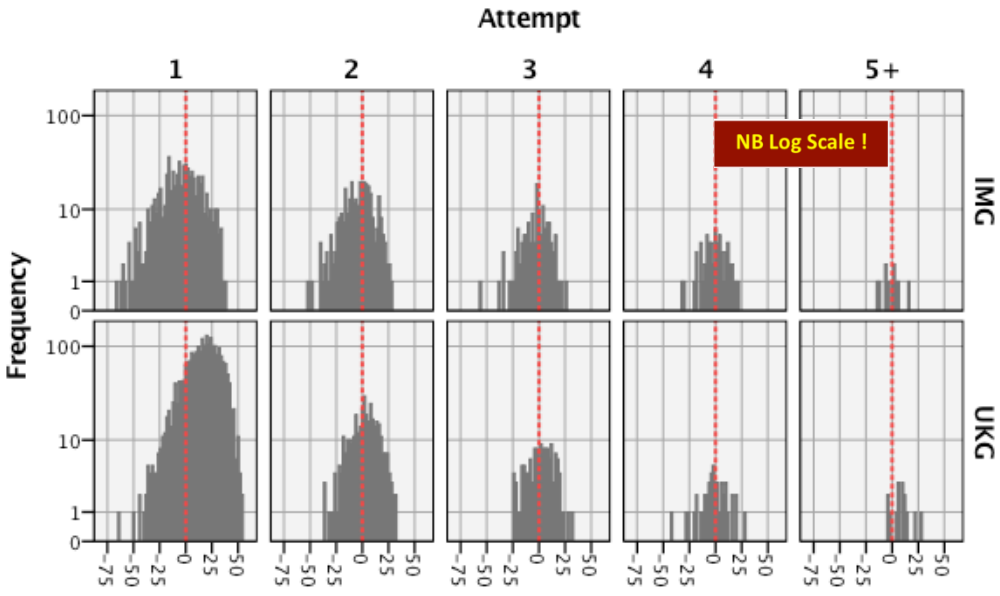
Training Year	Result		Total N	Scaled Mark			
	Fail	Pass		Min.	Max.	Mean	SD
ST2	582	1700	2282	-66	53	11.4	19.5
	25.5%	74.5%					
ST3/4	168	517	685	-66	53	11.4	19.5
	24.5%	75.5%					



3. Result and scores, by attempt at the AKT: all graduates, and separated by source of primary medical qualification, UK/non-UK (all candidates)

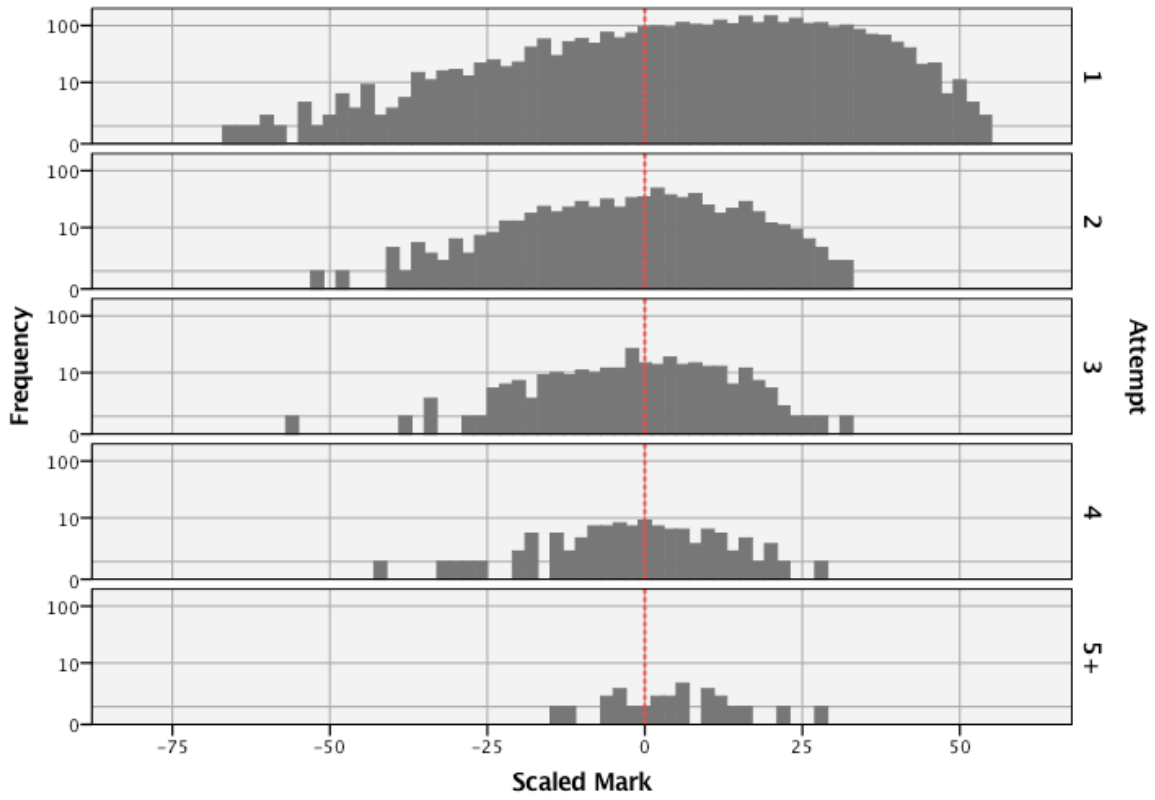
Attempt	UKG			IMG			All Candidates		
	Fail	Pass	Total N	Fail	Pass	Total N	Fail	Pass	Total N
	N/%	N/%		N/%	N/%		N/%	N/%	
1	374	1941	2315	376	276	652	750	2217	2967
	16.2%	83.8%	100.0%	57.7%	42.3%	100.0%	25.3%	74.7%	100.0%
2	137	203	340	174	134	308	311	337	648
	40.3%	59.7%	100.0%	56.5%	43.5%	100.0%	48.0%	52.0%	100.0%
3	55	74	129	82	56	138	137	130	267
	42.6%	57.4%	100.0%	59.4%	40.6%	100.0%	51.3%	48.7%	100.0%
4	25	20	45	30	31	61	55	51	106
	55.6%	44.4%	100.0%	49.2%	50.8%	100.0%	51.9%	48.1%	100.0%
5+	3	12	15	5	6	11	8	18	26
	20.0%	80.0%	100.0%	45.5%	54.5%	100.0%	30.8%	69.2%	100.0%
All	594	2250	2844	667	503	1170	1261	2753	4014
	20.9%	79.1%	100.0%	57.0%	43.0%	100.0%	31.4%	68.6%	100.0%

Attempt	UK or Non-UK Graduate	N	Min.	Max.	Mean	SD
1	IMG	652	-66	38	-5.21	19.40
	UKG	2315	-64	53	15.80	16.73
2	IMG	308	-52	28	-4.43	14.68
	UKG	340	-37	32	1.69	13.25
3	IMG	138	-57	25	-3.54	13.07
	UKG	129	-25	32	1.16	12.34
4	IMG	61	-33	21	-1.43	11.68
	UKG	45	-43	27	-2.11	13.33
5+	IMG	11	-14	16	-1.45	8.65
	UKG	15	-5	28	7.93	9.00

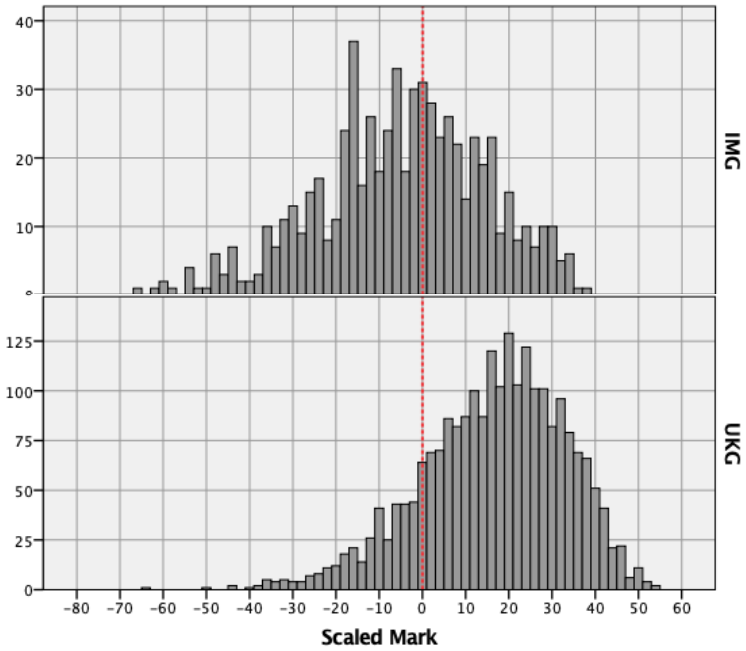


Score on AKT by attempt – all candidates

NB Log Scale !



4. Score on AKT on first attempt (linear Y scale) by source of PMQ, UK and non-UK Graduates compared – equivalently vertically scaled to show contrast



5. Candidates with Disabilities: prevalence by attempt and source of PMQ; outcomes

UK Equality Legislation supports examination candidates with disabilities in requesting 'reasonable accommodations' in regard to their disabilities, without affecting the standard of the examination. The tables below record the prevalence of such candidates in attempts at the AKT in 2017-18, together with the results of the assessments. Specific Learning Disability (SLD) is the disability most frequently reported. Disabilities other than SLD have been merged for reasons of small numbers and personal confidentiality, the commonest ones being 'other disability', physical disability, hearing impairment, and multiple disabilities. Note, importantly, that SLD may not be diagnosed until a second or later attempt at the assessment.

There were 363 disabled candidate-attempts at the AKT (see first, blue, table below), representing 9.0% of attempts. (Last year it was 7.5%, the year before 5.6%.) The second, green table shows the outcomes for these candidates. The overall number of successful attempts by candidates with disabilities was 221, or 61%.

Candidates with Disabilities: Numbers Sitting						
Disability	AKT Attempt					Total
	1	2	3	4	5+	
Specific learning difficulty	142	39	44	36	15	276
Other (or multiple) Disabilities	48	23	12	3	1	87
All Disabilities	190	62	56	39	16	363
No Disabilities	2777	586	211	67	10	3651
All Candidates	2967	648	267	106	26	4014

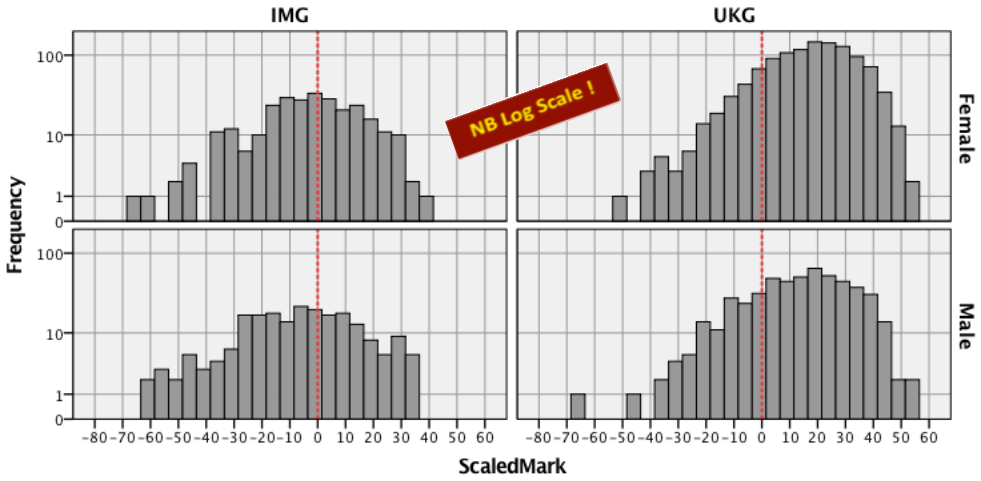
Candidates with Disabilities: Pass Rates (%)						
Disability	AKT Attempt					Total
	1	2	3	4	5+	
Specific learning difficulty	69.7%	51.3%	50.0%	50.0%	66.7%	61.2%
Other (or multiple) Disabilities	64.6%	47.8%	66.7%	33.3%	100.0%	59.8%
All Disabilities	68.4%	50.0%	53.6%	48.7%	68.8%	60.9%
No Disabilities	75.2%	52.2%	47.4%	47.8%	70.0%	69.4%
All Candidates	74.7%	52.0%	48.7%	48.1%	69.2%	68.6%

C: Results by Individual Demographics (Candidates on first attempt, only)

1. AKT Result and scores by candidate sex, and within source of PMQ (1st attempt)

Note that information on candidate sex was not available for 27.8% of this group: extreme caution should be observed when interpreting the data on this page

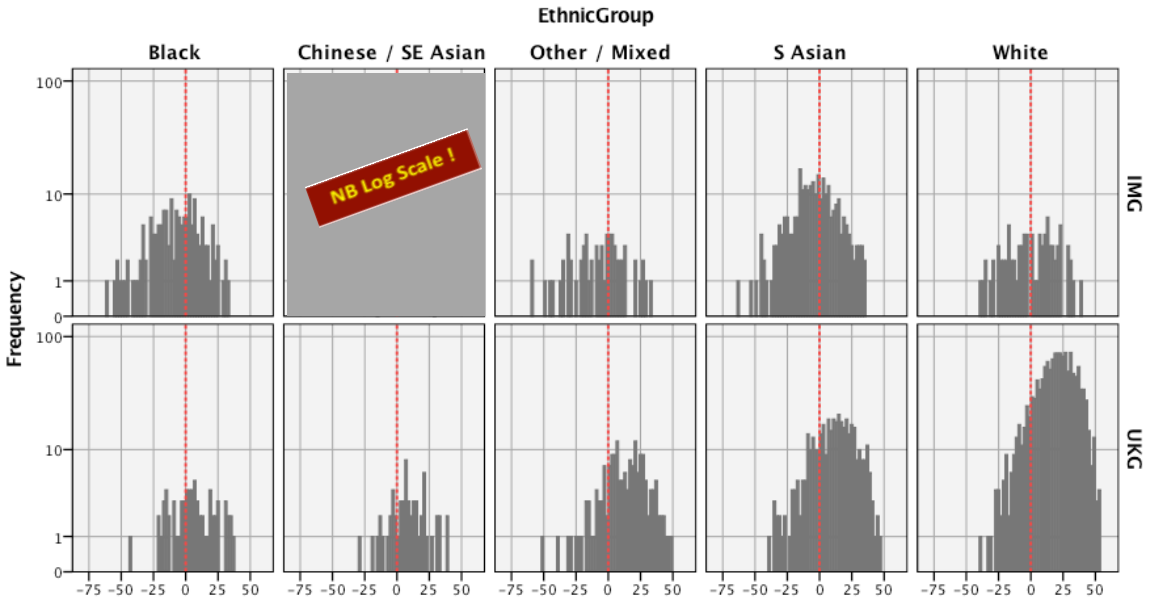
Result by Candidate Sex and Source of PMQ (Information re. sex unavailable on 824 candidates on first attempt)							
Source of PMQ	Sex	N Cands.	Pass Rate	Scaled Mark			
				Min.	Max.	Mean	SD
IMG	Female	277	46.6%	-66	38	-3.2	18.52
	Male	208	39.40%	-63	33	-6.5	20.58
	Total	485	43.5%	-66	38	-4.6	19.48
UKG	Female	1141	85.7%	-51	53	17.0	16.46
	Male	517	79.7%	-64	53	13.7	17.90
	Total	1658	83.8%	-64	53	16.0	16.99
Total	Female	1418	78.1%	-66	53	13.1	18.68
	Male	725	68.1%	-64	53	7.9	20.80
	Total	2143	74.7%	-66	53	11.3	19.57



2. AKT Result by classified candidate ethnicity, and separated by source of primary medical qualification; scaled mark by ethnicity (1st attempt)

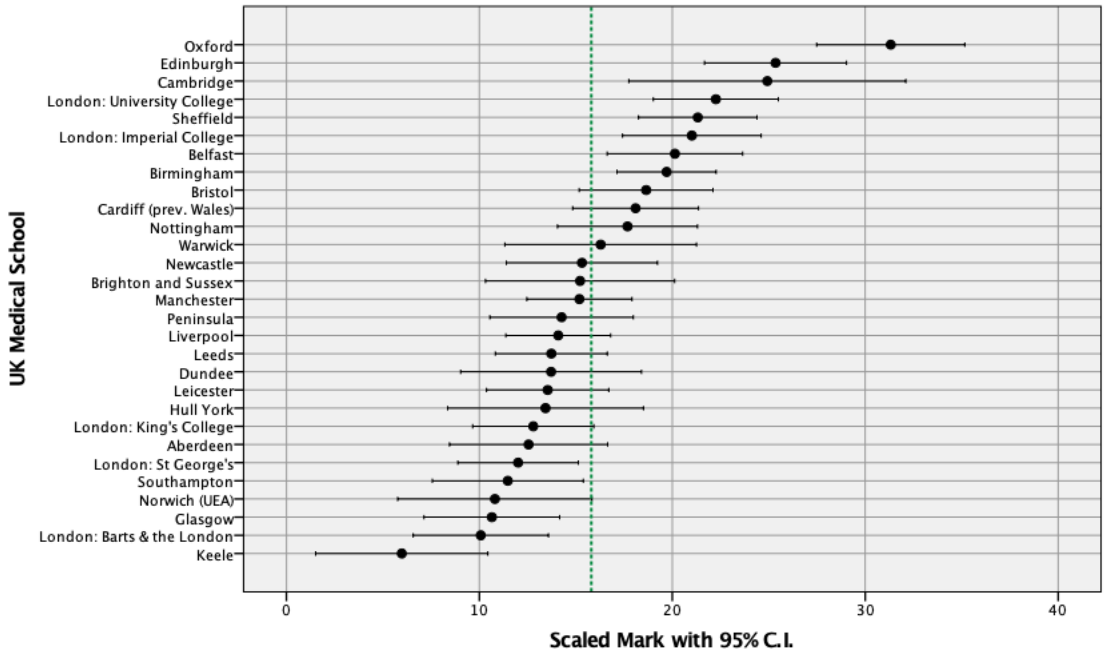
Note that information on candidate ethnicity was not available for 12.6% of this group: considerable caution should be observed when interpreting the data on this page

Result by Candidate Ethnicity and Source of PMQ (Information re. ethnicity unavailable on 375 candidates on first attempt)							
Source of PMQ	Ethnic Group	Pass Rate	N Cands.	Scaled Mark			
				Min.	Max.	Mean	SD
IMG	Black	39.8%	161	-61	33	-7.80	19.63
	Chinese / SE Asian	-	<5	-	-	-	-
	Other / Mixed Ethnicity	40.3%	67	-60	33	-8.43	21.18
	S Asian	40.9%	269	-63	35	-4.60	18.06
	All BME	*40.5%*	*499*	*-63*	*35*	*-6.10*	*19.08*
	White	53.5%	86	-39	38	0.12	18.98
UKG	Black	65.2%	69	-44	36	5.16	16.68
	Chinese / SE Asian	74.1%	58	-30	39	8.47	14.35
	Other / Mixed Ethnicity	80.1%	171	-51	49	12.05	17.35
	S Asian	75.5%	384	-39	46	10.64	16.69
	All BME	*75.5%*	*682*	*-51*	*49*	*10.25*	*16.75*
	White	89.0%	1325	-39	53	19.08	15.43
All	Black	47.4%	230	-61	36	-3.91	19.68
	Chinese / SE Asian	73.3%	60	-30	39	8.38	14.68
	Other / Mixed Ethnicity	68.9%	238	-60	49	6.28	20.64
	S Asian	61.3%	653	-63	46	4.36	18.82
	All BME	*60.7%*	*1181*	*-63*	*49*	*3.34*	*19.52*
	White	86.8%	1411	-39	53	17.92	16.30



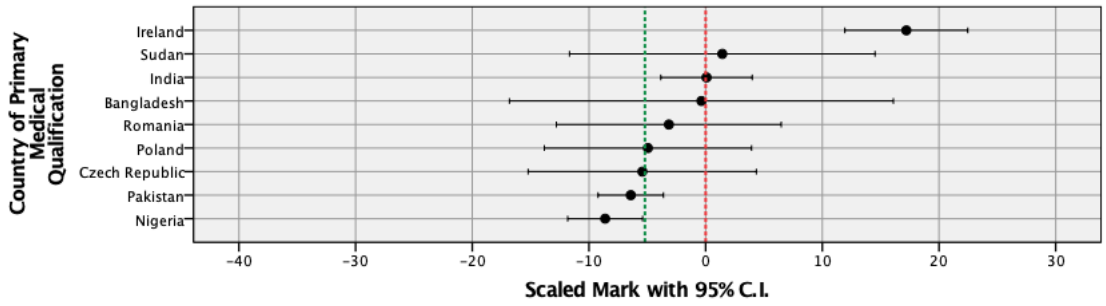
3. AKT Result and Scores by PMQ (medical school; country) on 1st attempt

UK Graduates



UK Medical School	N Candidates	Percent of All UK	Pass Rate	Scaled Mark			
				Minimum	Maximum	Mean	SD
Aberdeen	69	3.0	76.8%	-40	48	12.55	17.06
Belfast	74	3.2	87.8%	-25	45	20.14	15.17
Birmingham	122	5.3	91.8%	-24	49	19.70	14.35
Brighton and Sussex	41	1.8	85.4%	-19	42	15.22	15.54
Bristol	76	3.3	93.4%	-36	45	18.64	15.18
Cambridge	26	1.1	88.5%	-20	49	24.92	17.77
Cardiff (prev. Wales)	95	4.1	90.5%	-31	53	18.09	16.02
Dundee	46	2.0	89.1%	-32	41	13.72	15.78
Edinburgh	60	2.6	96.7%	-16	51	25.35	14.25
Glasgow	79	3.4	72.2%	-25	53	10.65	15.71
Hull York	56	2.4	82.1%	-44	43	13.43	18.95
Keele	48	2.1	64.6%	-26	44	5.98	15.36
Leeds	89	3.8	84.3%	-25	41	13.73	13.80
Leicester	98	4.2	81.6%	-37	46	13.54	15.81
Liverpool	126	5.4	80.2%	-31	46	14.09	15.41
London - Barts & the London	107	4.6	75.7%	-51	44	10.07	18.29
London - Imperial College	78	3.4	88.5%	-15	49	21.01	15.95
London - King's College	121	5.2	80.2%	-35	45	12.79	17.44
London - St George's	104	4.5	75.0%	-34	45	12.01	16.06
London - University College	90	3.9	92.2%	-20	49	22.26	15.48
London - unknown school	1	0.0	100.0%	25	25	25.00	-
Manchester	141	6.1	83.0%	-31	49	15.18	16.37
Newcastle	95	4.1	81.1%	-39	52	15.32	19.22
Norwich (UEA)	51	2.2	76.5%	-23	48	10.80	17.91
Nottingham	90	3.9	88.9%	-64	49	17.68	17.34
Oxford	28	1.2	100.0%	13	49	31.32	9.90
Peninsula	76	3.3	81.6%	-33	45	14.26	16.28
Sheffield	97	4.2	90.7%	-27	52	21.32	15.24
Southampton	76	3.3	78.9%	-34	47	11.47	17.13
Swansea	6	0.3	83.3%	-19	30	13.83	17.42
Warwick	49	2.1	85.7%	-36	43	16.29	17.29
Total	2315	100.0	83.8%	-64	53	15.8	16.73

Non-UK Graduates – Countries with 5+ passing Candidates, on First Attempt

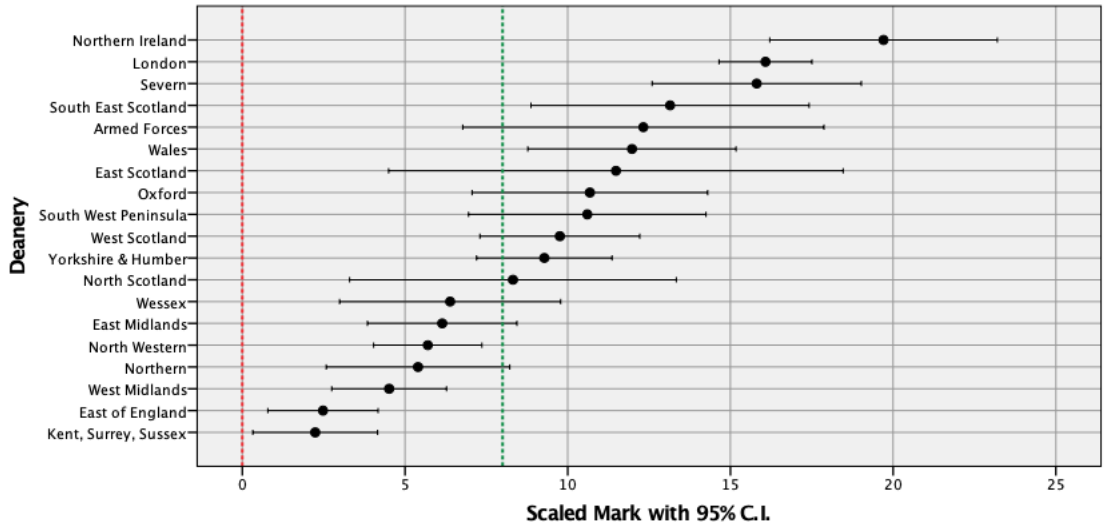


Country of Primary Medical Qualification	N Candidates	N Passing Candidates	Pass Rate	Scaled Mark			
				Minimum	Maximum	Mean	SD
Bangladesh	11	6	54.5%	-36	33	-0.36	24.49
Czech Republic	21	10	47.6%	-45	33	-5.43	21.49
India	91	46	50.5%	-63	35	0.08	18.83
Ireland	15	14	93.3%	-2	32	17.2	9.50
Nigeria	145	54	37.2%	-61	30	-8.61	19.59
Pakistan	137	53	38.7%	-49	31	-6.42	16.59
Poland	20	10	50.0%	-36	25	-4.95	18.98
Romania	13	6	46.2%	-27	22	-3.15	15.95
Sudan	14	9	64.3%	-50	29	1.43	22.67
All other countries	185	68	36.8%	-	-	-	-
Total	652	276	42.3%	-66	38	-5.21	19.40

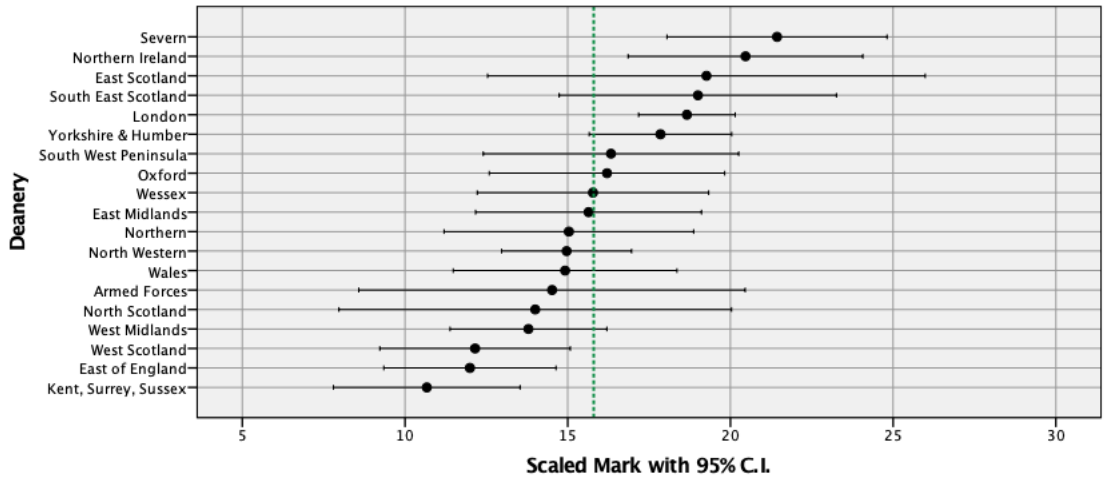
D: Results by Training Deanery / LETB

1. Error bar graphs of mean Candidate Scores by Deanery, by source of PMQ

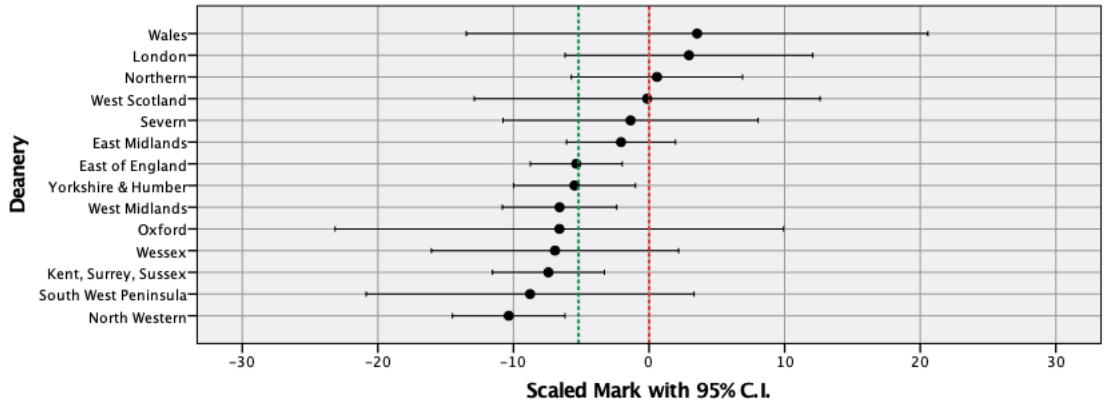
All Graduates, All Attempts



UK Graduates, First Attempt



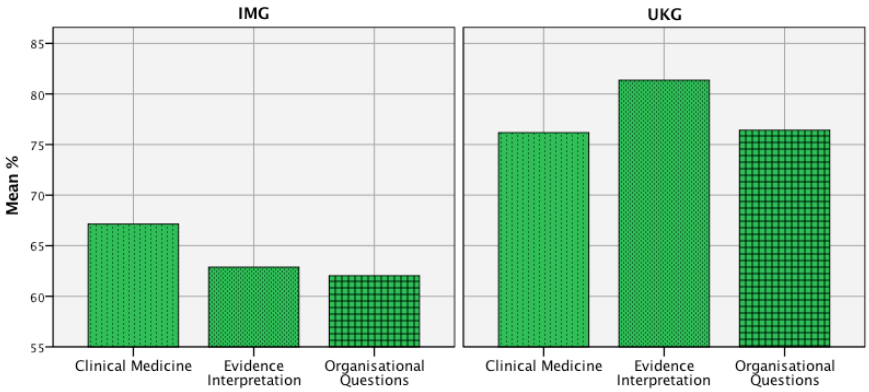
Non-UK Graduates, First Attempt



E: Analyses of AKT sub-Scores

1. Overall pattern of scores, UK graduates and IMGs compared on first attempt; descriptive statistics of the three scores, place of PMQ and training year compared

Candidate Group	Question Group	N Cands.	Descriptive Statistics %			
			Min.	Max.	Mean	SD
All 1st Attempt Candidates	Clinical Medicine	2967	30.63	96.84	74.19	9.77
	Evidence Interpretation	2967	10.00	100.00	77.31	15.51
	Organisational Questions	2967	15.00	100.00	73.26	14.06
IMG	Clinical Medicine	652	30.63	89.24	67.13	10.03
	Evidence Interpretation	652	10.00	100.00	62.88	16.83
	Organisational Questions	652	15.00	95.00	62.03	14.00
UKG	Clinical Medicine	2315	37.97	96.84	76.18	8.72
	Evidence Interpretation	2315	25.00	100.00	81.37	12.39
	Organisational Questions	2315	25.00	100.00	76.42	12.36
ST 2	Clinical Medicine	2282	30.63	96.84	74.49	9.85
	Evidence Interpretation	2282	10.00	100.00	77.37	15.53
	Organisational Questions	2282	15.00	100.00	73.68	14.06
ST 3	Clinical Medicine	685	37.97	95.00	73.21	9.45
	Evidence Interpretation	685	15.00	100.00	77.09	15.45
	Organisational Questions	685	25.00	100.00	71.85	13.99



2. Correlations between AKT section scores and total score: all candidates

Inter-Section Correlations -- All Candidates				
	Clinical Medicine	Evidence Interpretation	Organisational Questions	Total Score
Clinical Medicine (80% of items)	1.000	0.543	0.516	0.975
Evidence Interpretation (10% of items)		1.000	0.527	0.683
Organisational Questions (10% of items)			1.000	0.654
Total Score				1.000

N = 4014 All correlations significant at the 0.001 level (1-tailed)

4: CSA Statistics

A: Summary of Candidate Demographics

3052 candidates made a total of 3546 attempts at the CSA during 2017-18. The tables below show the origin of the 3052 candidates, by UK medical school or non-UK country of primary medical qualification—and the percentage from each out of the total of that part of the candidature. On the following page, the background demographic characteristics of the 3052 are shown, by training Deanery. Other tables report on the 3546 attempts (or sub-groups of these – eg candidates on first attempt only).

1. Source of Primary Medical Qualification

World Area	Frequency	Percent
EEA	102	3.3
RoW	534	17.5
UK	2416	79.2
Total	3052	100.0

EEA Country	Frequency	Percent
Czech Republic	23	22.5
Hungary	5	4.9
Ireland	19	18.6
Poland	16	15.7
Romania	12	11.8
Other Countries (<5)	27	26.5
Total	**102**	**100.0**

RoW Country	Frequency	Percent
Bangladesh	20	3.7
Belarus	5	0.9
China	7	1.3
Egypt	13	2.4
Grenada	5	0.9
India	99	18.5
Iran	7	1.3
Iraq	21	3.9
Nepal	16	3.0
Nigeria	104	19.5
Pakistan	138	25.8
Russia	8	1.5
South Africa	6	1.1
Sri Lanka	9	1.7
Sudan	14	2.6
Ukraine	12	2.2
Other Countries (<5)	50	9.8
Total	**534**	**100.0**

UK: Medical School	Frequency	Percent
Aberdeen	71	2.9
Belfast	72	3.0
Birmingham	143	5.9
Brighton and Sussex	40	1.7
Bristol	62	2.6
Cambridge	26	1.1
Cardiff	144	6.0
Dundee	50	2.1
Edinburgh	58	2.4
Glasgow	69	2.9
Hull York	61	2.5
Keele	41	1.7
Leeds	76	3.1
Leicester	97	4.0
Liverpool	116	4.8
London - Barts & the London	155	6.4
London - Imperial College	96	4.0
London - King's College	143	5.9
London - School Unknown	1	0.0
London - St George's	108	4.5
London - University College	98	4.1
Manchester	150	6.2
Newcastle	96	4.0
Norwich (UEA)	55	2.3
Nottingham	83	3.4
Oxford	28	1.2
Peninsula	64	2.6
Sheffield	83	3.4
Southampton	75	3.1
Warwick	55	2.3
Total	**2416**	**100.0**

2. CSA Candidates' Place of PMQ, by Training Deanery/LETB

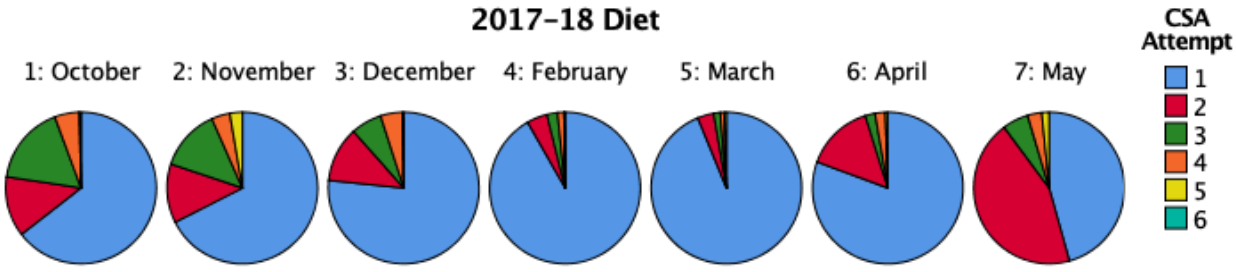
Deanery / LETB	Source of PMQ			Total
	EEA	RoW	UK	
Armed Forces	<5	<5	24	24
	n<5	n<5	100.0%	100.0%
East Midlands	7	55	123	185
	3.8%	29.7%	66.5%	100.0%
East of England	21	84	179	284
	7.4%	29.6%	63.0%	100.0%
East Scotland	<5	<5	19	23
	n<5	n<5	82.6%	100.0%
Kent, Surrey, Sussex	19	55	152	226
	8.4%	24.3%	67.3%	100.0%
London	<5	<5	415	422
	n<5	n<5	98.3%	100.0%
North Scotland	<5	<5	44	46
	n<5	n<5	95.7%	100.0%
North Western	9	76	271	356
	2.5%	21.3%	76.1%	100.0%
Northern	10	38	82	130
	7.7%	29.2%	63.1%	100.0%
Northern Ireland	<5	<5	65	65
	n<5	n<5	100.0%	100.0%
Oxford	<5	5	103	111
	n<5	4.5%	92.8%	100.0%
Severn	<5	5	143	152
	n<5	3.3%	94.1%	100.0%
South East Scotland	<5	<5	60	61
	n<5	n<5	98.4%	100.0%
South West Peninsula	<5	9	84	94
	n<5	9.6%	89.4%	100.0%
Wales	<5	12	101	116
	n<5	10.3%	87.1%	100.0%
Wessex	<5	15	97	113
	n<5	13.3%	85.8%	100.0%
West Midlands	11	111	180	302
	3.6%	36.8%	59.6%	100.0%
West Scotland	<5	17	115	134
	n<5	12.7%	85.8%	100.0%
Yorkshire & Humber	7	42	159	208
	3.4%	20.2%	76.4%	100.0%
Total	**102**	**534**	**2416**	**3052**
	3.3%	**17.5%**	**79.2%**	**100.0%**

B: Main Results: Overall, and by Exam Diet and Attempt (All Candidates)

1. CSA Result and scores, overall and by Diet (all candidates/attempts)

Candidates

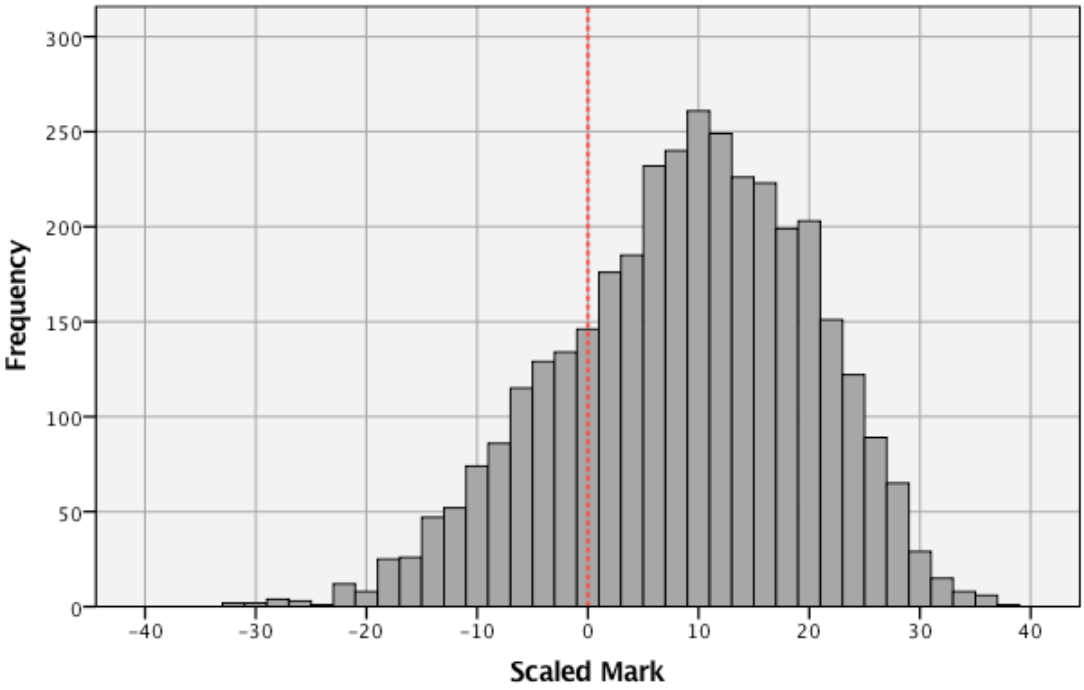
CSA Attempt	2017-18 Diet							Total
	October	November	December	February	March	April	May	
1	171	102	324	751	936	299	237	2820
	64.5%	67.5%	76.6%	91.7%	93.8%	80.6%	45.7%	79.5%
2	34	19	50	36	35	54	229	457
	12.8%	12.6%	11.8%	4.4%	3.5%	14.6%	44.1%	12.9%
3	45	20	28	19	14	8	29	163
	17.0%	13.2%	6.6%	2.3%	1.4%	2.2%	5.6%	4.6%
4	14	6	20	11	8	8	16	83
	5.3%	4.0%	4.7%	1.3%	0.8%	2.2%	3.1%	2.3%
5+	1	4	1	2	5	2	8	23
	0.4%	2.6%	0.2%	0.2%	0.5%	0.5%	1.5%	0.6%
Total	265	151	423	819	998	371	519	3546
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

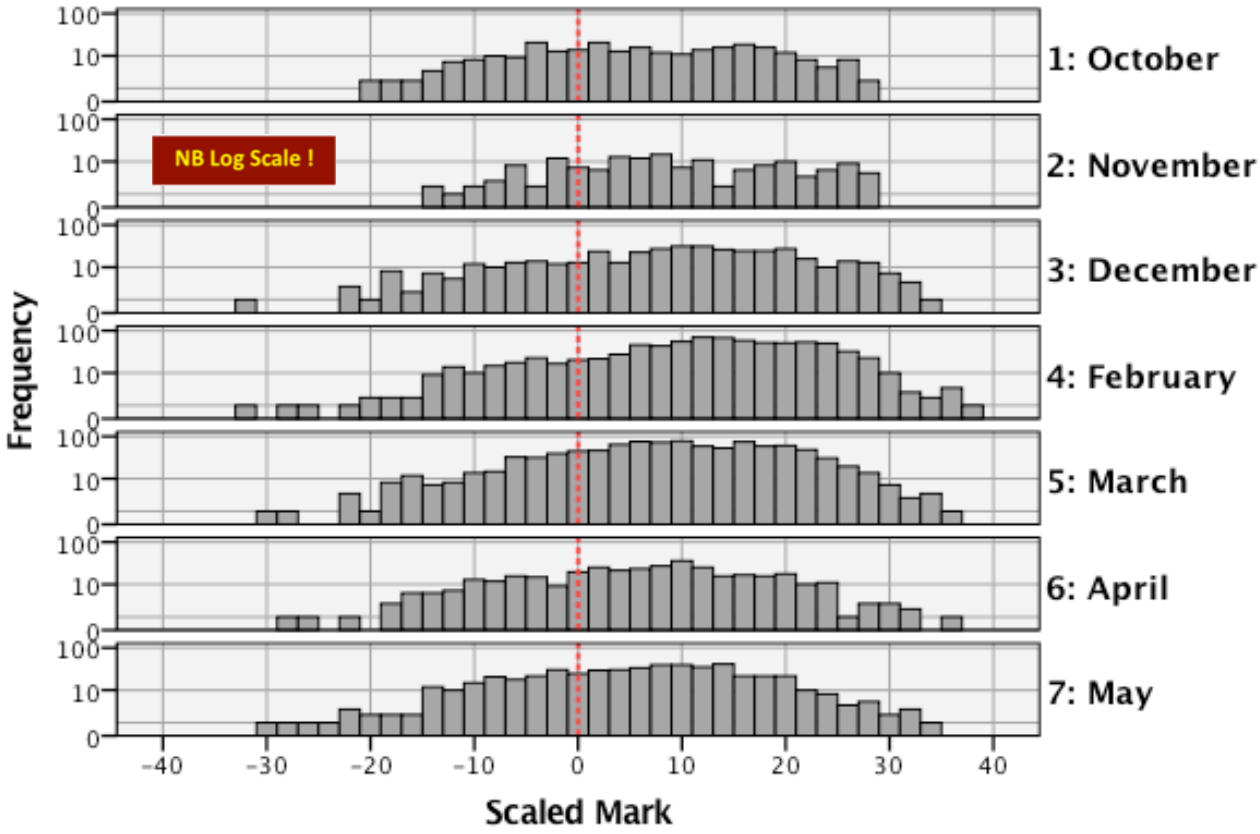


Results

Diet	N Cands	Pass Rate	Scaled Mark			
			Minimum	Maximum	Mean	SD
October	265	66.8%	-21	27	5.6	11.0
November	151	78.1%	-15	28	8.6	10.6
December	423	77.8%	-32	33	8.6	12.1
February	819	84.6%	-32	38	11.3	11.1
March	998	80.2%	-31	35	8.5	10.8
April	371	73.3%	-29	35	5.7	11.1
May	519	70.3%	-31	33	5.3	10.9
Total	**3546**	**77.7%**	**-32**	**38**	**8.2**	**11.3**

All Candidates; and by Diet

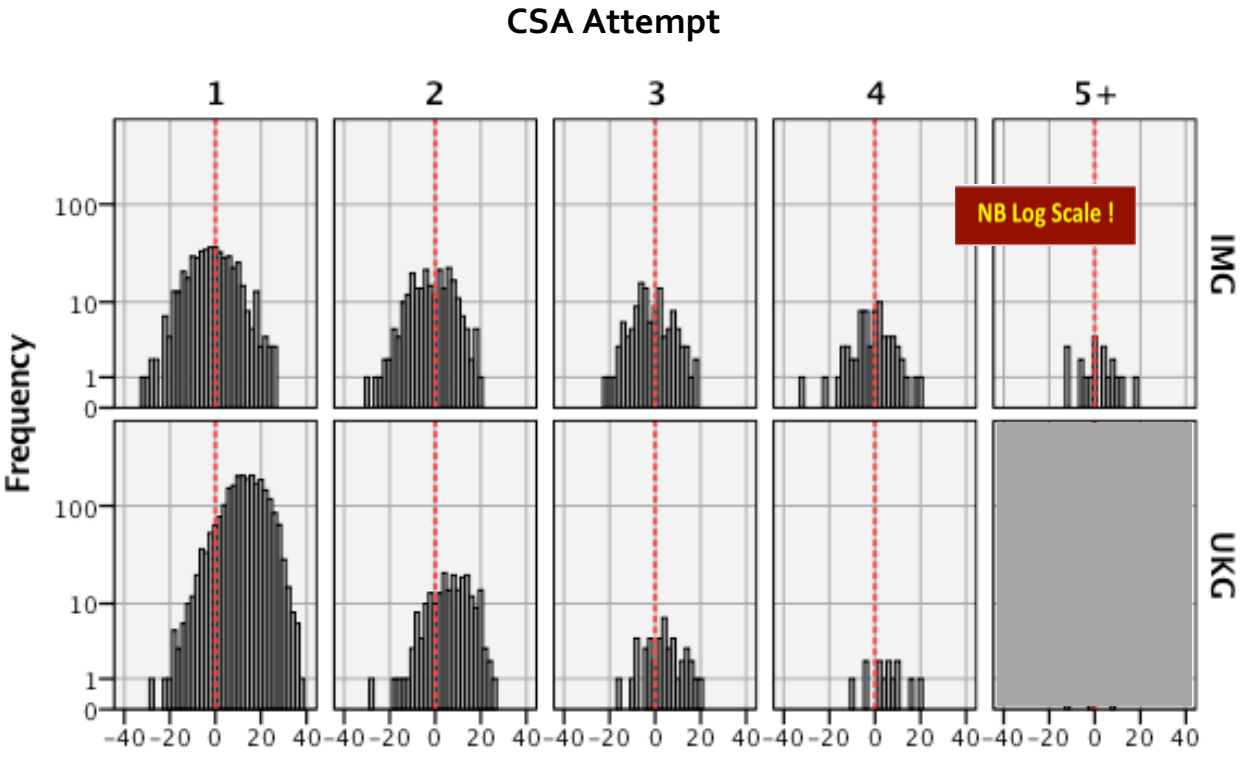




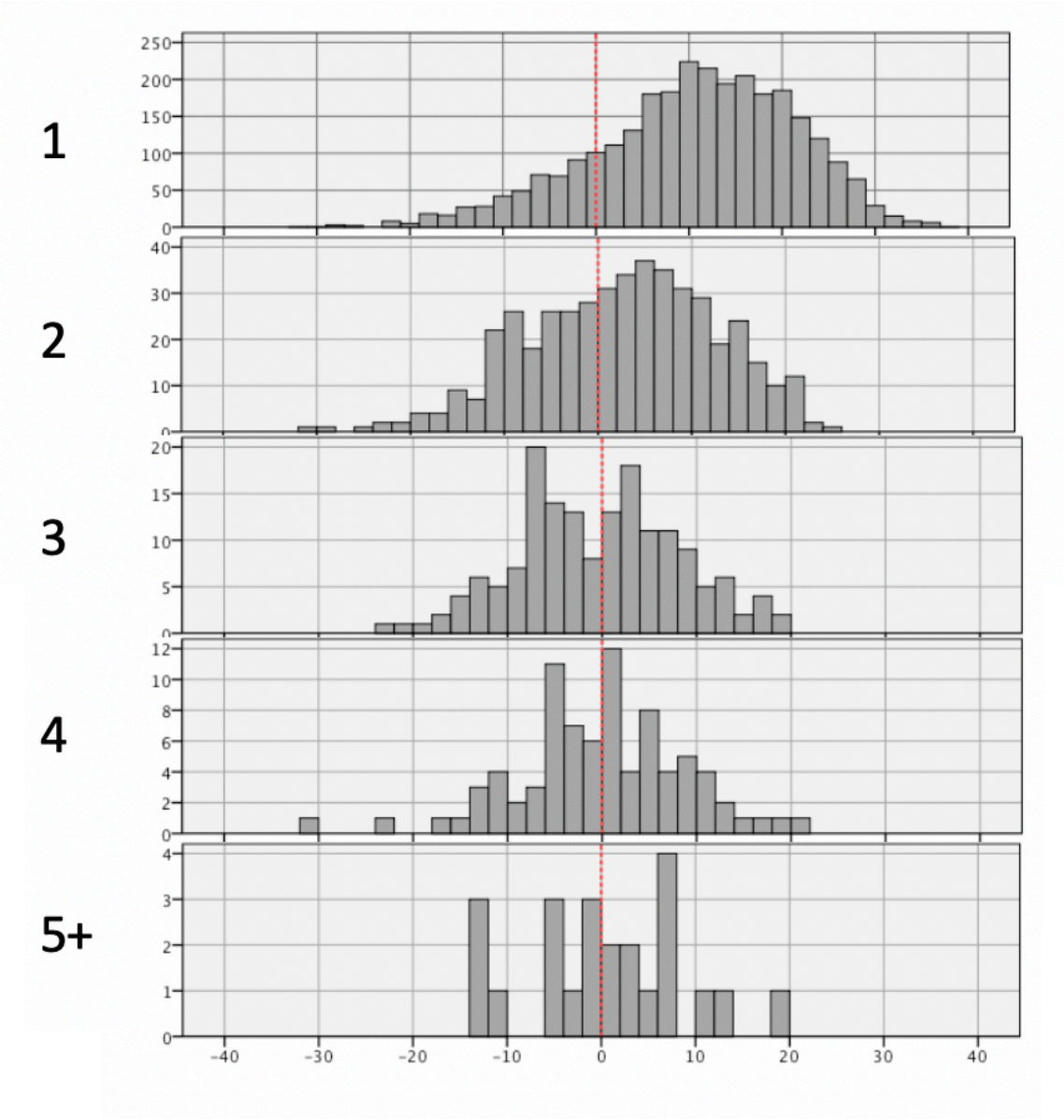
2. Result and scores, by attempt at the CSA: all graduates, and separated by source of primary medical qualification, UK/non-UK (all candidates)

Candidates' results and scores by attempt, by source of PMQ

Attempt	PMQ	N Candidates	Pass Rate %	Scaled Mark			
				Min	Max	Mean	SD
1	IMG	479	44.3	-32	26	-1.73	10.40
	UKG	2341	90.8	-29	38	12.44	9.36
2	IMG	242	47.1	-31	20	-1.88	9.38
	UKG	215	77.2	-29	25	6.45	9.02
3	IMG	120	43.3	-23	18	-2.23	8.42
	UKG	43	67.4	-17	19	2.98	8.19
4	IMG	70	47.1	-32	20	-1.57	8.86
	UKG	13	76.9	-10	19	4.62	8.19
5+	IMG	20	55.0	-13	18	0.50	8.34
	UKG	3	n/a	n/a	n/a	n/a	n/a



All Candidates: score on CSA by attempt – vertically scaled to show contrast



3. Candidates with Disabilities: prevalence by PMQ and by attempt; outcomes

UK Equality Legislation supports examination candidates with disabilities in requesting 'reasonable accommodations' in regard to their disabilities, without affecting the standard of the examination. The tables below record the prevalence of such candidates in attempts at the CSA in 2017-18, together with the results of the assessments. Specific Learning Disability (SLD) is the disability most frequently reported. Disabilities other than SLD have been merged for reasons of small numbers and personal confidentiality, the commonest ones being 'other disability' and hearing impairment. Please bear in mind the earlier warning about possible confounding of background variables.

Note, importantly, that SLD may not be diagnosed until a second or later attempt at the assessment.

There were 290 disabled candidate-attempts at the CSA (see first, blue, table below), representing 8.2% of attempts (2016-17: 6.7%; 2015-16: 6.0%). The second, green table shows the outcomes for these candidates.

The overall number of successful attempts by candidates with disabilities was 185, representing a pass rate of 64%, the same as last year.

Candidates with Disabilities: Numbers Sitting						
Disability Reported	Attempt					Total
	1	2	3	4	5+	
Specific learning difficulty	156	37	22	10	3	228
Other disability (or multiple)	45	12	3	2	0	62
Any disability	201	49	25	12	3	290
No disability reported	2619	408	138	71	20	3256
All candidates	2820	457	163	83	23	3546

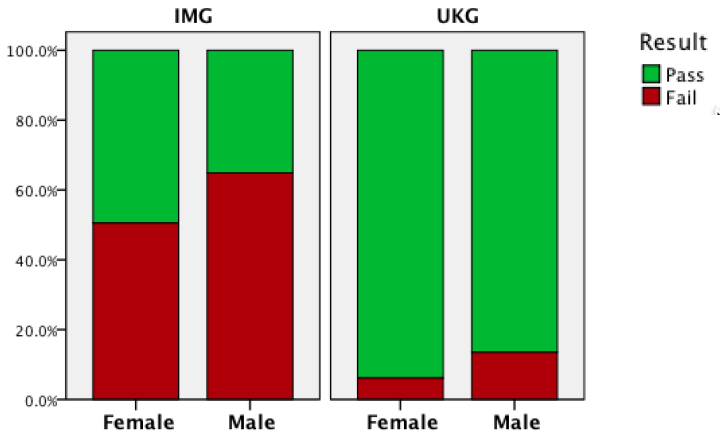
Candidates with Disabilities: Pass Rates						
Disability Reported	Attempt					Total
	1	2	3	4	5+	
Specific learning difficulty	73.7%	45.9%	45.5%	30.0%	33.3%	64.0%
Other disability (or multiple)	71.1%	41.7%	66.7%	50.0%	-	62.9%
Any disability	73.1%	44.9%	48.0%	33.3%	33.3%	63.8%
No disability reported	83.7%	63.2%	50.0%	54.9%	55.0%	78.9%
All candidates	82.9%	61.3%	49.7%	51.8%	52.2%	77.7%

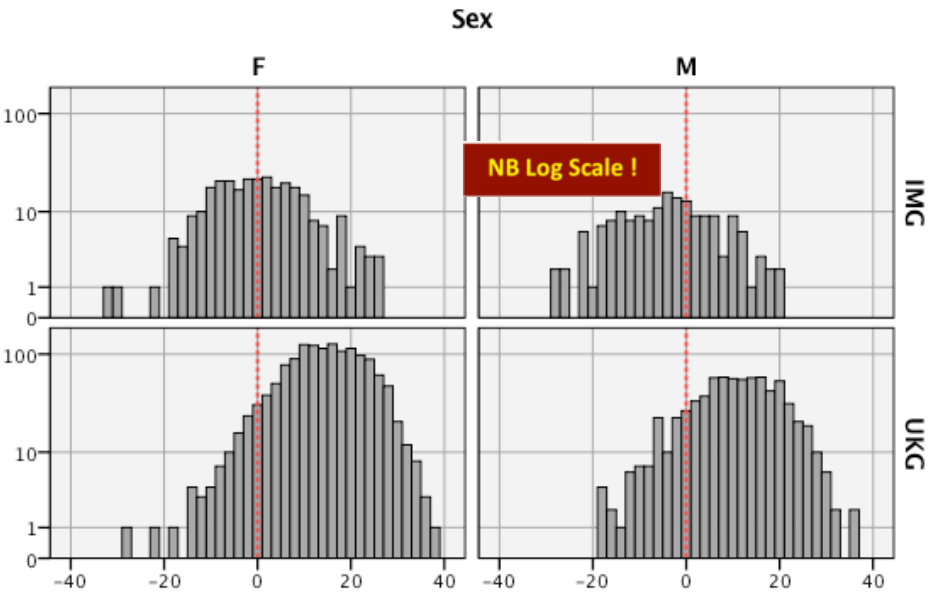
C: Results by Individual Demographics (Candidates on first attempt, only)

1. Result and scores by candidate sex, within source of PMQ

NB 243 Candidates did not declare their sex: they are excluded from this section of the report

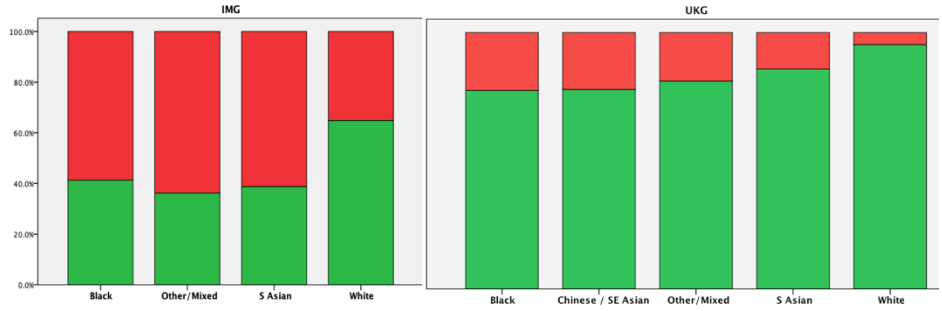
PMQ	Candidate Sex	N Candidates	Result	Scaled Mark			
			Pass Rate	Min	Max	Mean	SD
IMG	Female	283	49.5%	-32	26	-0.07	9.96
	Male	168	35.1%	-29	19	-4.31	10.45
	Total	451	44.1%	-32	26	-1.65	10.34
UKG	Female	1408	93.9%	-29	38	13.87	8.89
	Male	718	86.5%	-19	35	10.14	9.48
	Total	2126	91.4%	-29	38	12.61	9.26
Total	Female	1691	86.5%	-32	38	11.54	10.46
	Male	886	76.7%	-29	35	7.40	11.21
	Total	2577	83.1%	-32	38	10.11	10.90



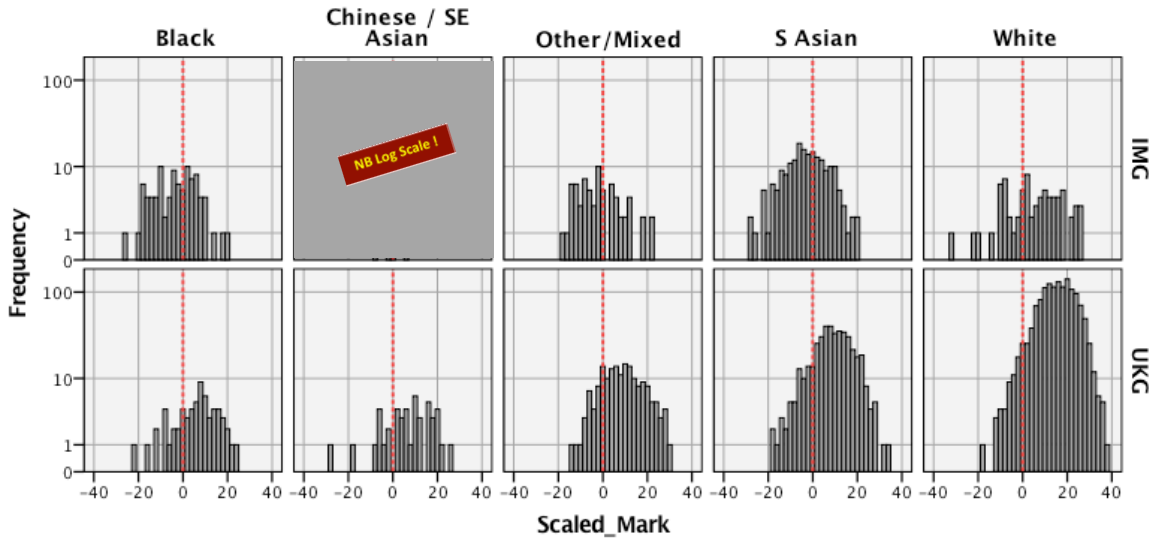


2. Result by classified candidate ethnicity, and separated by source of primary medical qualification, UK/non-UK graduates (1st attempt)

NB 291 First attempt candidates did not declare their ethnicity: they are excluded from this section of the report

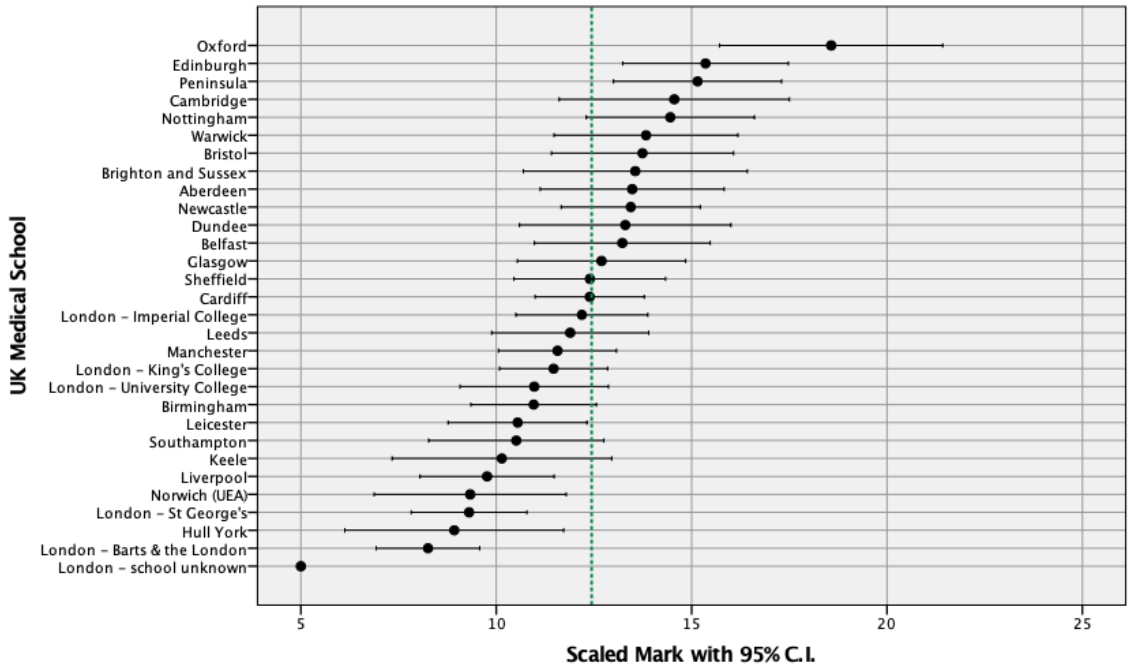


Source of PMQ	Ethnic Group	N Candidates	Result: Pass Rate	Scaled Mark			
				Min.	Max.	Mean	SD
IMG	Black	92	41.3%	-26	19	-3.61	9.31
	Chinese / SE Asian	<5	-	-	-	-	-
	Other/Mixed	69	36.2%	-18	22	-2.22	9.37
	S Asian	191	38.7%	-29	19	-3.31	9.68
	All BME	*356*	*39.0%*	*-29*	*22*	*-3.16*	*9.47*
	White	74	64.9%	-32	26	4.28	12.36
	Total IMG	430	43.5%	-32	26	-1.88	10.40
UKG	Black	62	77.4%	-22	23	5.39	9.54
	Chinese / SE Asian	45	77.8%	-29	26	6.53	11.05
	Other/Mixed	169	81.1%	-14	30	8.21	9.35
	S Asian	422	85.8%	-19	33	8.59	8.97
	All BME	*698*	*83.4%*	-29	33	8.08	9.29
	White	1401	95.3%	*-19*	*38*	*14.95*	*8.36*
	Total UKG	2099	91.3%	-29	38	12.66	9.26
All Candidates	Black	154	55.8%	-26	23	0.01	10.36
	Chinese / SE Asian	49	75.5%	-29	26	5.86	10.92
	Other/Mixed	238	68.1%	-18	30	5.19	10.47
	S Asian	613	71.1%	-29	33	4.88	10.72
	All BME	*1054*	*68.4%*	*-29*	*33*	*4.48*	*10.75*
	White	1475	93.8%	-32	38	14.41	8.91
	Total All Graduates	2529	83.2%	-32	38	10.19	10.93



3. CSA Result and Scores by PMQ - UK medical school and IMG Country (1st attempt)

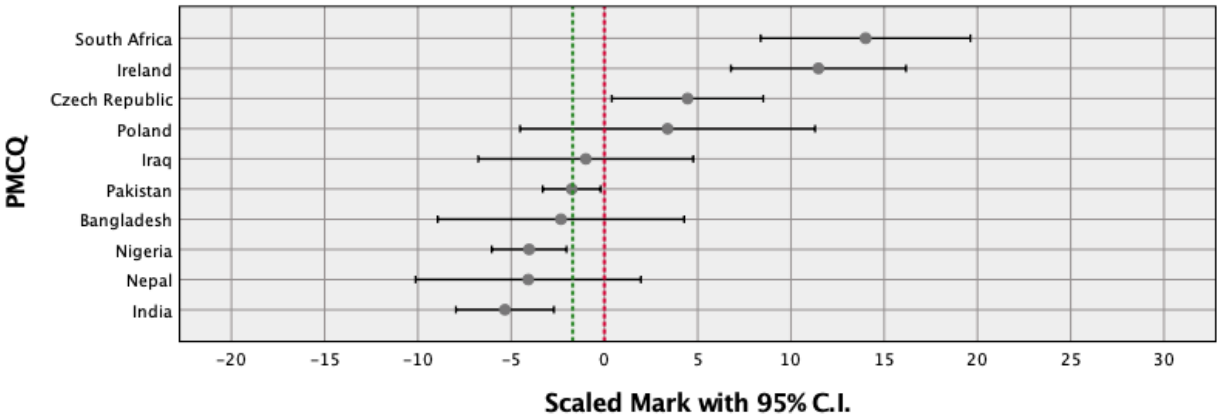
UK Graduates (by medical school)



UK Medical School	N Candidates	Percent of All UK	Pass Rate	Scaled Mark			
				Minimum	Maximum	Mean	SD
Aberdeen	69	2.9	95.7%	-19	38	13.91	10.03
Belfast	71	3.0	95.8%	-9	35	14.31	8.83
Birmingham	139	5.9	87.1%	-21	33	11.71	10.64
Brighton and Sussex	40	1.7	92.5%	-5	35	13.75	9.57
Bristol	58	2.5	98.3%	-3	32	15.62	8.29
Cambridge	26	1.1	96.2%	-4	30	14.77	7.51
Cardiff	142	6.1	90.1%	-19	31	12.70	8.95
Dundee	47	2.0	95.7%	-8	33	14.94	8.48
Edinburgh	57	2.4	98.2%	-7	34	15.51	8.21
Glasgow	67	2.9	95.5%	-11	33	13.12	9.06
Hull York	55	2.3	89.1%	-9	29	11.36	9.08
Keele	40	1.7	92.5%	-14	30	10.30	9.12
Leeds	76	3.2	90.8%	-13	31	12.63	9.03
Leicester	94	4.0	87.2%	-17	32	10.59	9.62
Liverpool	112	4.8	84.8%	-15	31	10.30	10.14
London - Barts & the London	150	6.4	88.7%	-17	28	8.98	8.82
London - Imperial College	95	4.1	93.7%	-11	30	12.43	8.41
London - King's College	141	6.0	92.2%	-29	31	11.40	8.84
London - school unknown	1	0.0	100.0%	5	5	5.00	-
London - St George's	103	4.4	87.4%	-14	26	9.71	7.85
London - University College	94	4.0	87.2%	-19	35	11.60	10.08
Manchester	139	5.9	90.6%	-13	33	13.06	9.15
Newcastle	93	4.0	90.3%	-15	29	13.69	9.46
Norwich (UEA)	54	2.3	85.2%	-22	25	9.89	9.75
Nottingham	83	3.5	88.0%	-18	32	14.89	10.18
Oxford	28	1.2	100.0%	1	32	18.57	7.37
Peninsula	63	2.7	96.8%	-4	35	15.62	8.38
Sheffield	82	3.5	89.0%	-8	31	12.84	9.21
Southampton	69	2.9	88.4%	-12	34	12.10	9.89
Warwick	53	2.3	94.3%	-2	35	14.87	8.37
Total	2341	100.0	90.8%	-29	38	12.44	9.36

Non-UK Graduates (by country; data only shown for countries with ≥5 passing candidates: 1st attempt)

(Green line shows mean for all IMG candidates on first attempt)

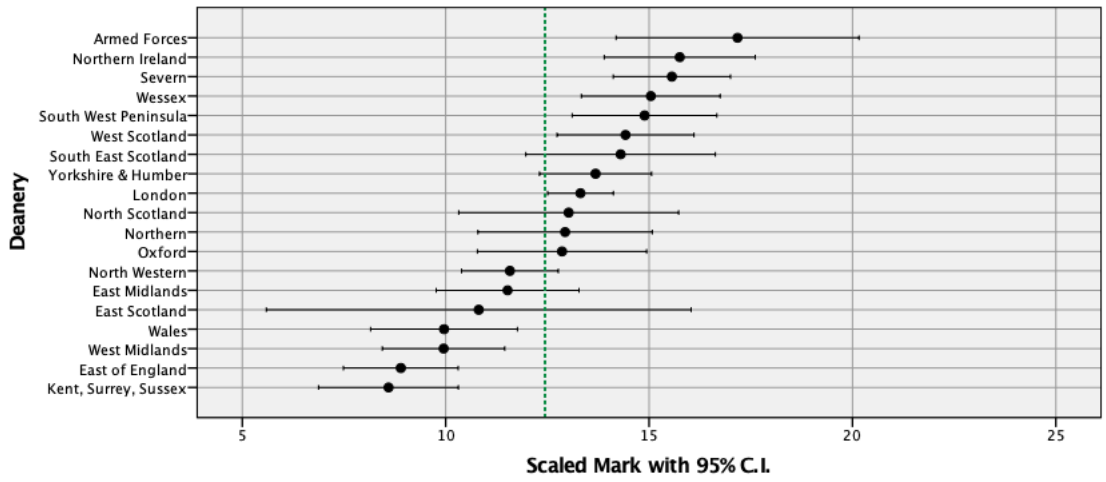


Country of Primary Medical Qualification	N Candidates	N Passing Candidates	Pass Rate	Scaled Mark			
				Minimum	Maximum	Mean	SD
Bangladesh	12	7	58.3%	-27	12	-2.33	10.40
Czech Republic	22	12	54.5%	-6	22	4.45	9.16
India	68	22	32.4%	-29	22	-5.34	10.85
Iraq	18	8	44.4%	-32	17	-1	11.59
Ireland	19	17	89.5%	-15	26	11.47	9.74
Nepal	12	5	41.7%	-17	12	-4.08	9.51
Nigeria	78	31	39.7%	-17	12	-4.08	9.51
Pakistan	100	45	45.0%	-23	16	-1.76	7.82
Poland	13	8	61.5%	-18	23	3.38	13.09
South Africa	5	5	100.0%	7	18	14	4.53
All other countries	132	52	39.4%	-	-	-	-
Total	479	212	44.3%	-32	26	-1.73	10.40

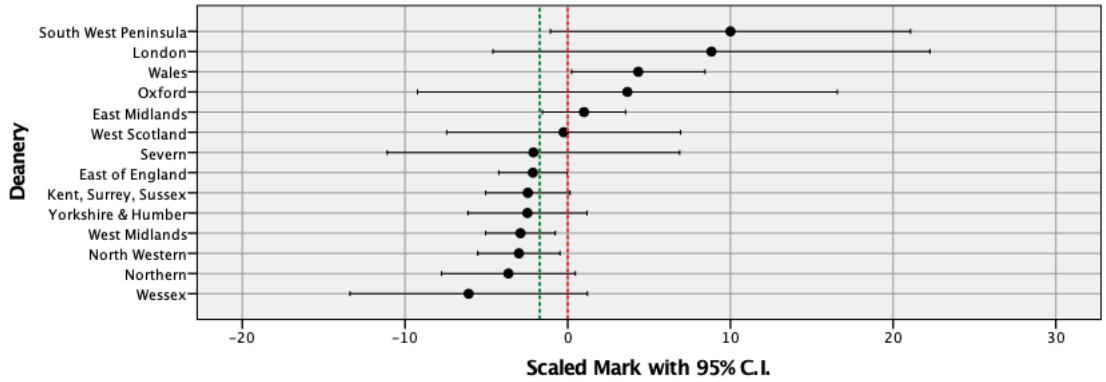
D: Performance by Training Deanery/LETB

1. Error bar graphs of Candidate Scores by Deanery, overall, and for first attempts by source of PMQ

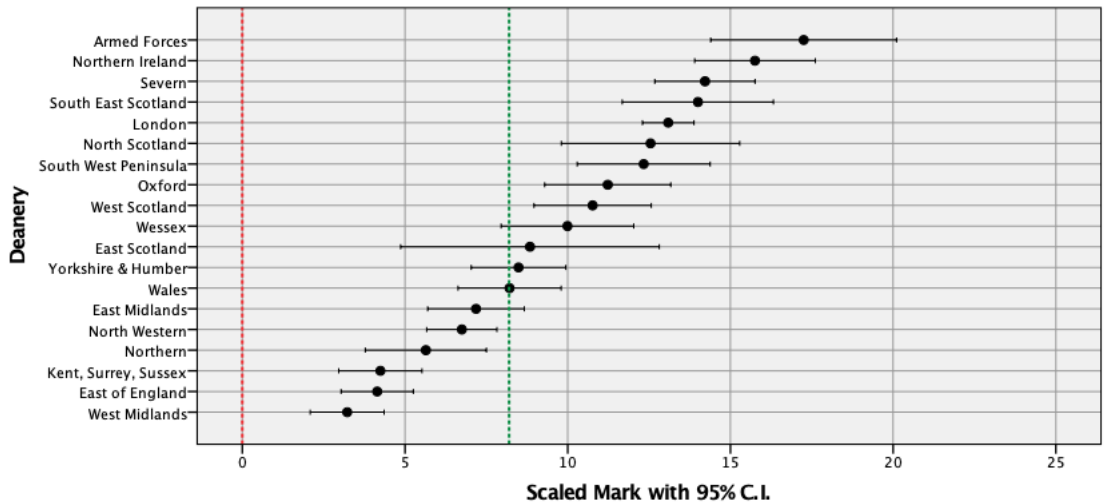
UK Graduates, First Attempt



Non-UK Graduates, First Attempt



All Graduates, All Attempts



E: Summary of CSA Feedback Statements

The table gives the prevalence of the numbered feedback statements given by examiners to individual candidates' case performances, by the main two candidate PMQ groups.

The column of figures shows the percentage of the total of all cases which attracted that feedback comment: the feedback comments have then been sorted in order of prevalence for the two groups and those applying to more than 5% of candidates are highlighted.

UK Graduates	All Candidates: percentage of all cases seen
07: Does not develop a management plan reflecting knowledge of current best practice	**12%**
02: Does not recognise the issues or priorities in the consultation	**8%**
10: Does not demonstrate an awareness of management of risk or make the patient aware of relative risks of different options	**7%**
06: Does not make the correct working diagnosis or identify an appropriate range of differential possibilities	**6%**
08: Does not show appropriate use of resources, including aspects of budgetary governance	**6%**
03: Shows poor time management	5%
04: Does not identify abnormal findings or results or fails to recognise their implications	5%
15: Does not develop a shared management plan, demonstrating an ability to work in partnership with the patient	5%
05: Does not undertake physical examination competently, or use instruments proficiently	4%
01: Disorganised / unstructured consultation	3%
09: Does not make adequate arrangements for follow-up and safety-netting	3%
12: Does not appear to develop rapport or show awareness of patient's agenda, health beliefs and preferences	3%
13: Poor active listening skills and use of cues. Consulting may appear formulaic, and lacks fluency	3%
14: Does not identify or use appropriate psychological or social information to place the problem in context	3%
16: Does not use language and/or explanations that are relevant and understandable to the patient	3%
11: Does not attempt to promote good health at opportune times in the consultation	1%

Non-UK Graduates	All Candidates: percentage of all cases seen
07: Does not develop a management plan reflecting knowledge of current best practice	**18%**
02: Does not recognise the issues or priorities in the consultation	**14%**
10: Does not demonstrate an awareness of management of risk or make the patient aware of relative risks of different options	**10%**
15: Does not develop a shared management plan, demonstrating an ability to work in partnership with the patient	**10%**
16: Does not use language and/or explanations that are relevant and understandable to the patient	**10%**
06: Does not make the correct working diagnosis or identify an appropriate range of differential possibilities	**9%**
08: Does not show appropriate use of resources, including aspects of budgetary governance	**9%**
03: Shows poor time management	**8%**
04: Does not identify abnormal findings or results or fails to recognise their implications	**8%**
01: Disorganised / unstructured consultation	**7%**
12: Does not appear to develop rapport or show awareness of patient's agenda, health beliefs and preferences	**7%**
05: Does not undertake physical examination competently, or use instruments proficiently	**6%**
13: Poor active listening skills and use of cues. Consulting may appear formulaic, and lacks fluency	5%
14: Does not identify or use appropriate psychological or social information to place the problem in context	5%
09: Does not make adequate arrangements for follow-up and safety-netting	4%
11: Does not attempt to promote good health at opportune times in the consultation	1%

5: Overview, Inter-component Statistics, and Test Quality Statistics

Overview of pass-rates in AKT and CSA by Protected Characteristics and source of PMQ

The following table summarises data from elsewhere in this report, bringing together crude pass rates of AKT and CSA candidates on their first attempt by 'protected characteristics' (as defined by the Equality Act (2010) and as then collected by the RCGP), also by source of their primary medical qualification. Please recall an earlier warning that many of these variables are confounded.

Candidate Performance 2017-2018 on First Attempt by 'Protected Characteristics' (also whether UK or International Graduate)

Cells with high proportions (5%+) of missing data highlighted in red

Candidate Characteristic		AKT		CSA	
		Number Sitting	Pass Rate %	Number Sitting	Pass Rate %
Sex*	Male	725	**68.1%**	886	**76.7%**
	Female	1418	**78.1%**	1691	**86.5%**
Ethnicity**	BME	1181	**60.7%**	1054	**68.4%**
	White	1411	**86.8%**	1475	**93.8%**
Ethnicity*** (UK Graduates only)	BME	682	**75.5%**	698	**83.4%**
	White	1325	**89.0%**	1401	**95.3%**
PMQ Source	UK Graduate	2315	83.8%	2341	90.8%
	IMG	652	42.3%	479	44.3%
Disability	Reported****	190	68.4%	201	73.1%
	None reported	2777	75.2%	2619	83.7%
All Candidates		**2967**	**74.7%**	**2820**	**82.9%**

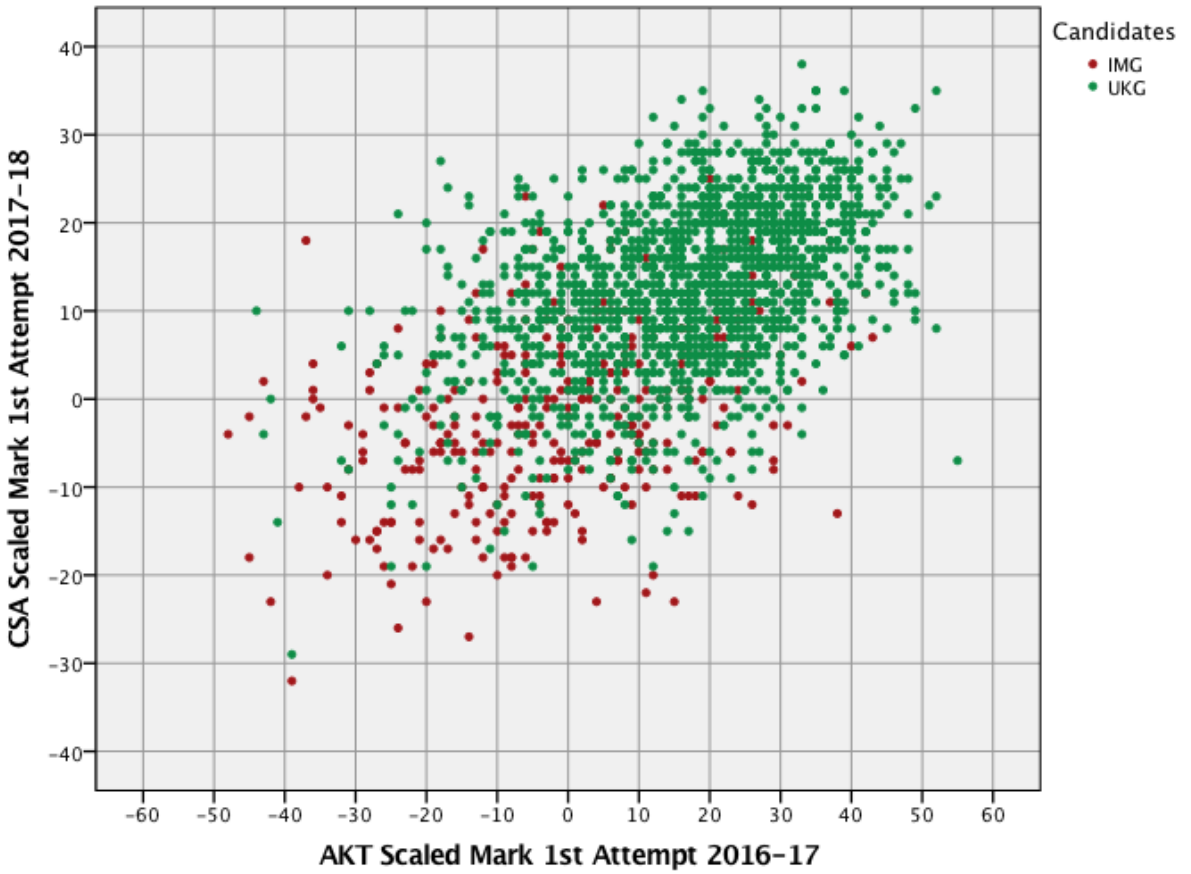
Missing data; notes

* AKT: 824 (27.8%); CSA: 243 (8.6%) - no information
** AKT: 375 (12.6%); CSA: 291 (10.3%) - no information
*** AKT: 308 (13.3%); CSA: 242 (10.3%) - no information
**** SLD has highest prevalence = 76.0% of all disabilities in AKT, 78.6% of all in CSA

Inter-component Statistics

Currently it is only possible to make comparisons between the performance of candidates between the AKT and the CSA, as the Workplace-Based Assessment data are not readily accessible for comparative analysis. Most candidates make their first attempt at the AKT in ST2 and at the CSA at some point in ST3.

The accompanying scatterplot shows the most recent analysis from these datasets showing the relationship between the AKT and CSA scores of 1960 candidates taking each component for the first time, the AKT in 2016-17 and the CSA in 2017-2018. Overall, the correlation between the two is 0.54 (*cf* last four years 0.51, 0.52, 0.52 and 0.53), this suggesting shared variance this year of 29%.



The chart contrasts UK and non-UK graduates' performance: the relationship between the two scores is not greatly dissimilar for the two groups: UKG r = 0.44, r^2 = 0.20; IMG r = 0.41, r^2 = 0.17.

Test Quality Information: AKT

For the diets of the AKT, the reliability, as evidenced by the alpha co-efficient, and the accuracy, indicated by the measurement error estimate, or SEm, is straightforwardly calculated. Occasionally, underperforming items need to be removed from the calculated scores. The current year's quality statistics – similar to all those of recent years – are shown in the accompanying table.

AKT Delivery	No. of Items Scored	Alpha	SEm
October 2017	200	0.89	2.9%
January 2018	200	0.91	2.9%
April 2018	198	0.92	2.9%

These psychometric quality indicators continue to describe a multi-choice assessment which is performing to an excellent standard.

Test Quality Information: CSA

Estimating and representing the reliability of a clinical test of the form of the CSA is more difficult using classical psychometric test theory. In a multi-choice test such as the AKT, all the candidates have to respond to all the test items, which are exactly the same for everyone (1000+ candidates/diet). The 'items' (stations or cases) in the CSA are only the same for a day at a time (max 78 candidates), and indeed there are different sets of examiners on each of the three circuits—so there is only exact comparability for 26 candidates. This is of course not at all unusual in a high stakes clinical test, where a variety of imperatives conflict—e.g. item consistency *vs* test security and fairness. The number taking the CSA moreover varies considerably between diets.

Thus the quality of the CSA is monitored qualitatively as well as quantitatively, the latter at a number of levels of detail with different objectives—but with reliability and fairness always foremost in mind. Qualitative monitoring involves 1¼-hour-long

examiner, role-player and case standardization sessions at the beginning of each day, and examiner performance monitoring, quality assurance and training.

Reliability (e.g. an alpha coefficient) is explored with reference to both days and circuits, towards case, palette and examiner monitoring and development. Daily alpha coefficients—probably something which it is fair to assess, combining circuits across examiners—give a reasonable indication of reliability, but they are also very dependent on the variance in candidate ability. Analyses show that the range and variance in ability of candidate groups can vary greatly day on day, despite administrative measures towards harmonisation: here, ability can be estimated not just from a rather self-fulfilling analysis of CSA performance, but by looking at predictive surrogates (eg degree origin) and correlates (eg AKT performance). Finally, the alpha coefficient is estimated on the basis of scores which have relatively limited variance (0-9 on a case, currently), tending to minimise the values. As a result, the test measurement error, indicated by the standard error of measurement, may be a more appropriate overall indicator of quality. That said, current and recent quality statistics – alpha and the SEm – appear in the accompanying table.

Year	Alpha: range across days	Mean alpha across days	SEm: range across days	Mean SEm across days
2010-2011	0.64 – 0.86	0.77	5.1 % - 5.4 %	5.2%
2011-2012	0.64 – 0.86	0.77	4.5 % - 5.6 %	5.1%
2012-2013	0.64 – 0.87	0.78	4.3 % - 5.4 %	5.0%
2013-2014	0.56 – 0.85	0.74	4.4 % - 5.6 %	4.9%
2014-2015	0.55 – 0.85	0.72	4.4% - 5.2%	4.8%
2015-2016	0.55 – 0.82	0.72	4.4% - 5.4%	4.7%
2016-2017	0.49 – 0.86	0.71	4.5% - 5.2%	4.8%
2017-2018	0.63 – 0.85	0.74	4.3% - 5.3%	4.7%

* * *