MRCGP Statistics 2014-2015

Annual Report
(August 2014 – July 2015)
on the results of the
AKT and CSA Assessments

Introduction

This Report relates to the formal MRCGP assessments conducted in the academical year 2014-15. It presents the statistics that summarise 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 each.

The Report first presents an updated summary of both of these assessments and their standard-setting procedures, to orient new readers. Full background information on the MRCGP, the AKT and the CSA (and 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/Year of Primary Medical Qualification, Sex, Ethnic Group, Training Deanery, UK Medical School
- Main Results: Overall and by Exam Diet and Attempt
- Results by Individual Demographics (candidates on first attempt)
- Overview of Results by LETB/Training Deanery – a more detailed version is provided confidentially to the LETBs/Deaneries

And in addition:

- AKT mean sub-component scores, by candidate year of training
- CSA feedback statements for all candidates: aggregate summaries by place of PMQ

Some additional tables conclude the report which 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 accuracy and reliability. Candidates self-report their demographic variables, but wherever possible these are checked against the GMC's List of Registered Medical Practitioners. The 'attempt' is from the College's records.

This 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) Confounding of variables: as in previous years, there are many significant differences between sub-groups on their performance on both the tests reported, for example by sex and country of primary medical training. But variables may well be confounded with others, to potential confusion of the unwary.

b) As increasing use is made by both overseas and UK candidates of **medical schools in countries other than those of 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, after Pakistani and Indian nationals, British nationals are the third commonest group (by nationality) to sit the PLAB assessments.

Acknowledgements:

I thank the two Clinical Assessment Leads (currently, Carol Blow, AKT and Nicki Williams CSA) for their support in preparing this report. They scanned the draft version – as did the Chief Examiner, Pauline Foreman, to whom I am also grateful.

Richard Wakeford
December 2015

CONTENTS

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 separately passed:

a. ***Applied Knowledge Test*** *(multi-choice computer-presented 'paper', available in test centres throughout the UK)*
b. ***Clinical Skills Assessment*** *(an integrated test of clinical and consulting skills, taken in a single assessment centre)*
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 only available to doctors undergoing GP training within the UK state health care system (though GP 'returners' may take the AKT). 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, being essentially formative, with candidate performance and development on them being reviewed towards a determination of progression annually by the Deaneries and not the College, are not covered by this report. 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, 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, 3 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 four formats: single best answer (including images and graphics), extended matching questions, completion of tables/algorithms, and a small number of 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 neither deducted 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. The standard takes account of the 'guessing factor' always present in multi-choice tests. 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 sometimes 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 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 (here, zero) to permit comparability.

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, or the fourth year of an extended training programme). 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 on to the curriculum with intended learning outcomes, 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 recommended to the College by 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 the certainty of their judgement on that case – in particular if they felt that overall the candidate may be on the borderline between pass and fail.

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 group which includes recently-qualified GPs, lay representatives, and key stakeholders from the training community.

The overall standard of the assessment is set by ensuring that 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 support mechanisms are in place: calibration exercises at the beginning of each day of the CSA; initial and on-going training of examiners; and an annual two-day examiners workshop 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 accuracy 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 statistic varies, too.

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

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.

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

Certain 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 log, as opposed to a linear, scale. The relevant charts have a small label to alert the reader, as shown here.

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 have the right to work in the UK), and 'rest of the world' graduates (RoW). Elsewhere, the two last groups (EEA and RoW) are combined into a single group – 'IMGs'; this is due to a general overall similarity in performance between the EEA and RoW groups, small numbers in the former, and increasing practical overlap of the two groups with both British and overseas (non–EEA) students taking EEA qualifications.

Note regarding the Interpretation of the AKT statistics

Some candidates appear twice (367) or three times (38) within this annual database on the AKT, because of retakes. Except in the Summary of Demographic Information, the statistics "for all candidates" aggregate all 3523 candidates' 3928 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. Readers may notice that figures in this report do not always concur precisely with those given in reports of AKT examinations on the College website. The latter normally show totals and pass rates for *all* AKT candidates, including some 'GP returners'. The figures in this report refer only to candidates 'in training' and thus eligible for the MRCGP.

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 (470), three times (59) or four times (3) within this database on the CSA, because of retakes. Except in the demographic Information, the statistics "for all candidates" aggregate all 3167 candidates' 3699 attempts in this period.

Data Inconsistencies: Caution

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, though major data fields have been checked by reference to the GMC's LRMP
- For the same reason, data are occasionally missing: most notably, 115 AKT candidate-attempts and 81 CSA candidate-attempts have no record for candidate ethnicity, which we are not able to check by reference to the LRMP
- 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

However, the College would as always appreciate learning of any serious apparent errors or omissions in the data reported (for which the compiler apologises in advance). Please email him at rew5@cam.ac.uk

3: AKT Statistics

A: Summary of Candidate Demographics

3523 candidates made a total of 3928 attempts at the AKT during 2014-15. The tables below show the origin of the 3523 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 age distribution of the candidates is proxied by their year of primary qualification, and then the background demographic characteristics of the 3523 are shown, by training LETB/Deanery. Subsequent tables report on attempts.

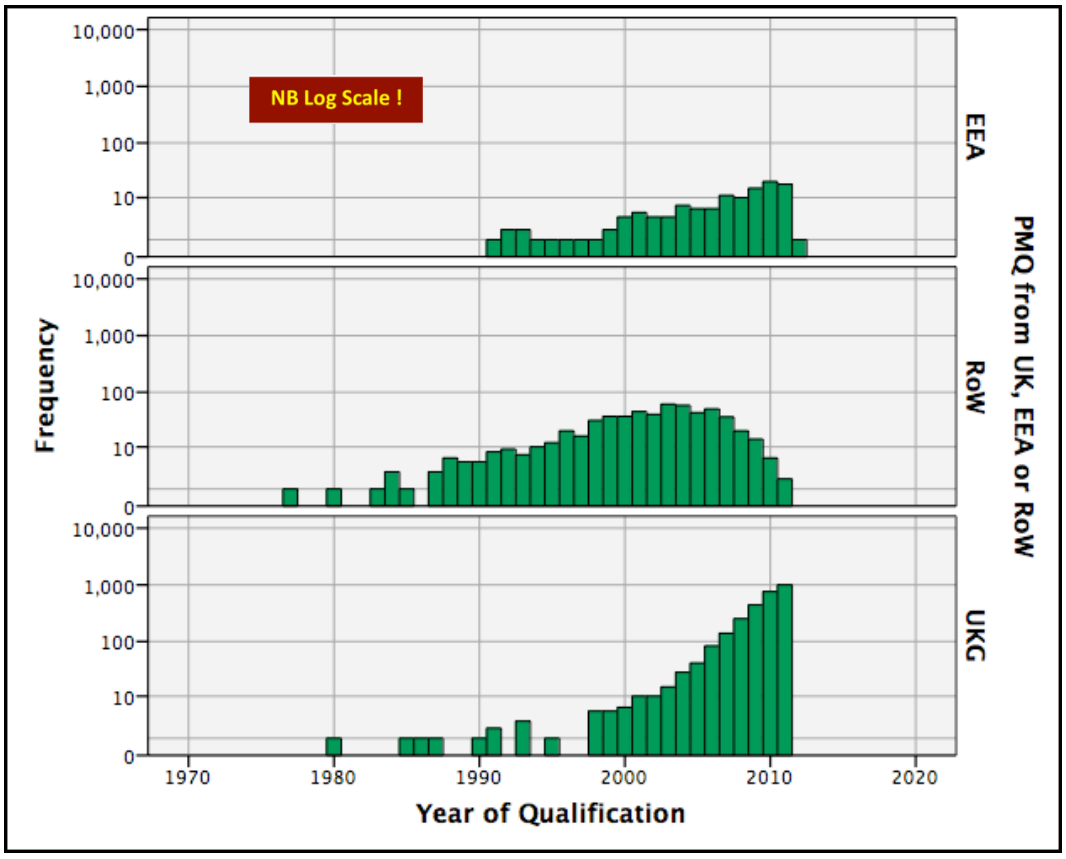
1. Source of Candidates' Primary Medical Qualification; year of qualification

All Graduates: from UK, EEA or Rest of the World		
Group	**N**	**%**
EEA Graduates	123	3.5
Graduates from Rest of World	588	16.7
UK Graduates	2812	79.8
Total	**3523**	**100.0**

EEA Graduates		
Country of PMQ	**N**	**%**
Bulgaria	5	4.1
Czech Republic	36	29.3
Germany	6	4.9
Ireland	15	12.2
Poland	21	17.1
Romania	10	8.1
Other EEA Countries (< 5 each)	30	24.4
Total	**123**	**100.0**

Graduates from the Rest of the World		
Country of PMQ	**N**	**%**
Afghanistan	5	0.9
Bangladesh	16	2.7
Belarus	5	0.9
Egypt	13	2.2
Ghana	5	0.9
India	126	21.4
Iraq	19	3.2
Nepal	6	1.0
Nigeria	92	15.6
Pakistan	179	30.4
Philippines	6	1.0
Russia	14	2.4
South Africa	9	1.5
Sri Lanka	10	1.7
Sudan	11	1.9
Syria	7	1.2
Ukraine	10	1.7
Other Countries (< 5 each)	55	9.4
Total	**588**	**100.0**

Graduates of UK Medical Schools		
Medical School	**N**	**%**
Aberdeen	59	2.1
Belfast	56	2.0
Birmingham	167	5.9
Brighton and Sussex	48	1.7
Bristol	61	2.2
Cambridge	31	1.1
Dundee	47	1.7
Edinburgh	76	2.7
Glasgow	72	2.6
Hull York	54	1.9
Keele	20	0.7
Leeds	109	3.9
Leicester	108	3.8
Liverpool	140	5.0
London (School unknown)	5	0.2
London: Imperial College	112	4.0
London: King's College	186	6.6
London: St George's	125	4.4
London: University College	124	4.4
London: Barts & the London	156	5.5
Manchester	214	7.6
Newcastle	131	4.7
Norwich (UEA)	61	2.2
Nottingham	112	4.0
Oxford	27	1.0
Peninsula	72	2.6
Sheffield	111	3.9
Southampton	106	3.8
Wales (incl Cardiff & Swansea)	148	5.3
Warwick	74	2.6
Total	**2812**	**100.0**



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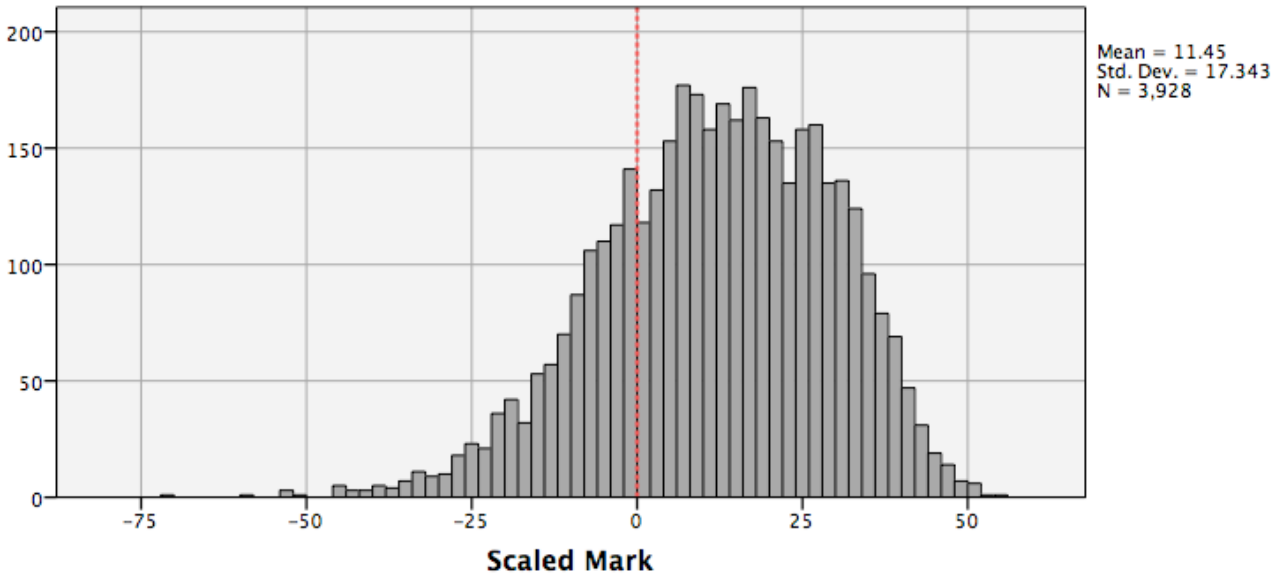
2. AKT Candidates' Place of PMQ, by Training LETB / Deanery

Deanery / LETB	Source of PMQ			Total
	UK	EEA	RoW	
Armed Forces (Defence)	25	0	0	**25**
	100.0%	0.0%	0.0%	**100.0%**
East Midlands	185	14	61	**260**
	71.2%	5.4%	23.5%	**100.0%**
East of England	208	26	76	**310**
	67.1%	8.4%	24.5%	**100.0%**
East Scotland	26	2	2	**30**
	86.7%	6.7%	6.7%	**100.0%**
Kent, Surrey, Sussex	222	12	41	**275**
	80.7%	4.4%	14.9%	**100.0%**
London	430	6	5	**441**
	97.5%	1.4%	1.1%	**100.0%**
Mersey	123	8	27	**158**
	77.8%	5.1%	17.1%	**100.0%**
North Scotland	42	2	8	**52**
	80.8%	3.8%	15.4%	**100.0%**
North Western	206	5	87	**298**
	69.1%	1.7%	29.2%	**100.0%**
Northern	94	10	60	**164**
	57.3%	6.1%	36.6%	**100.0%**
Northern Ireland	57	3	1	**61**
	93.4%	4.9%	1.6%	**100.0%**
Oxford	102	2	2	**106**
	96.2%	1.9%	1.9%	**100.0%**
Severn	137	4	1	**142**
	96.5%	2.8%	0.7%	**100.0%**
South East Scotland	57	1	2	**60**
	95.0%	1.7%	3.3%	**100.0%**
South West Peninsula	104	2	4	**110**
	94.5%	1.8%	3.6%	**100.0%**
Wales	115	1	15	**131**
	87.8%	0.8%	11.5%	**100.0%**
Wessex	124	3	18	**145**
	85.5%	2.1%	12.4%	**100.0%**
West Midlands	223	15	101	**339**
	65.8%	4.4%	29.8%	**100.0%**
West Scotland	102	3	42	**147**
	69.4%	2.0%	28.6%	**100.0%**
Yorkshire & The Humber	229	4	35	**268**
	85.4%	1.5%	13.1%	**100.0%**
Total	**2811**	**123**	**588**	**3522**
	79.8%	**3.5%**	**16.7%**	**100.0%**

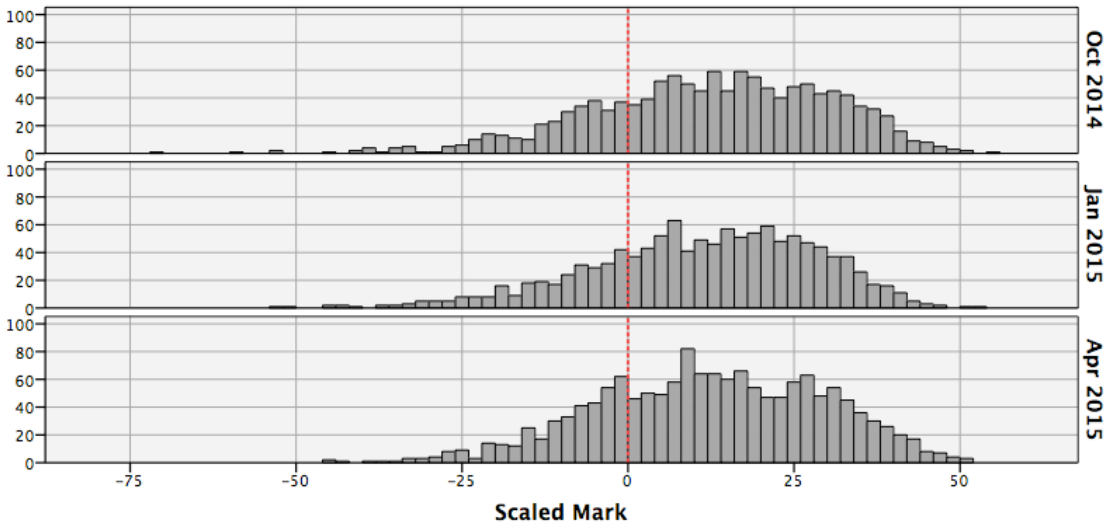
One candidate's Deanery information was missing

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)

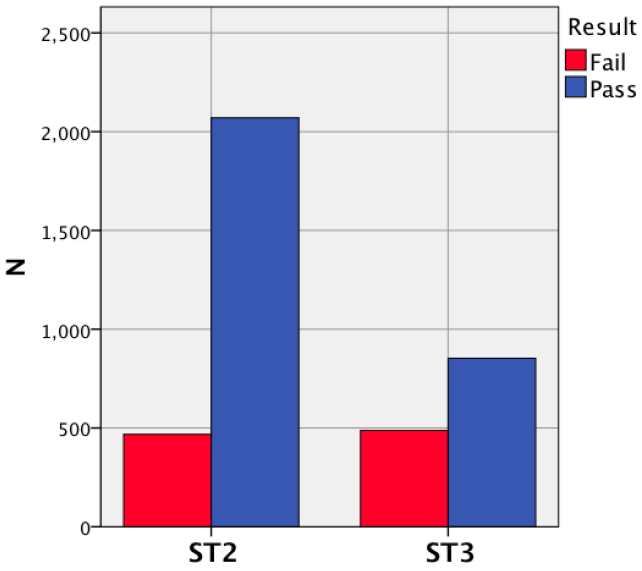


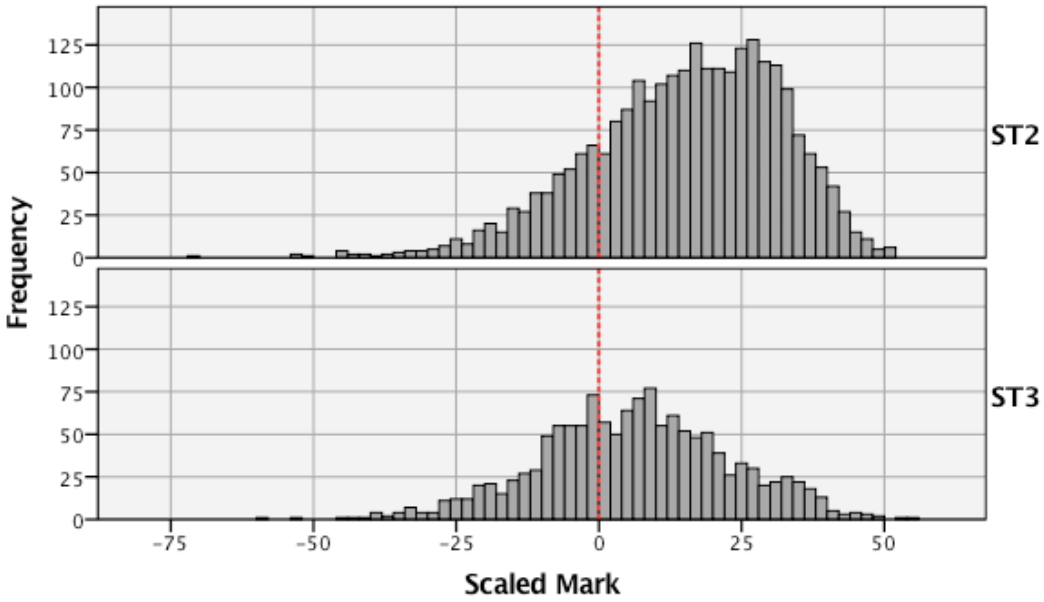
AKT Diet	Result		Total N	Scaled Mark			
	Fail	Pass		Min.	Max.	Mean	SD
AKT 22 October 2014	306	947	1253	-71	54	11.8	18.0
	24.4%	75.6%	100.0%				
AKT 23 January 2015	290	899	1189	-53	52	10.8	17.0
	24.4%	75.6%	100.0%				
AKT24 April 2015	380	1106	1486	-45	50	11.7	17.1
	25.6%	74.4%	100.0%				



2. AKT Result and scores, by Stage (Year) of Training (all candidates)

Training Year	Result		Total N	Scaled Mark			
	Fail	Pass		Min.	Max.	Mean	SD
ST 2	468	2070	2538	-71	51	14.6	16.8
	18.4%	81.6%	100.0%				
ST 3	487	853	1340	-60	54	5.6	16.7
	36.3%	63.7%	100.0%				
(Unknown)	21	29	50	-31	43	5.9	19.3
	42.0%	58.0%	100.0%				
All Candidates	976	2952	3928	-71	54	11.5	17.3
	24.8%	75.2%	100.0%				





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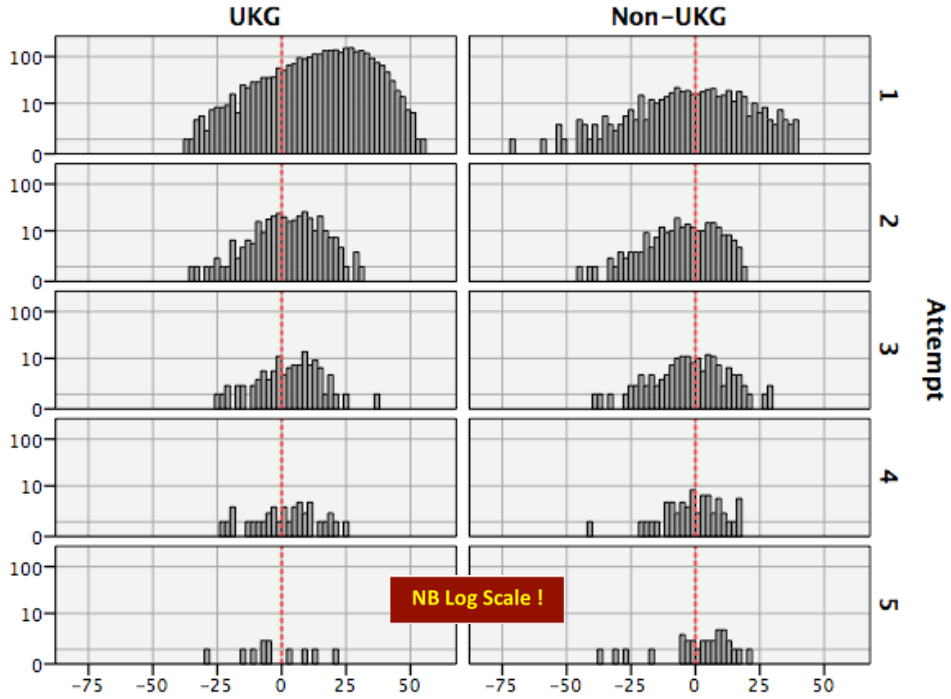
3. Result and scores, by attempt at the AKT: all graduates, and separated by source of primary medical qualification, UK/non-UK (all candidates)

UK or non-UK Graduate	Attempt	Result				Total N
		Fail		Pass		
		N	%	N	%	
UK Graduate	1	338	13.1%	2244	86.9%	2582
	2	119	39.4%	183	60.6%	302
	3	37	35.2%	68	64.8%	105
	4	15	39.5%	23	60.5%	38
	5	7	63.6%	4	36.4%	11
	6	2	66.7%	1	33.3%	3
	All	518	17.0%	2523	83.0%	3041
Non-UK Graduate	1	206	48.4%	220	51.6%	426
	2	128	59.0%	89	41.0%	217
	3	74	52.5%	67	47.5%	141
	4	30	50.0%	30	50.0%	60
	5	11	35.5%	20	64.5%	31
	6	3	60.0%	2	40.0%	5
	7	3	75.0%	1	25.0%	4
	8	3	100.0%	0	0.0%	3
	All	458	51.6%	429	48.4%	887
All	1	544	18.1%	2464	81.9%	3008
	2	247	47.6%	272	52.4%	519
	3	111	45.1%	135	54.9%	246
	4	45	45.9%	53	54.1%	98
	5	18	42.9%	24	57.1%	42
	6	5	62.5%	3	37.5%	8
	7	3	75.0%	1	25.0%	4
	8	3	100.0%	0	0.0%	3
	All	976	24.8%	2952	75.2%	3928



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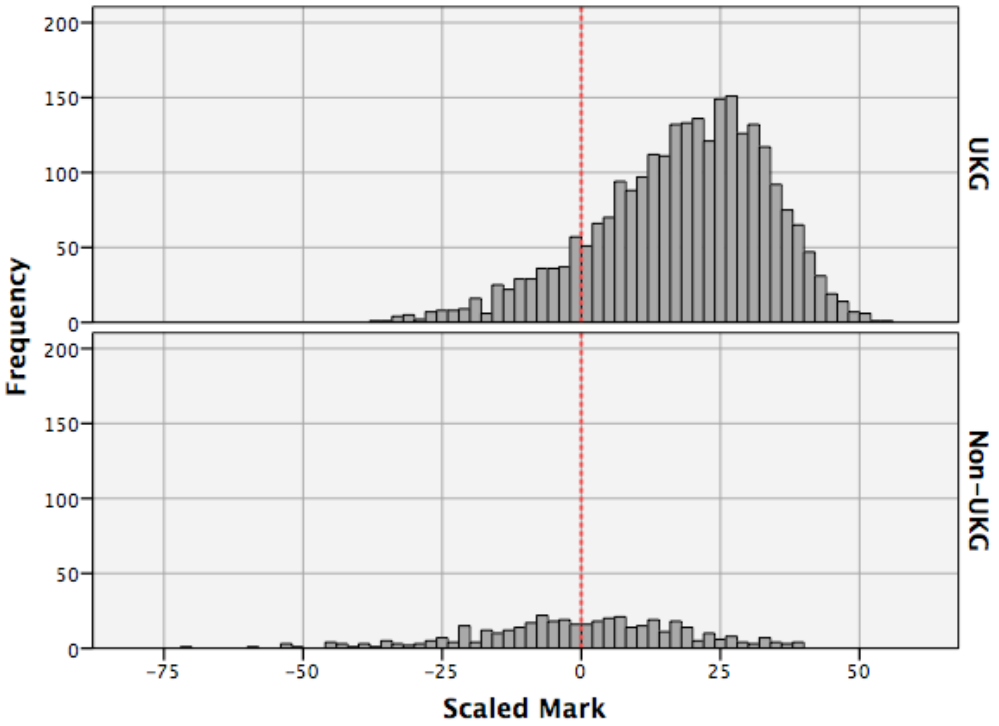
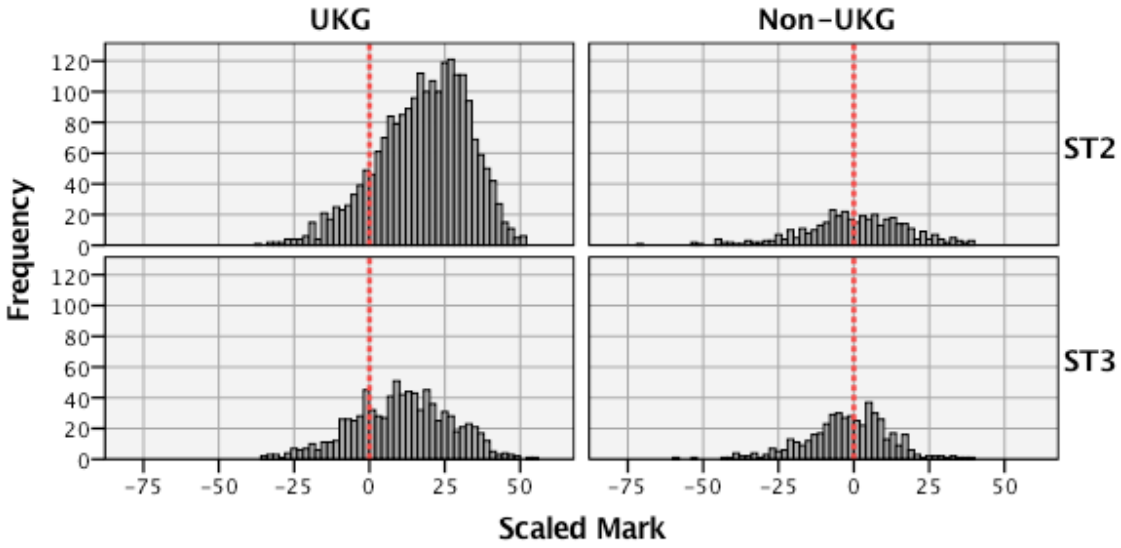
Attempt	UK or Non-UK Graduate	N	Min.	Max.	Mean	SD
1	UKG	2582	-37	54	17.57	15.41
	Non-UK G	426	-71	39	-0.64	18.91
2	UKG	302	-35	31	2.57	11.21
	Non-UK G	217	-45	18	-4.25	12.33
3	UKG	105	-25	36	3.48	10.62
	Non-UK G	141	-40	29	-1.70	12.43
4	UKG	38	-24	24	1.16	12.32
	Non-UK G	60	-42	17	-0.58	10.89
5+	UKG	14	-29	21	-2.00	12.67
	Non-UK G	43	-37	21	-1.63	12.85

4. Score on AKT on a) first attempt (linear scale) and b) by ST Year on first attempt by source of PMQ, UK and non-UK Graduates compared





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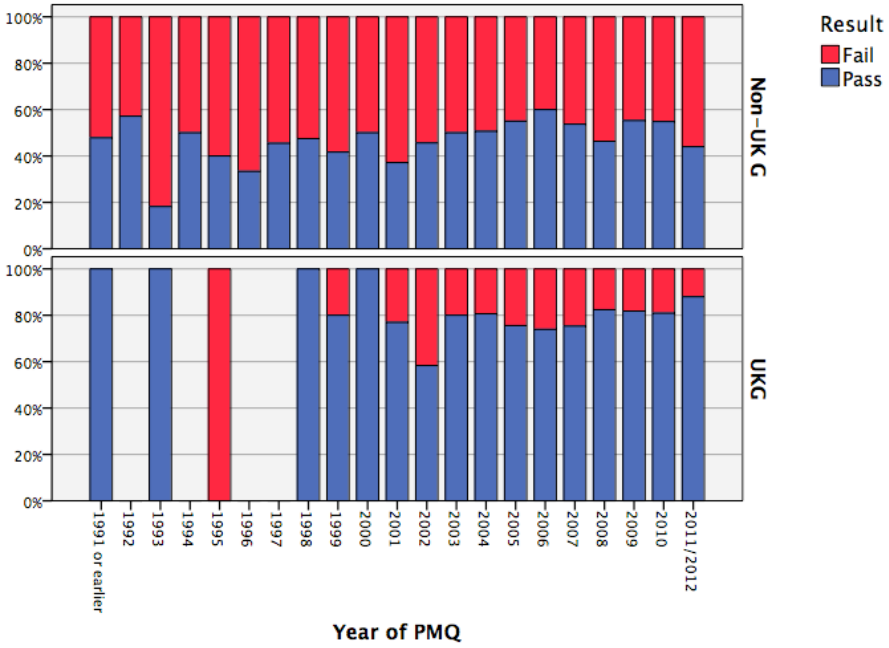
5. Numbers and result on AKT on first attempt by year of qualification for UK and non-UK Graduates

Year of PMQ	UKG	Non-UKG	Total
1991 or earlier	7	8	25
1992	-	5	5
1993	3	4	7
1994	-	8	8
1995	-	5	5
1996	-	12	12
1997	-	9	9
1998	5	20	25
1999	3	18	21
2000	5	23	28
2001	9	19	28
2002	8	26	34
2003	13	36	49
2004	24	41	65
2005	31	35	66
2006	75	36	111
2007	120	32	152
2008	212	23	235
2009	390	16	406
2010	676	20	696
2011/12	1001	20	1020
Total	2582	426	3008



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6. 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 2014-15, 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 a disabling medical condition and hearing impairment.

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

There were 252 disabled candidate-attempts at the AKT (see first, blue, table below), representing 6.4% of attempts. The second, green table shows the outcomes for these candidates. Multivariate analysis suggests that the amount of variance in the scaled mark attributable to 'disability / no disability' is 0.4%.

The overall number of successful attempts by candidates with disabilities was 171, or 68%.

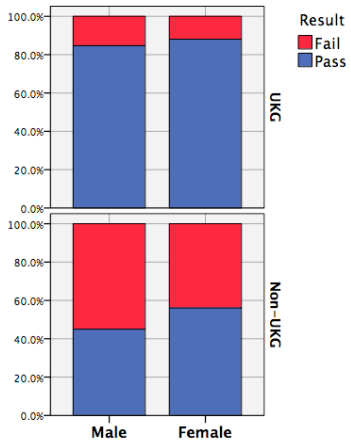
Candidates with Disabilities: Numbers Sitting								
Disability	AKT Attempt					PMQ		Total
	1	2	3	4	5+	UKG	Non-UK G	
Specific learning difficulty	90	28	31	22	23	146	48	194
Other Disabilities	26	14	7	5	6	39	19	58
All Disabilities	116	42	38	27	29	185	67	252
No Disabilities	2892	477	208	71	28	2856	820	3676
All Candidates	3008	519	246	98	57	3041	887	3928

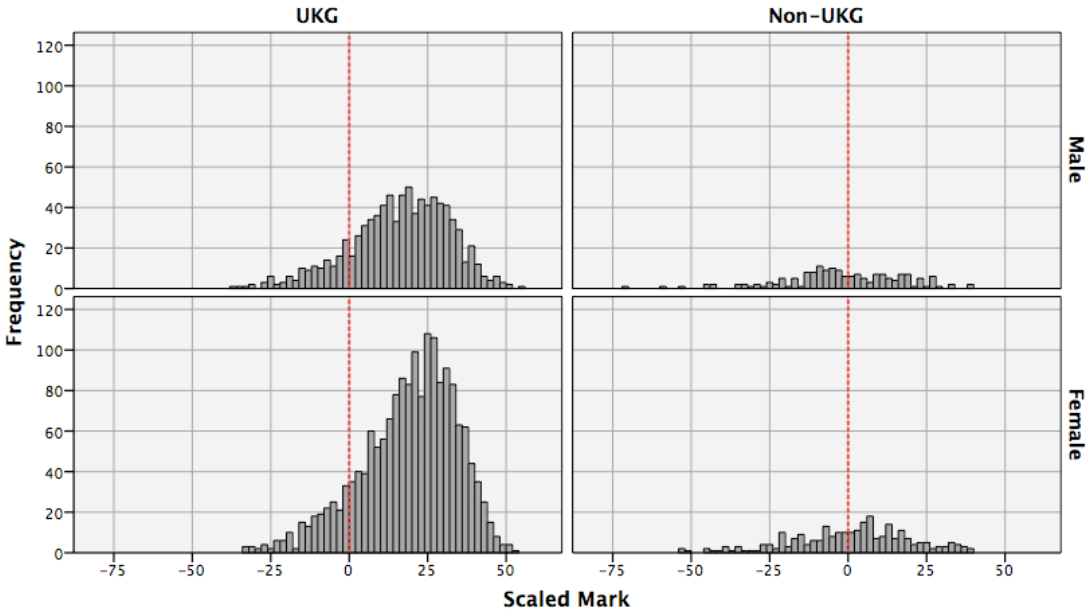
Candidates with Disabilities: Pass Rates (%)								
Disability	AKT Attempt					PMQ		Total
	1	2	3	4	5+	UKG	Non-UK G	
Specific learning difficulty	82.2	57.1	58.1	50.0	52.2	71.9	54.2	67.5
Other Disabilities	84.6	57.1	57.1	40.0	66.7	71.8	63.2	69.0
All Disabilities	82.8	57.1	57.9	48.1	55.2	71.9	56.7	67.9
No Disabilities	81.9	52.0	54.3	56.3	42.9	83.7	47.7	75.7
All Candidates	81.9	52.4	54.9	54.1	49.1	83.0	48.4	75.2

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)

Result by Candidate Sex						
Source of PMQ	Sex	Fail		Pass		Total
		N	%	N	%	N
UK Graduate	Male	134	15.3%	740	84.7%	874
	Female	204	11.9%	1504	88.1%	1708
	Total	338	13.1%	2244	86.9%	2582
Non-UK Graduate	Male	93	55.0%	76	45.0%	169
	Female	113	44.0%	144	56.0%	257
	Total	206	48.4%	220	51.6%	426
Total	Male	227	21.8%	816	78.2%	1043
	Female	317	16.1%	1648	83.9%	1965
	Total	544	18.1%	2464	81.9%	3008





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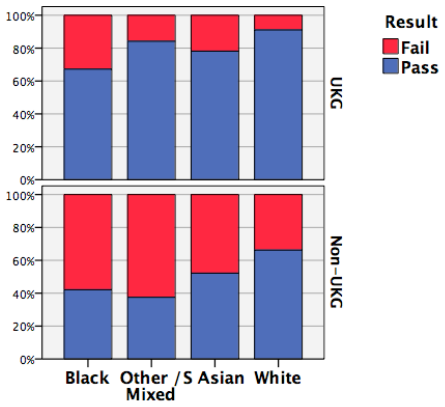
2. AKT Result by classified candidate ethnicity, and separated by source of primary medical qualification (1st attempt)

Result by Candidate Ethnicity						
UK or non-UK Graduate	Ethnic Group	Result				
		Fail		Pass		Total
		N	%	N	%	N
UK Graduate	Black	20	32.8%	41	67.2%	61
	Other / Mixed Ethnicity	32	15.8%	170	84.2%	202
	S Asian	124	21.8%	444	78.2%	568
	White	149	9.0%	1515	91.0%	1664
	Total	325	13.0%	2170	87.0%	2495
Non-UK Graduate	Black	44	57.9%	32	42.1%	76
	Other / Mixed Ethnicity	25	62.5%	15	37.5%	40
	S Asian	109	47.8%	119	52.2%	228
	White	24	33.8%	47	66.2%	71
	Total	202	48.7%	213	51.3%	415
All Graduates	Black	64	46.7%	73	53.3%	137
	Other / Mixed Ethnicity	57	23.6%	185	76.4%	242
	S Asian	233	29.3%	563	70.7%	796
	White	173	10.0%	1562	90.0%	1735
	Total	527	18.1%	2383	81.9%	2910



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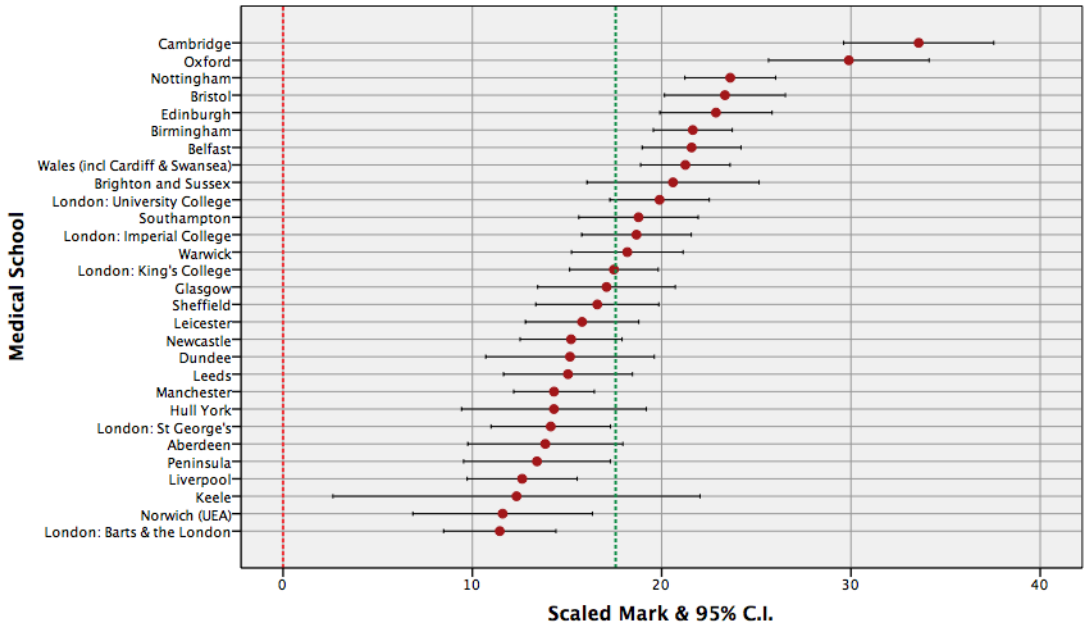
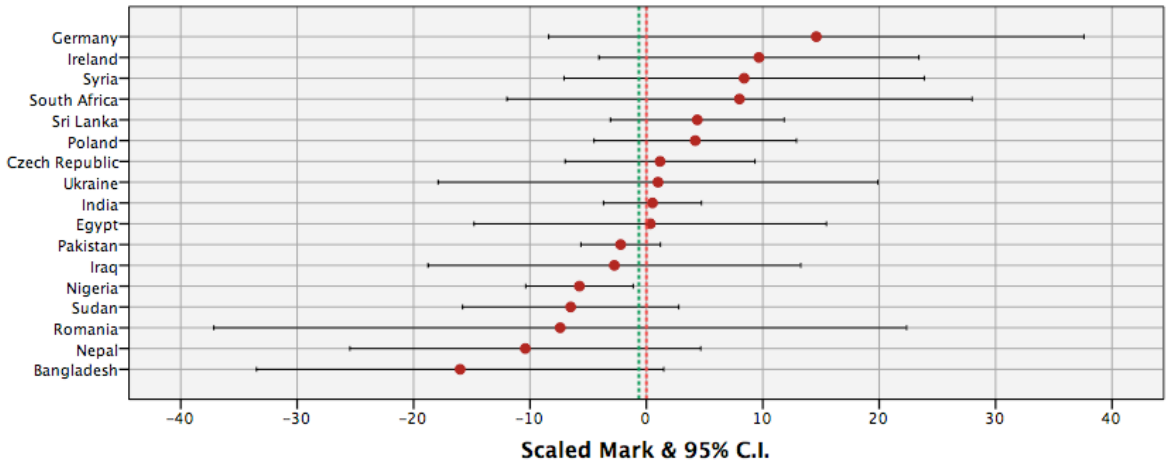
3. AKT Result and Scores by PMQ (medical school; country) on 1st attempt

UK Graduates



Performance by UK Medical School							
Medical School	N Cands	Scaled Mark				Result	
		Min	Max	Mean	SD	Fail	Pass
Aberdeen	55	-31	40	13.85	15.15	16.4%	83.6%
Belfast	55	-2	41	21.58	9.67	1.8%	98.2%
Birmingham	161	-19	51	21.65	13.39	6.8%	93.2%
Brighton and Sussex	40	-10	42	20.60	14.22	10.0%	90.0%
Bristol	61	-12	45	23.34	12.46	3.3%	96.7%
Cambridge	31	11	52	33.58	10.81	0.0%	100.0%
Dundee	44	-15	42	15.16	14.64	15.9%	84.1%
Edinburgh	76	-23	43	22.87	12.97	2.6%	97.4%
Glasgow	69	-16	50	17.09	15.12	15.9%	84.1%
Hull York	42	-18	37	14.31	15.66	19.0%	81.0%
Keele	18	-31	36	12.33	19.50	22.2%	77.8%
Leeds	97	-32	49	15.05	16.90	20.6%	79.4%
Leicester	98	-25	45	15.80	14.94	16.3%	83.7%
Liverpool	125	-31	50	12.63	16.42	21.6%	78.4%
London: Barts & the London	125	-36	45	11.45	16.76	21.6%	78.4%
London: Imperial College	100	-19	48	18.67	14.59	10.0%	90.0%
London: King's College	169	-33	47	17.48	15.40	13.6%	86.4%
London: St George's	113	-33	46	14.14	16.93	15.0%	85.0%
London: University College	118	-20	47	19.89	14.40	11.0%	89.0%
Manchester	191	-28	48	14.31	14.92	15.2%	84.8%
Newcastle	121	-33	42	15.21	14.96	14.0%	86.0%
Norwich (UEA)	50	-37	46	11.60	16.69	18.0%	82.0%
Nottingham	109	-12	47	23.62	12.63	5.5%	94.5%
Oxford	27	6	46	29.89	10.72	0.0%	100.0%
Peninsula	70	-27	36	13.41	16.25	21.4%	78.6%
Sheffield	100	-28	43	16.60	16.38	19.0%	81.0%
Southampton	99	-27	49	18.78	15.81	14.1%	85.9%
Wales (incl Cardiff & Swansea)	143	-30	54	21.25	14.30	8.4%	91.6%
Warwick	70	-13	41	18.19	12.37	7.1%	92.9%

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



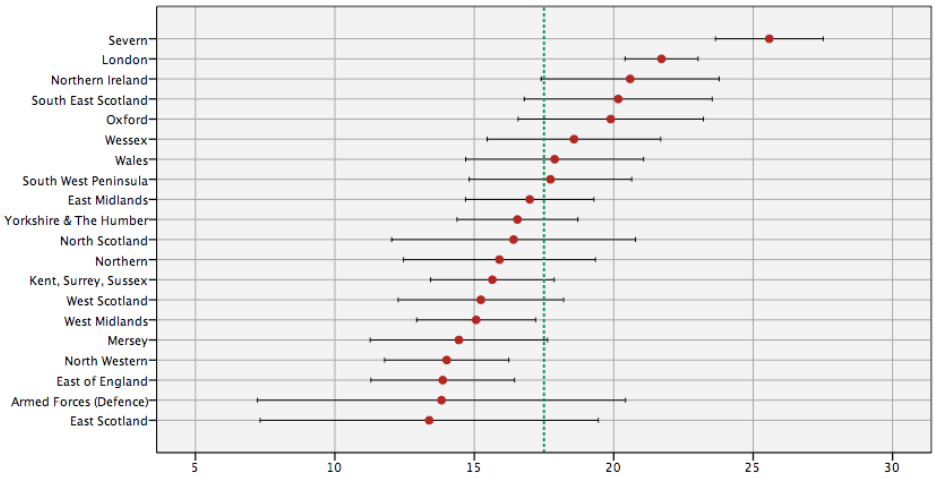
Performance by non-UK Country of PMQ							
PMQ Country	N Cands	Scaled Mark				Result	
		Min	Max	Mean	SD	Fail	Pass
Bangladesh	8	-45	11	-16.00	20.92	75.0%	25.0%
Czech Republic	23	-42	38	1.17	18.86	47.8%	52.2%
Egypt	9	-35	26	0.33	19.69	44.4%	55.6%
Germany	5	-14	32	14.60	18.52	20.0%	80.0%
India	82	-54	37	0.52	19.15	39.0%	61.0%
Iraq	8	-26	32	-2.75	19.15	62.5%	37.5%
Ireland	12	-25	39	9.67	21.64	41.7%	58.3%
Nepal	5	-26	5	-10.40	12.14	80.0%	20.0%
Nigeria	64	-60	29	-5.75	18.48	62.5%	37.5%
Pakistan	91	-52	38	-2.21	16.41	49.5%	50.5%
Poland	10	-10	23	4.20	12.16	40.0%	60.0%
Romania	5	-45	19	-7.40	23.97	60.0%	40.0%
South Africa	8	-34	36	8.00	23.90	37.5%	62.5%
Sri Lanka	8	-12	17	4.38	8.93	25.0%	75.0%
Sudan	10	-27	13	-6.50	12.98	70.0%	30.0%
Syria	5	-13	17	8.40	12.46	20.0%	80.0%
Ukraine	5	-14	25	1.00	15.22	60.0%	40.0%

D: Results by Training Deanery

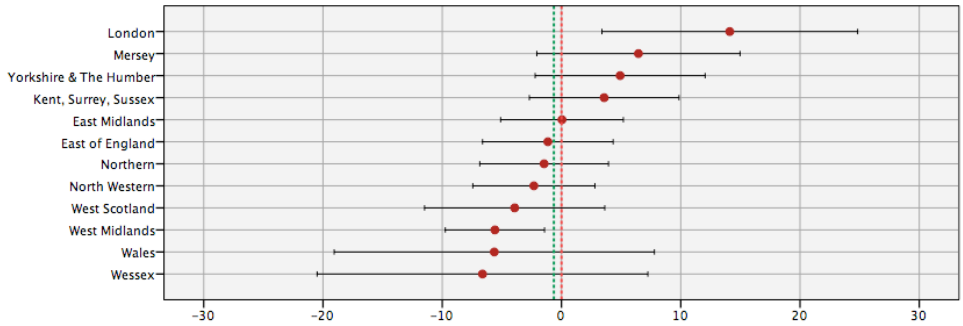
1. Error bar graphs of mean Candidate Scores by Deanery, by source of PMQ

(Markers indicate mean scores, bars indicate 95% C.I. Categories removed if 5 candidates or less.)

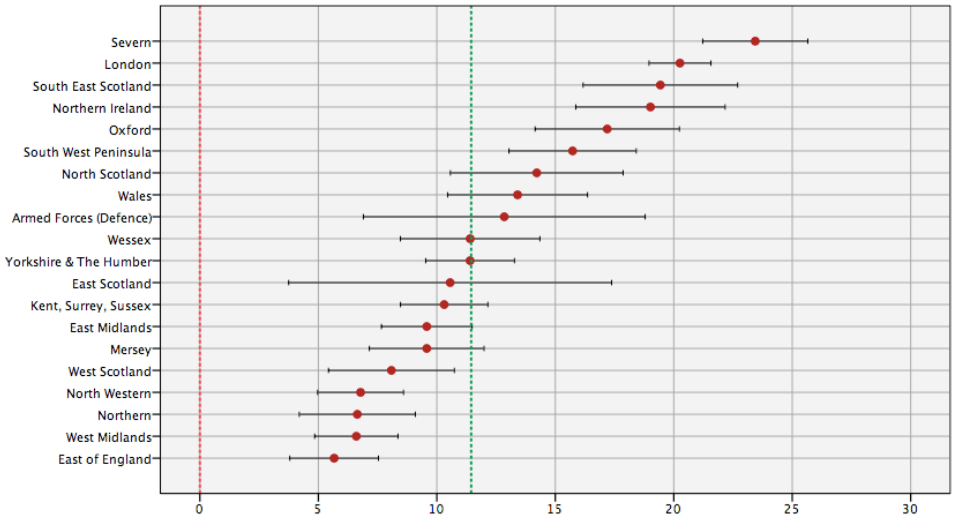
UK Graduates, First Attempt



Non-UK Graduates, First Attempt

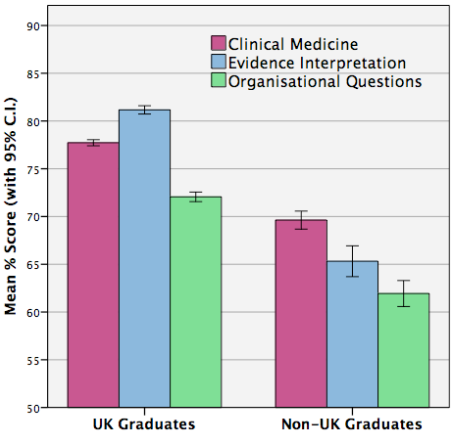


All Graduates, All Attempts



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
UKG	Clinical Medicine	2582	45.00	97.50	77.73	8.23
	Evidence Interpretation	2582	30.00	100.00	81.17	11.28
	Organisational Questions	2582	30.00	100.00	72.06	12.97
Non-UKG	Clinical_Medicine	426	30.00	90.00	69.62	9.90
	Evidence_Interpretation	426	15.00	100.00	65.32	16.96
	Organisational_Questions	426	20.00	95.00	61.94	14.27
ST 2	Clinical_Medicine	2538	30.00	97.50	76.56	8.80
	Evidence_Interpretation	2538	20.00	100.00	78.91	13.26
	Organisational_Questions	2538	20.00	100.00	69.13	13.77
ST 3	Clinical_Medicine	1340	33.13	97.50	71.58	8.53
	Evidence_Interpretation	1340	15.00	100.00	71.58	15.24
	Organisational_Questions	1340	25.00	100.00	69.79	13.55

2. Correlations between AKT section scores and total score: candidates on first attempt. UK graduates and IMGs compared

The size of the correlations between section scores and the total score shows the pattern of candidates' performance within the AKT; separated by place of PMQ, possible differences in the pattern could be seen as between UKGs and IMGs (such differences are in fact small).

Inter-Section Correlations: UKG Candidates on first attempt (n = 2582)				
	Evidence Interpretation	Organisational Questions	Clinical Medicine	Total Score
Evidence Interpretation (10% of items)	1.000	0.317	0.462	0.586
Organisational Questions (10% of items)	0.317	1.000	0.416	0.561
Clinical Medicine (80% of items)	0.462	0.416	1.000	0.977
Total Score	0.586	0.561	0.977	1.000

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

Inter-Section Correlations: IMG Candidates on first attempt (n = 426)				
	Evidence Interpretation	Organisational Questions	Clinical Medicine	Total Score
Evidence Interpretation (10% of items)	1.000	0.297	0.471	0.608
Organisational Questions (10% of items)	0.297	1.000	0.480	0.596
Clinical Medicine (80% of items)	0.471	0.480	1.000	0.977
Total Score	0.608	0.596	0.977	1.000

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

4: CSA Statistics

A: Summary of Candidate Demographics

3167 candidates made a total of 3699 attempts at the CSA during 2014-15. The tables below show the origin of the 3167 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. Candidates' year of qualification (PMQ) is also shown, as a surrogate for age. On the following page, the background demographic characteristics of the 3167 are shown, by training Deanery. Other tables report on the 3699 attempts.

1. Source of Primary Medical Qualification; year of qualification

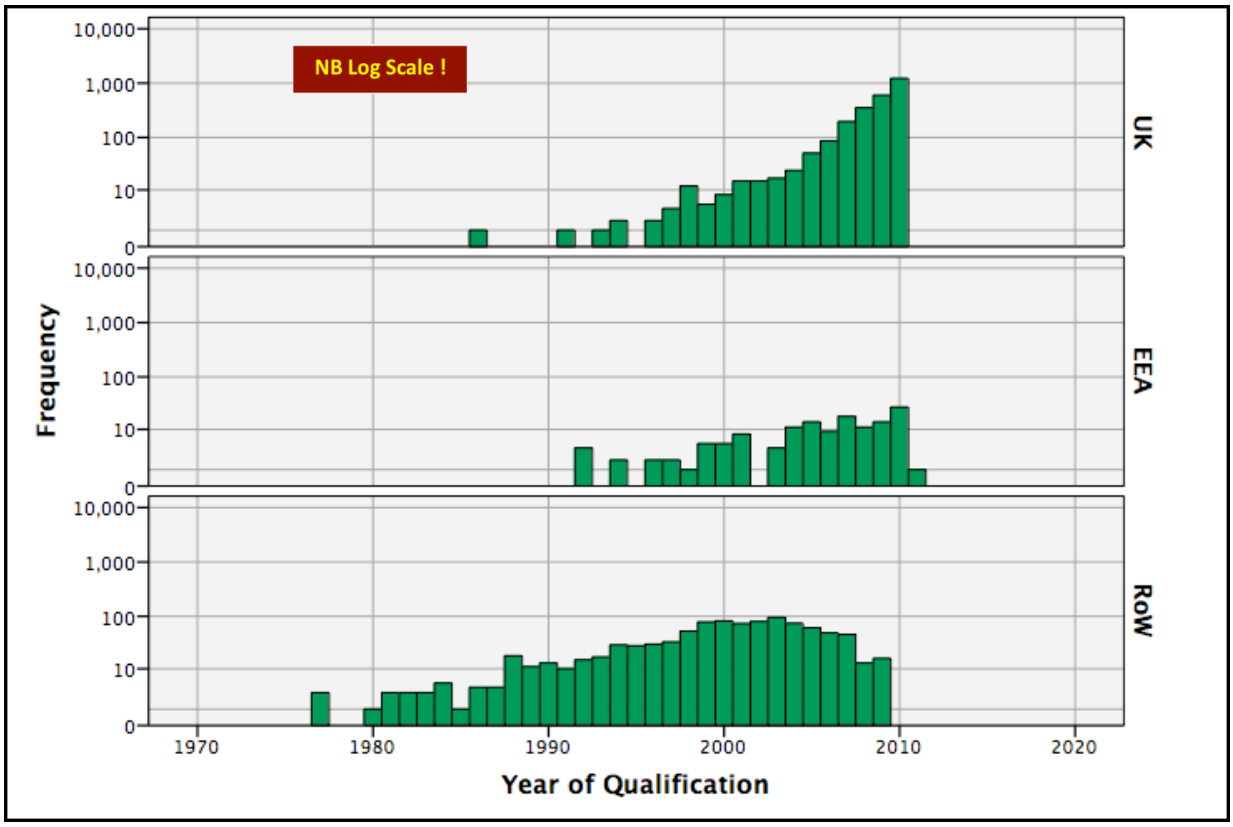
All Graduates: by major source		
Group	**N**	**%**
EEA Graduates	106	3.3
Graduates from Rest of World	648	20.5
UK Graduates	2413	76.2
Total	**3167**	**100.0**

EEA Graduates		
Country of PMQ	**N**	**%**
Bulgaria	5	4.7
Czech Republic	27	25.5
Germany	9	8.5
Ireland	15	14.2
Poland	18	17.0
Romania	13	12.3
Other EEA Countries (< 5 each)	19	17.9
Total	**106**	**100.0**

Graduates from the Rest of the World		
Country of PMQ	**N**	**%**
Bangladesh	18	2.8
Egypt	10	1.5
India	173	26.7
Iran	8	1.2
Iraq	29	4.5
Myanmar	5	0.8
Nigeria	119	18.4
Pakistan	162	25.0
Philippines	8	1.2
Russia	11	1.7
Sri Lanka	12	1.9
Sudan	7	1.1
Ukraine	16	2.5
Other RoW Countries (< 5 each)	70	10.8
Total	**648**	**100.0**

Graduates of UK Medical Schools		
Medical School	**N**	**%**
Aberdeen	60	2.5
Belfast	54	2.2
Birmingham	172	7.1
Brighton and Sussex	34	1.4
Bristol	64	2.7
Cambridge	26	1.1
Dundee	60	2.5
Edinburgh	77	3.2
Glasgow	69	2.9
Hull York	39	1.6
Keele	12	0.5
Leeds	116	4.8
Leicester	93	3.9
Liverpool	110	4.6
London: Barts & the London	126	5.2
London: Imperial College	79	3.3
London: King's College	145	6.0
London: St George's	98	4.1
London: University College	92	3.8
Manchester	177	7.3
Newcastle	127	5.3
Norwich (UEA)	50	2.1
Nottingham	101	4.2
Oxford	24	1.0
Peninsula	56	2.3
Sheffield	104	4.3
Soc. Apothecaries of London	1	0.0
Southampton	77	3.2
Wales (incl Cardiff & Swansea)	110	4.6
Warwick	60	2.5
Total	**2413**	**100.0**

Indication of Candidates' Age by major recruited group, using year of primary medical qualification as a surrogate



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

Deanery / LETB	Source of PMQ			Total
	UK	EEA	RoW	
Armed Forces (Defence)	27	0	0	**27**
	100.0%	0.0%	0.0%	**100.0%**
East Midlands	144	11	76	**231**
	62.3%	4.8%	32.9%	**100.0%**
East of England	176	18	88	**282**
	62.4%	6.4%	31.2%	**100.0%**
East Scotland	25	1	2	**28**
	89.3%	3.6%	7.1%	**100.0%**
Kent, Surrey, Sussex	170	14	68	**252**
	67.5%	5.6%	27.0%	**100.0%**
London	355	8	13	**376**
	94.4%	2.1%	3.5%	**100.0%**
Mersey	96	7	40	**143**
	67.1%	4.9%	28.0%	**100.0%**
North Scotland	37	1	14	**52**
	71.2%	1.9%	26.9%	**100.0%**
North Western	166	3	78	**247**
	67.2%	1.2%	31.6%	**100.0%**
Northern	94	7	50	**151**
	62.3%	4.6%	33.1%	**100.0%**
Northern Ireland	62	3	1	**66**
	93.9%	4.5%	1.5%	**100.0%**
Oxford	87	2	10	**99**
	87.9%	2.0%	10.1%	**100.0%**
Severn	119	2	3	**124**
	96.0%	1.6%	2.4%	**100.0%**
South East Scotland	62	2	3	**67**
	92.5%	3.0%	4.5%	**100.0%**
South West Peninsula	67	1	2	**70**
	95.7%	1.4%	2.9%	**100.0%**
Wales	87	2	17	**106**
	82.1%	1.9%	16.0%	**100.0%**
Wessex	91	2	18	**111**
	82.0%	1.8%	16.2%	**100.0%**
West Midlands	220	12	82	**314**
	70.1%	3.8%	26.1%	**100.0%**
West Scotland	106	5	41	**152**
	69.7%	3.3%	27.0%	**100.0%**
Yorkshire & The Humber	222	5	42	**269**
	82.5%	1.9%	15.6%	**100.0%**
Total	**2413**	**106**	**648**	**3167**
	76.2%	**3.3%**	**20.5%**	**100.0%**

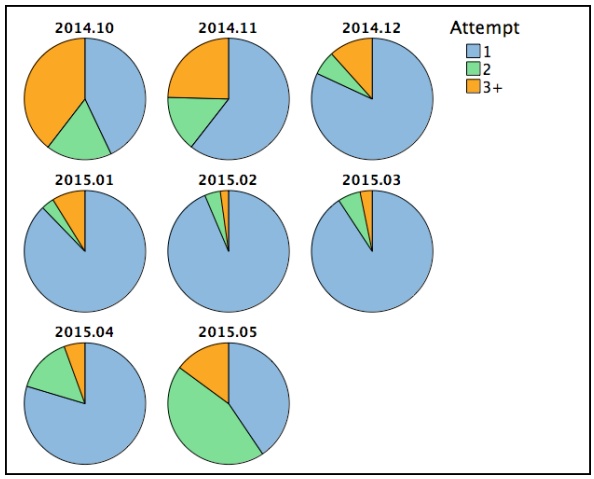
B: Main Results: Overall, and by Exam Diet and Attempt (All Candidates)

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

The pass-mark varies slightly day-on-day (see introduction): marks have been re-scaled in this report to a pass-mark of zero

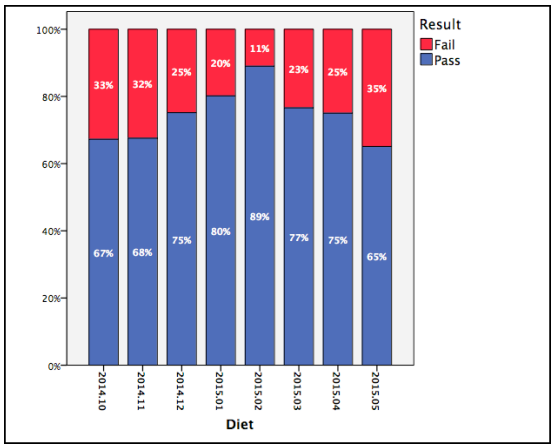
Background: Candidate Attempts on Each CSA Diet

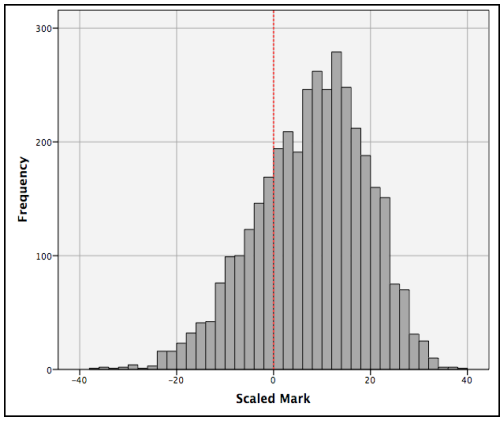
CSA Diet	CSA Attempt						Total
	1	2	3	4	5	6	
October 2014	76	31	53	8	9		177
	42.9%	17.5%	29.9%	4.5%	5.1%		100.0%
November 2014	138	34	46	5	5	0	228
	60.5%	14.9%	20.2%	2.2%	2.2%	0.0%	100.0%
December 2014	267	21	23	15			326
	81.9%	6.4%	7.1%	4.5%			100.0%
January 2015	566	22	19	32	6		645
	87.8%	3.4%	2.9%	5.0%	1.0%		100.0%
February 2015	425	19	10			0	454
	93.6%	4.2%	2.1%			0.0%	100.0%
March 2015	903	60	13	19			995
	90.8%	6.0%	1.3%	1.9%			100.0%
April 2015	258	48	10	8		0	324
	79.6%	14.8%	3.1%	2.5%		0.0%	100.0%
May 2015	223	245	47	24	11	0	550
	40.5%	44.5%	8.5%	4.4%	2.0%	0.0%	100.0%
All Diets	**2856**	**480**	**217**	**104**	**42**		**3699**
	77.2%	**13.0%**	**5.9%**	**2.8%**	**1.1%**		**100.0%**

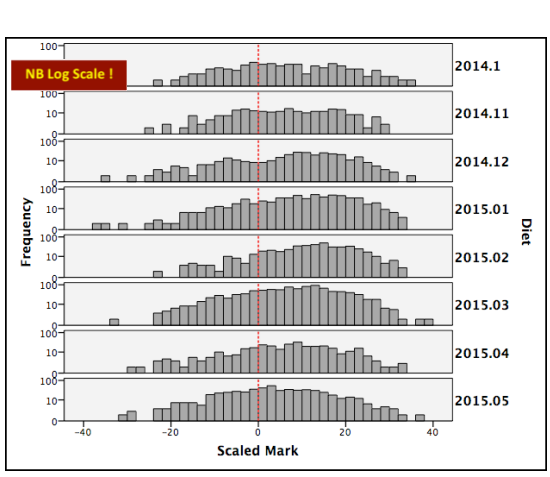


Results Overall and by Diet

CSA Diet	Result				Total	Scaled Mark			
	Fail		Pass			Min.	Max.	Mean	SD
	N	%	N	%	N				
October 2014	58	0.328	119	0.672	177	-24	35	5.96	12.10
November 2014	74	0.325	154	0.675	228	-25	28	5.73	11.29
December 2014	81	0.248	245	0.752	326	-36	34	7.42	12.32
January 2015	128	0.198	517	0.802	645	-37	33	9.53	11.57
February 2015	50	0.11	404	0.89	454	-24	33	11.55	9.78
March 2015	233	0.234	762	0.766	995	-34	38	7.16	10.80
April 2015	81	25.0%	243	75.0%	324	-29	33	6.10	11.36
May 2015	192	34.9%	358	65.1%	550	-31	36	3.46	11.03
All Diets	**897**	**24.2%**	**2802**	**75.8%**	**3699**	**-37**	**38**	**7.35**	**11.38**



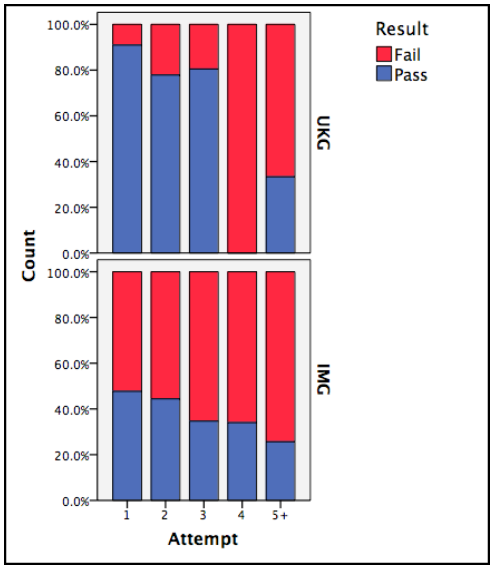




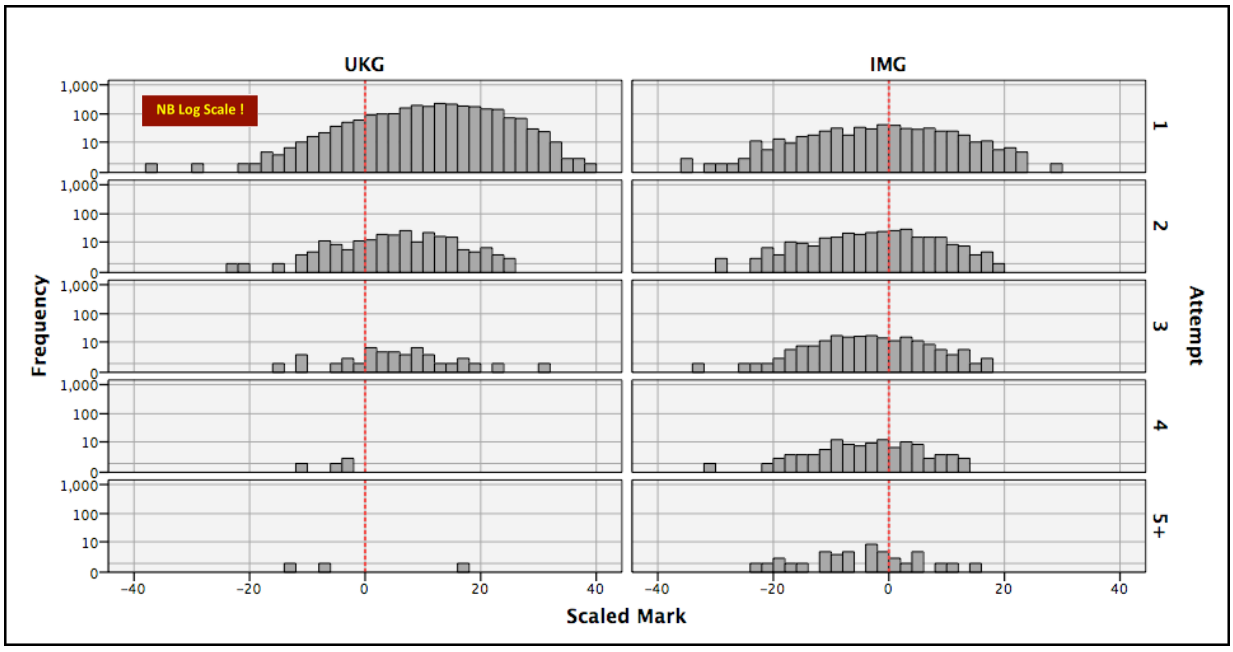
2. Result and scores, by attempt at the CSA: all graduates, and separated by source of primary medical qualification, UK/non-UK (all candidates)

Result

UK or non-UK Graduate	Attempt	Result				Total N
		Fail		Pass		
		N	%	N	%	
UK Graduate	1	214	9.1%	2145	90.9%	2359
	2	45	22.2%	158	77.8%	203
	3+	14	29.2%	34	70.8%	48
Non-UK Graduate	1	260	52.3%	237	47.7%	497
	2	154	55.6%	123	44.4%	277
	3	115	65.3%	61	34.7%	176
	4	66	66.0%	34	34.0%	100
	5+	29	74.4%	10	25.6%	39
All	1	474	16.6%	2382	83.4%	2856
	2	199	41.5%	281	58.5%	480
	3	123	56.7%	94	43.3%	217
	4	70	67.3%	34	32.7%	104
	5+	31	73.8%	11	26.2%	42



Candidates' Score, by Attempt and source of PMQ



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

UK Equality Legislation permits examination candidates with disabilities to request reasonable accommodations in regard to their disabilities, without affecting the difficulty of the examination. The tables below record the prevalence of such candidates in attempts at the CSA in 2014-15, together with the results of the assessments. SLD is the most prevalent reported disability. Disabilities other than SLD have been merged for reasons of small numbers and personal confidentiality, the commonest being physical disability and hearing impairment.

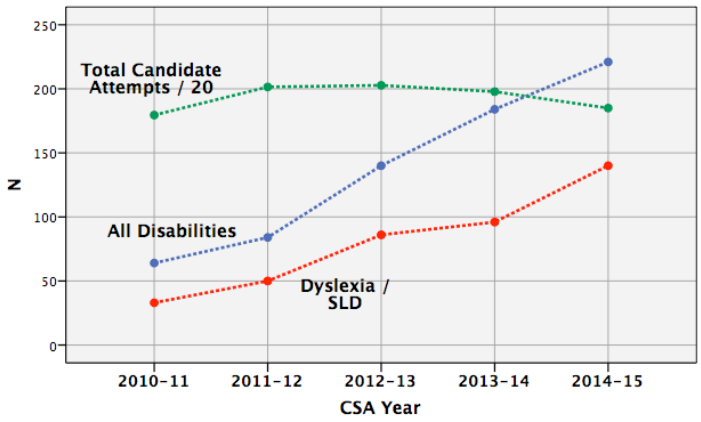
There were 221 disabled candidate-attempts at the CSA, representing 6.0 % of all attempts, a continuing proportionate increase year-on-year. The small green table shows the outcomes for these candidates by SLD and other disability; the multi-coloured one shows the results for all disabled candidates, by attempt. The overall number of successful attempts by candidates with disabilities was 118, or 53%. Multivariate analysis suggests that the amount of variance in the scaled mark attributable to 'disability / no disability' is 0.5%.

A summary of the recent history of prevalence of candidates with disabilities presenting in the CSA 2010-15, follows.

Disability	N UKG	N IMG	N Total	Pass Rate
Specific learning difficulty	78	62	140	55.0%
All other disabilities	44	37	81	50.6%
Total	**122**	**99**	**221**	**53.4%**

CSA Attempt	Result: Candidates without Disabilities			Result: Candidates with Disabilities		
	Fail	Pass	Total	Fail	Pass	Total
1	434	2300	2734	40	82	122
	15.9%	84.1%	100.0%	32.8%	67.2%	100.0%
2	170	262	432	29	19	48
	39.4%	60.6%	100.0%	60.4%	39.6%	100.0%
3	106	84	190	17	10	27
	55.8%	44.2%	100.0%	63.0%	37.0%	100.0%
4	59	31	90	11	3	14
	65.6%	34.4%	100.0%	78.6%	21.4%	100.0%
5+	25	7	32	6	4	10
	78.1%	21.9%	100.0%	60.0%	40.0%	100.0%
All Attempts	**794**	**2684**	**3478**	**103**	**118**	**221**
	22.8%	**77.2%**	**100.0%**	**46.6%**	**53.4%**	**100.0%**

Recent History of Prevalence of Candidates with Disabilities in the CSA 2010-15



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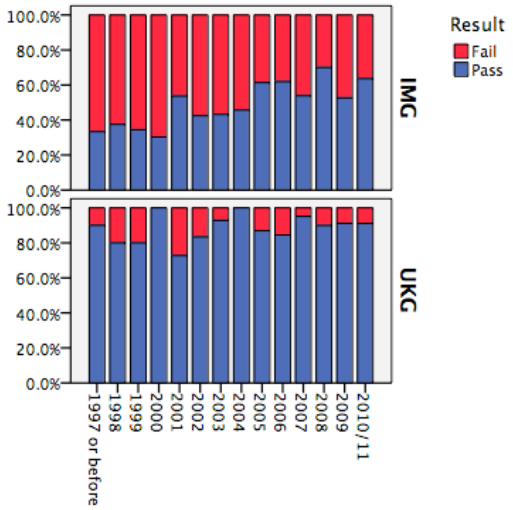
C: Results by Individual Demographics (Candidates on first attempt, only)

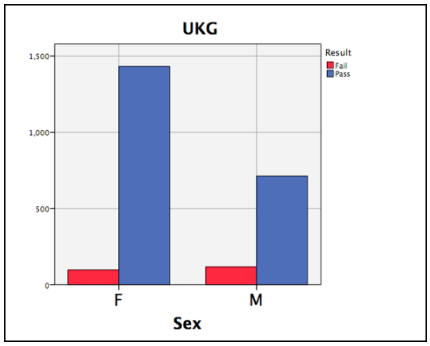
1. Result on CSA on first attempt by year of qualification for UK and non-UK Graduates

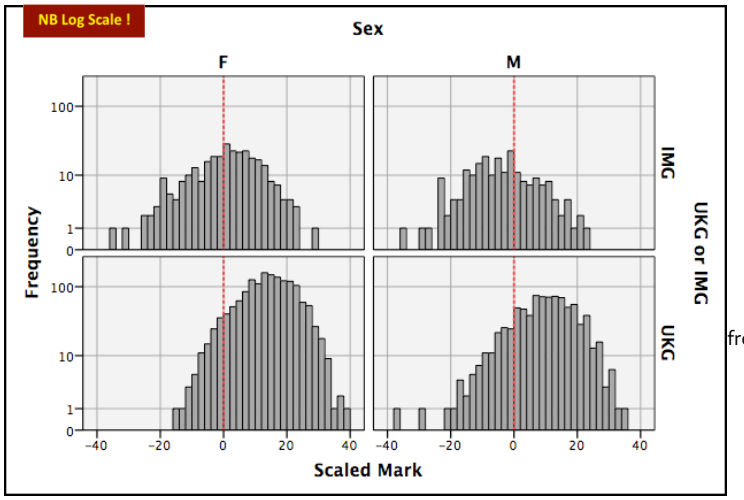
Year of Qualification	IMG		UKG	
	N	Pass %	N	Pass %
1997 or earlier	69	33	10	90
1998	16	38	10	80
1999	29	34	5	80
2000	33	30	7	100
2001	41	54	11	73
2002	33	42	12	83
2003	44	43	14	93
2004	46	46	23	100
2005	44	61	46	87
2006	42	62	71	85
2007	39	54	185	95
2008	20	70	307	90
2009	19	53	532	91
2010/11	22	64	1126	91



2. Result and scores by candidate sex, within source of PMQ, and within UK Medical School

Result by Candidate Sex						
UK or non-UK Graduate	Sex	Result				
		Fail		Pass		Total
		N	%	N	%	N
UK Graduate	Female	97	6.3%	1432	93.7%	1529
	Male	117	14.1%	713	85.9%	830
	Total	214	9.1%	2145	90.9%	2359
Non-UK Graduate	Female	120	41.0%	173	59.0%	293
	Male	140	68.6%	64	31.4%	204
	Total	260	52.3%	237	47.7%	497
Total	Female	217	11.9%	1605	88.1%	1822
	Male	257	24.9%	777	75.1%	1034
	Total	474	16.6%	2382	83.4%	2856





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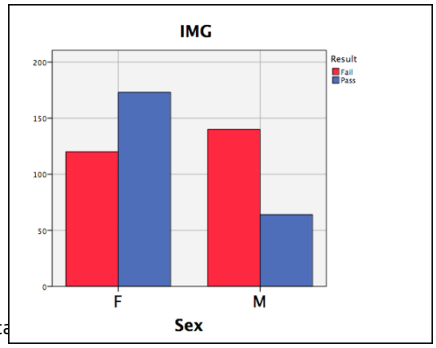

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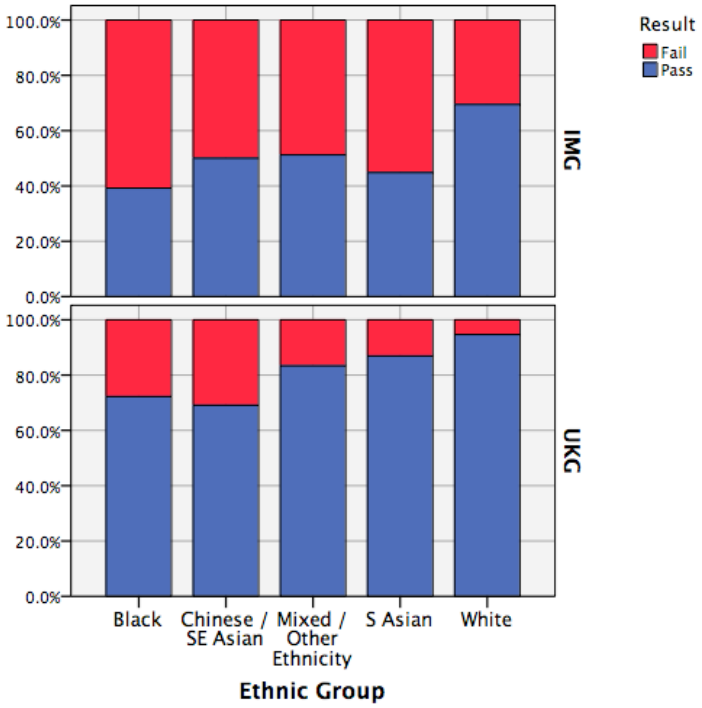
2. Result by classified candidate ethnicity, and separated by source of primary medical qualification, UK/non-UK graduates (1st attempt)

Result by Candidate Ethnicity						
UK or non-UK Graduate	Ethnic Group	Result				
		Fail		Pass		Total
		N	%	N	%	N
UK Graduate	Black	20	27.8%	52	72.2%	72
	Chinese / SE Asian	17	30.9%	38	69.1%	55
	Mixed / Other Ethnicity	22	16.7%	110	83.3%	132
	S Asian	63	13.1%	418	86.9%	481
	White	83	5.3%	1472	94.7%	1555
	Total	205	8.9%	2090	91.1%	2295
Non-UK Graduate	Black	62	60.8%	40	39.2%	102
	Mixed / Other Ethnicity	21	48.8%	22	51.2%	43
	S Asian	149	55.2%	121	44.8%	270
	White	22	30.6%	50	69.4%	72
	Total	254	52.2%	233	47.8%	487
All Graduates	Black	82	47.1%	92	52.9%	174
	Chinese / SE Asian	18	31.6%	39	68.4%	57
	Mixed / Other Ethnicity	42	24.3%	131	75.7%	173
	S Asian	212	28.2%	539	71.8%	751
	White	105	6.5%	1522	93.5%	1627
	Total	459	16.5%	2323	83.5%	2782

Note: 74 candidates on first attempt did not disclose their ethnicity

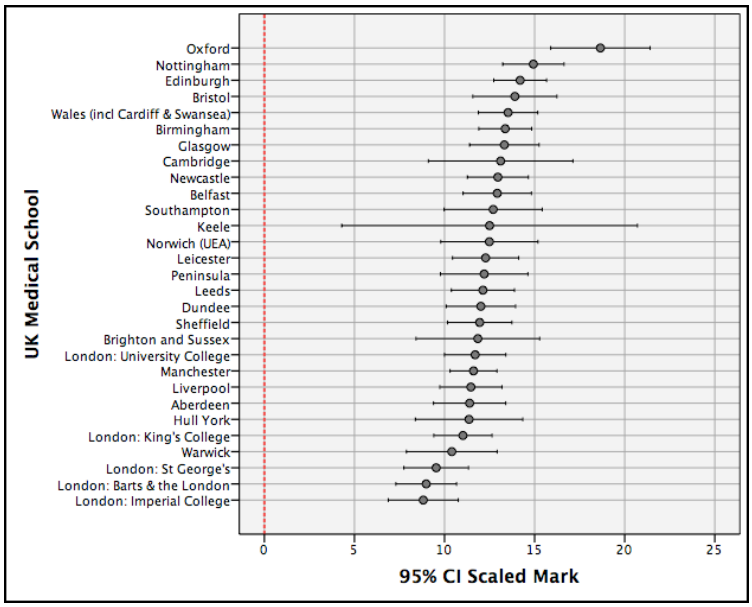


3. CSA Result and Scores by PMQ, subdivided (1st attempt)

UK Graduates (by medical school)

Performance by UK Medical School						
Medical School	N Cands	Scaled Mark				Pass Rate (%)
		Min	Max	Mean	SD	
Aberdeen	56	-7	27	11.39	7.48	92.9%
Belfast	54	0	33	12.93	6.95	100.0%
Birmingham	168	-17	33	13.37	9.62	88.7%
Brighton and Sussex	33	-16	31	11.85	9.67	90.9%
Bristol	63	-18	31	13.90	9.26	95.2%
Cambridge	26	-5	28	13.12	9.93	88.5%
Dundee	60	-8	28	12.02	7.46	95.0%
Edinburgh	76	-3	30	14.20	6.42	97.4%
Glasgow	69	-4	32	13.32	8.03	97.1%
Hull York	36	-7	29	11.36	8.81	88.9%
Keele	12	-5	27	12.50	12.92	66.7%
Leeds	114	-14	34	12.13	9.43	91.2%
Leicester	89	-14	27	12.28	8.71	92.1%
Liverpool	108	-11	28	11.46	9.04	88.9%
London: Barts & the London	119	-21	31	8.98	9.27	83.2%
London: Imperial College	78	-19	27	8.82	8.62	83.3%
London: King's College	141	-30	36	11.02	9.70	89.4%
London: St George's	95	-13	27	9.54	8.80	84.2%
London: University College	90	-13	32	11.70	8.13	94.4%
Manchester	174	-12	32	11.61	8.70	90.8%
Newcastle	125	-12	36	12.96	9.56	89.6%
Norwich (UEA)	47	-9	27	12.49	9.18	89.4%
Nottingham	100	-7	38	14.93	8.58	99.0%
Oxford	23	4	27	18.65	6.38	100.0%
Peninsula	55	-14	28	12.20	8.98	90.9%
Sheffield	103	-11	30	11.95	9.15	92.2%
Southampton	77	-37	33	12.70	11.99	88.3%
Wales (incl Cardiff & Swansea)	110	-12	35	13.53	8.71	95.5%
Warwick	57	-11	31	10.40	9.49	86.0%

(and one candidate qualified LMSSA)



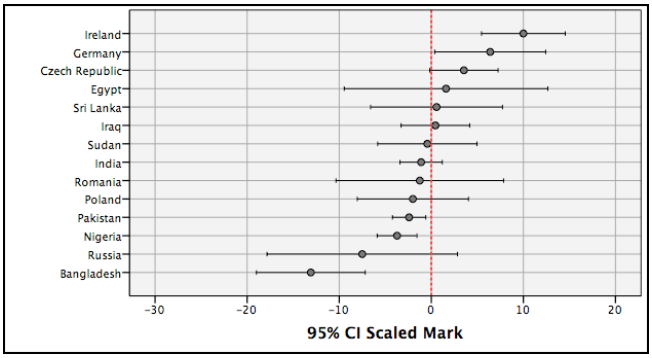
The summary of the one-way ANOVA below shows the true extent of differentiation in performance between the graduates of the various UK schools—putting the differences apparent in the table and error bar graph into statistical context.

Only three homogeneous subsets can be identified.

One-Way ANOVA Analysis of Scaled Markl Post-hoc Identification of Subsets by Ryan-Einot-Gabriel-Welsch Range				
Medical School	N Cands	Homogeneous Subsets alpha = .05		
		1	2	3
London: Imperial College	78	◆		
London: Barts & the London	119	◆		
London: St George's	95	◆	◆	
Warwick	57	◆	◆	◆
London: King's College	141	◆	◆	◆
Hull York	36	◆	◆	◆
Aberdeen	56	◆	◆	◆
Liverpool	108	◆	◆	◆
Manchester	174	◆	◆	◆
London: University College	90	◆	◆	◆
Brighton and Sussex	33	◆	◆	◆
Sheffield	103	◆	◆	◆
Dundee	60	◆	◆	◆
Leeds	114	◆	◆	◆
Peninsula	55	◆	◆	◆
Leicester	89	◆	◆	◆
Norwich (UEA)	47	◆	◆	◆
Keele	12	◆	◆	◆
Southampton	77	◆	◆	◆
Belfast	54	◆	◆	◆
Newcastle	125	◆	◆	◆
Cambridge	26	◆	◆	◆
Glasgow	69	◆	◆	◆
Birmingham	168		◆	◆
Wales (incl Cardiff & Swansea)	110		◆	◆
Bristol	63		◆	◆
Edinburgh	76		◆	◆
Nottingham	100			◆
Oxford	23			◆
Sig.		0.12	0.23	0.28

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

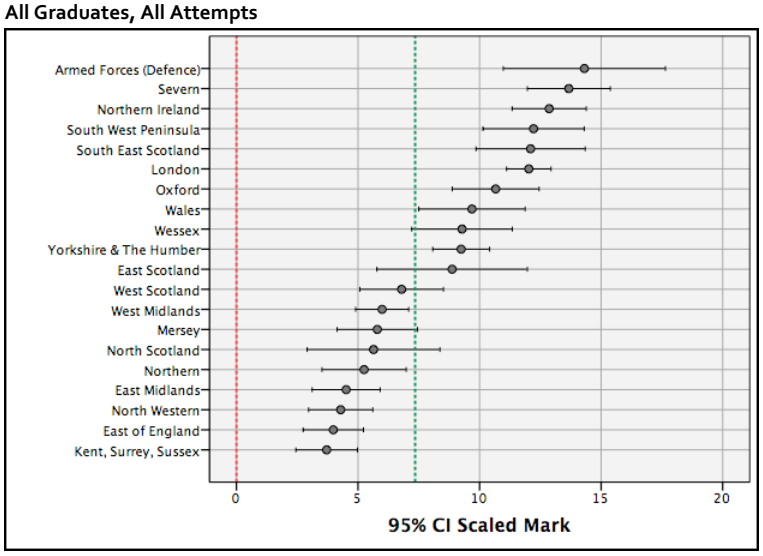
Performance by Country of PMQ (Countries with 5+ candidates on first attempt)						
Country	**N**	**Min**	**Max**	**Mean**	**SD**	**Pass Rate**
Bangladesh	12	-24	10	-13.08	9.30	8.3%
Czech Republic	24	-16	16	3.54	8.79	66.7%
Egypt	5	-10	11	1.60	8.91	60.0%
Germany	10	-4	20	6.40	8.42	70.0%
India	105	-36	29	-1.10	11.87	50.5%
Iraq	18	-16	11	0.44	7.49	55.6%
Ireland	14	-2	22	10.00	7.87	85.7%
Nigeria	78	-24	21	-3.72	9.58	33.3%
Pakistan	105	-31	20	-2.41	9.35	45.7%
Poland	14	-23	20	-2.00	10.46	42.9%
Romania	8	-20	12	-1.25	10.89	37.5%
Russia	8	-27	10	-7.50	12.38	37.5%
Sri Lanka	7	-7	16	0.57	7.74	57.1%
Sudan	7	-10	7	-0.43	5.83	57.1%



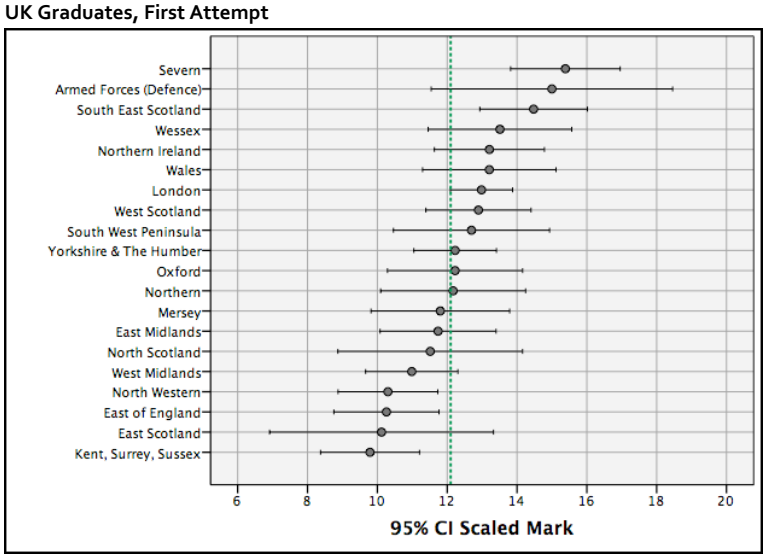
D: Results by Training Deanery/LETB

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

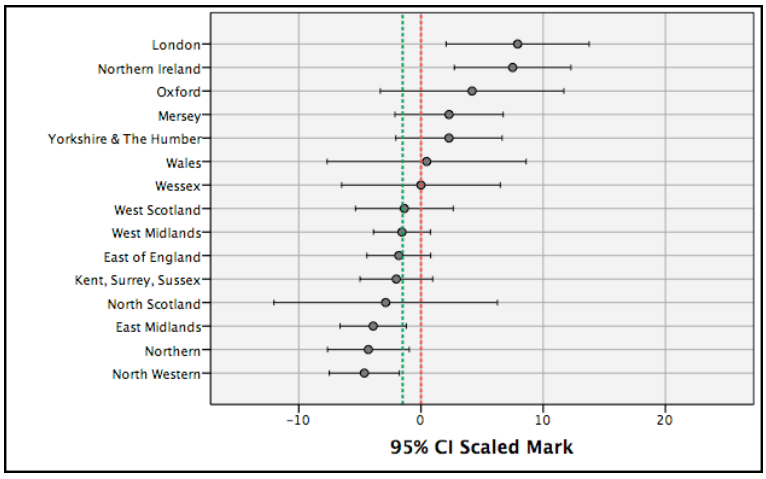
All Graduates, All Attempts



UK Graduates, First Attempt



Non-UK Graduates, First Attempt



E: Summary of 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. Figures represent the percentage of the total of all cases which attracted that feedback comment.

UK Graduates N = 33,995 candidate-cases	In response to percentage of all cases seen
7: Does not develop a management plan reflecting knowledge of current best practice	12.4%
2: Does not recognise the issues or priorities in the consultation	9.6%
10: Does not demonstrate an awareness of management of risk or make the patient aware of relative risks of different options	8.1%
8: Does not show appropriate use of resources, including aspects of budgetary governance	7.1%
3: Shows poor time management	7.0%
4: Does not identify abnormal findings or results or fails to recognise their implications	6.8%
6: Does not make the correct working diagnosis or identify an appropriate range of differential possibilities	6.6%
15: Does not develop a shared management plan, demonstrating an ability to work in partnership with the patient	6.4%
14: Does not identify or use appropriate psychological or social information to place the problem in context	5.2%
5: Does not undertake physical examination competently, or use instruments proficiently	4.5%
9: Does not make adequate arrangements for follow-up and safety-netting	4.4%
16: Does not use language and/or explanations that are relevant and understandable to the patient	4.3%
1: Disorganised / unstructured consultation	4.2%
13: Poor active listening skills and use of cues. Consulting may appear formulaic, and lacks fluency	4.2%
12: Does not appear to develop rapport or show awareness of patient's agenda, health beliefs and preferences	3.6%
11: Does not attempt to promote good health at opportune times in the consultation	1.8%

Non-UK Graduates N = 14,092 candidate-cases	In response to percentage of all cases seen
7: Does not develop a management plan reflecting knowledge of current best practice	19.8%
2: Does not recognise the issues or priorities in the consultation	16.1%
15: Does not develop a shared management plan, demonstrating an ability to work in partnership with the patient	13.8%
13: Poor active listening skills and use of cues. Consulting may appear formulaic, and lacks fluency	13.5%
16: Does not use language and/or explanations that are relevant and understandable to the patient	12.9%
10: Does not demonstrate an awareness of management of risk or make the patient aware of relative risks of different options	11.4%
3: Shows poor time management	10.9%
8: Does not show appropriate use of resources, including aspects of budgetary governance	10.4%
1: Disorganised / unstructured consultation	10.1%
4: Does not identify abnormal findings or results or fails to recognise their implications	9.8%
6: Does not make the correct working diagnosis or identify an appropriate range of differential possibilities	9.4%
12: Does not appear to develop rapport or show awareness of patient's agenda, health beliefs and preferences	9.4%
14: Does not identify or use appropriate psychological or social information to place the problem in context	8.5%
9: Does not make adequate arrangements for follow-up and safety-netting	7.6%
5: Does not undertake physical examination competently, or use instruments proficiently	6.8%
11: Does not attempt to promote good health at opportune times in the consultation	2.5%

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

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 by Protected Characteristics (also whether UK or International Graduate) on First Attempt at AKT and CSA 2014-2015

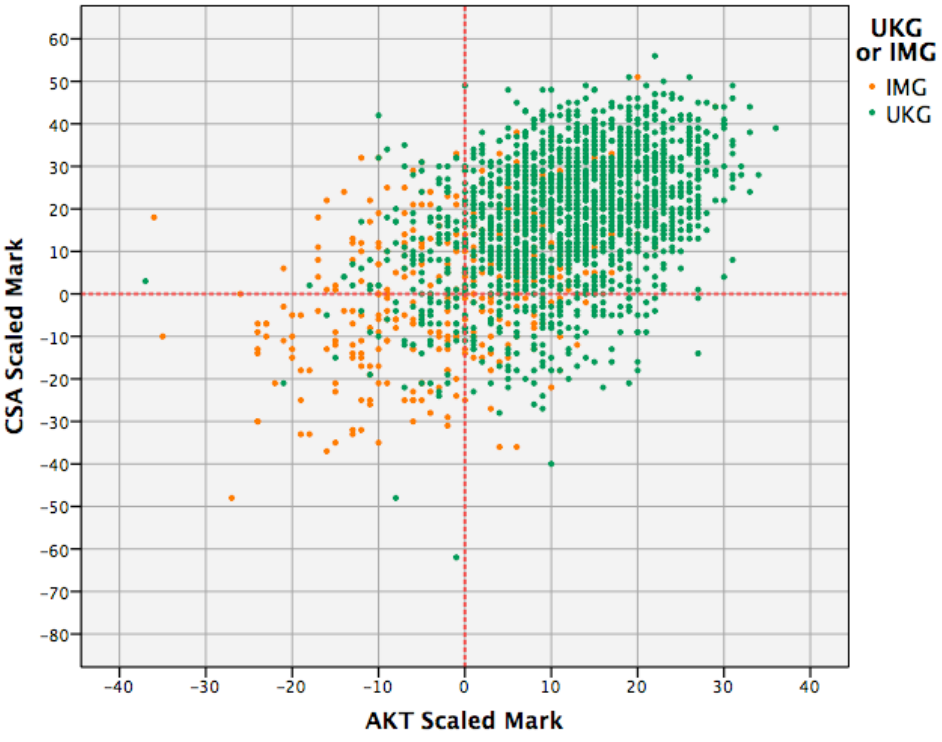
Protected Characteristic &c	Sub-Group	Applied Knowledge Test			Clinical Skills Assessment		
		N sitting	N passing	Pass Rate	N sitting	N passing	Pass Rate
Sex	Male	1043	816	78.2%	1034	777	75.1%
	Female	1965	1648	83.9%	1822	1605	88.1%
Race*	BME	1175	821	69.9%	1155	801	69.4%
	White	1735	1562	90.0%	1627	1522	93.5%
PMQ Source	UK Graduate	2582	2244	86.9%	2359	2145	90.9%
	IMG	426	220	51.6%	497	237	47.7%
Disability	Reported	116	96	82.8%	122	82	67.2%
	None reported	2892	2368	81.9%	2734	2300	84.1%
All Candidates		3008	2464	81.9%	2856	2382	83.4%

* plus 98 unstated for AKT and 74 unstated for 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 in the middle of ST3.

The accompanying scatterplot is the most recent analysis from these datasets showing the relationship between the AKT and CSA scores of 2050 candidates taking each component for the first time, the AKT in 2013-14 and the CSA in 2014-2015. Overall, the correlation between the two is 0.52 (*cf* last year 0.53), suggesting shared variance of 27%. The chart contrasts UK and non-UK graduates' performance: the relationship between the two scores is similar for the two groups: UKG r = 0.40, r^2 = 0.16; IMG r = .44, r^2 = 0.19.



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, but this has not taken place in 2014-15 (or at all, recently). Current and recent quality statistics are shown in the accompanying table.

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

AKT Diet	No of Items removed	Alpha Coefficient	SEm
2011: October	0	0.91	2.8 %
2012: February	0	0.89	2.8 %
2012: April	1	0.92	2.9 %
2012: October	1	0.89	2.8 %
2013: January	0	0.92	2.9 %
2013: May	0	0.90	2.9 %
2013: October	0	0.90	2.8 %
2014: January	0	0.90	2.7 %
2014: April	0	0.90	2.9 %
2014: October	0	0.90	2.8 %
2015: January	0	0.90	2.7 %
2015: April	0	0.90	2.8 %

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 (1200+ 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—eg 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, live monitoring of examiners and role-players, and explicit ongoing examiner monitoring and training.

Reliability (eg 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. And 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 table below.

Academical Year	No of Cases (stations) in CSA	Alpha: range across days	Average alpha across days	SEm: range across days	Average SEm across days
2010-2011	13	0.64 – 0.86	0.77	5.1 % - 5.4 %	5.2%
2011-2012	13	0.64 – 0.86	0.77	4.5 % - 5.6 %	5.1%
2012-2013	13	0.64 – 0.87	0.78	4.3 % - 5.4 %	5.0%
2013-2014	13	0.56 – 0.85	0.74	4.4 % - 5.6 %	4.9%
2014-2015	13	0.55 – 0.85	0.72	4.4 % - 5.2 %	4.8%

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