
MRCGP: Statistics 2009

Second Annual Report on the results of the MRCGP AKT and CSA Assessments

INTRODUCTION

This Report relates to the second full year of the new version formal MRCGP assessments, 2009. It presents the statistics which summarise the outcomes of all the diets of the MRCGP examinations during that year – the Applied Knowledge Test (AKT) and the Clinical Skills Assessment (CSA).

The Report first presents an updated summary of both of these assessments and their current standard-setting procedures, to orientate readers who are unfamiliar with these. Full background information on the MRCGP, the AKT and the CSA (and also the 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 give information on the candidature and the attempts at the test, for each of them:

- candidates overall: the origin of their primary medical degree
- candidates by training deanery: their gender and ethnicity, and whether a UK graduate or not
- overall results; results by diet; results by attempt at the component; results by training year (AKT)
- results by source of primary medical qualification (UK, EEA, IMG)
- results by gender, and gender within primary medical qualification source
- results by ethnicity, and ethnicity within primary medical qualification source
- results by training deanery
- results by medical school (UK) or country

also:

- AKT mean domain scores, by candidate year of training
- CSA feedback statements on failed cases: aggregate summary

This report is descriptive, only, and neither interpretative nor discursive. Data – and, where appropriate, statistical significances – are presented without psychometric comment other than that which follows and at the end of the report. A commentary on the report by the Examination Convenor will accompany it when published on the College's website.

Two cautionary notes are appropriate:

1. There are many significant differences between sub-groups on their performance on both the tests reported, for example by gender and country of primary medical training. Such variables may well interact with others, such as training Deanery (eg the prevalence of women trainees varies across Deaneries, as does that of non-UK medical graduates). The relevant results should thus be interpreted appropriately.
2. Demographic variables are mostly self-coded by the candidates when registering as AiTs or for an examination. Whilst obvious errors are re-coded (eg the 'attempt' reported by candidates was recalculated from the database as many candidates' memories were clearly poor), there will be a few inaccuracies left.

March 2010

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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, the College and PMETB of the competence of exiting trainee General Practitioners (GPs) across a broad and carefully-defined three year 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 PMETB (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 re-accreditation).

The MRCGP's three assessment components are the following:

- a. **Applied Knowledge Test** (*multi-choice computer-presented 'paper', available in test centres throughout the UK*)
- b. **Clinical Skills Assessment** (*a formal 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, Trainers and others*)

No compensation is permitted between the CSA and the AKT (or workplace-based) —each must be separately passed.

The curriculum, the training and the assessments are based on practice in the UK National Health Service. Entry to the formal assessments is only permissible to doctors undergoing GP training in the UK health care system. Accordingly, no external candidates take these, as happens in certain other Royal Colleges. (The College has other arrangements to support GPs practising in other countries and who seek affiliation with it or Membership of it through the 'MRCGP [International]', see the website.)

Please 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.

The Applied Knowledge Test (AKT)

The multi-choice **Applied Knowledge Test** is a 3-hr 200-item computer-delivered and marked assessment which may be taken in any of the three years of training (Year 1 = ST₁; Year 2 = ST₂; Year 3 = ST₃). 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 three formats: single best answer (including images and graphics), extended matching questions and completion of algorithms. 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 for each delivery of the test 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 and representatives of outside bodies with a stake in the outcome of the examination 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' (JPS) is accordingly determined for the test as a whole, and a statistical review may 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 at one SEM (Standard Error of Measurement) above the 'JPS'. 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, the only variable which may be simply and validly compared across diets is the 'result' (pass/fail).

The Clinical Skills Assessment (CSA)

The **Clinical Skills Assessment** is an OSCE-style assessment using simulated patients which may be taken only in the final year of training (Year 3 = ST3). Currently 13 cases long (12 + 1 pilot case), it is delivered in a purpose-built College assessment centre (in Croydon, South London). Three circuits can run simultaneously on the three floors of the centre.

A case is depicted by a role player, and candidate performance assessed by an examiner who accompanies the roleplayer for the day. Each case lasts 10 minutes (plus two minutes marking/changeover time). Candidates have their own 'consulting room', and the role players and assessors move around the circuit. Of the 13 cases, 12 are assessed and the other is presently used to pilot new cases.

Cases, written by dedicated writers who are practising GPs, present typical clinical scenarios that a UK GP will encounter. 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.

Each case is marked on three domains and with an overall global judgement. The domains are: Data Gathering, Examination and Clinical Skills; Clinical Management Skills; Interpersonal Skills. Each domain score and global judgement is marked as: *Clear Pass* – *Marginal Pass* – *Marginal Fail* – *Clear Fail*. (Also, to assist in standard-setting developments but not yet used towards test outcomes, the assessors are also asked to give a confidence score on their global judgement.) The domain scores inform the assessor judgement for the global score but are not used in any further summative manner.

The critical pass/fail determination on the CSA as a whole is as a result of how many cases are passed (out of 12), whether 'marginally' or 'clearly' being immaterial. Thus the effective judgement for each case is the *global score* as a *pass or fail* (whether clear or marginal is operationally irrelevant). The domain scores are used for quality assurance of the assessors and cases.

The overall standard of the assessment is set by means of ensuring both that the cases are at an appropriate level of difficulty 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 ongoing training of examiners; and an annual two-day examiners workshop.

The passmark—number of cases to be passed out of 12, known as 'n2P'—is set by an Adjudication Committee comprised of various stakeholders, following each diet of the assessment: throughout 2009, it was *eight*. Hofstee-style data-collection from examiners provides the committee with collective perceptions about candidate standards.

The reliability of the CSA is estimated by calculating Cronbach's *alpha* using the *global scores* (0-3) for each case. Because of daily case and examiner differences, *alpha* must be estimated only *per diem*, 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 'result' (pass/fail at n2P = 8) and 'cases passed' (out of 12).

2: Notes on the Tables and Statistics

General Notes

Tables are accompanied by thumbnail charts, to assist those who prefer visual rather than numerical summaries of data. Where space prevents the charts being of adequate size to read, (for example) the axis scales, the relevant table should be inspected for this information. 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

Note regarding the Interpretation of the AKT statistics

Except in the Summary of Demographic information, the statistics aggregate all 3,394 attempts in 2009 at the AKT. Some candidates appear twice (219), others three times (36). Data have been presented in this way (for all candidates, rather than first time takers, only) for consistency, as this is the form requested by PMETB in respect of other reports.

Observant readers may notice that figures in this report do not always concur precisely with those given in various reports of AKT examinations in 2009 on the College website. The latter normally show totals and pass rates for *all* AKT candidates, including GP 'returners' and those completing the 'old' MRCGP and summative assessment. The figures in this report refer only to examination candidates eligible for 'new' MRCGP.

Particular tables could be presented for first timers only, but have not been, for brevity.

Note regarding the interpretation of the CSA statistics

Two simple (though large) databases have been constructed for the 2009 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 thus includes additionally information on pilot cases. With one exception, all the data in this report is sourced from the first database; the second one was used for CSA Table L.

Except in the Summary of Demographic information, the statistics aggregate all 2,792 attempts at the CSA in 2009. Some candidates appear twice (334), others three times (90) and seventeen four times. Data have been presented in this way (for all candidates, rather than first time takers, only), for the same reason as for the AKT.

The present report excludes one re-sitting candidate included in the earlier report, subsequently detected as technically 'out of frame': this apparently arose out of candidate (and database) confusion in the transition period.

Particular tables could again be presented for first timers only, but have not been in an attempt towards some brevity.

Data Inconsistencies: Caution

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

- Most of the candidates' background data is self-reported on registration for each assessment. It is thus subject to error, though obvious ones are corrected when seen
- For the same reason, data are occasionally missing
- 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
- Updates to the databases, internally in the College and from the individual Deaneries, are inevitably intermittent

However, the College would appreciate learning of any serious apparent errors or omissions in the data reported. It would also be pleased to receive suggestions as to additional or alternative data which might be helpful to Deaneries and the training establishment. Contact the compiler at rew5@cam.ac.uk

3: AKT Statistics

Summary of Demographic Information on AKT Candidates

Note that 3139 candidates made a total of 3394 attempts at the AKT during 2009. The first two tables show the source of their medical degree and then the background demographic characteristics of the 3139, by training Deanery. Other tables report on the 3394 attempts

UK Medical Graduates: Medical Schools	n	%
Aberdeen	87	2.8
Belfast, Queen's University	85	2.7
Birmingham	122	3.9
Bristol	57	1.8
Cambridge	22	.7
Cardiff	114	3.6
Dundee	71	2.3
East Anglia	1	.0
Edinburgh	77	2.5
Glasgow	115	3.7
Hull & York	1	.0
Leeds	102	3.2
Leicester	81	2.6
Liverpool	96	3.1
London - Barts & London (Q Mary)	112	3.6
London - Imperial College	111	3.5
London - King's College	121	3.9
London - St George's	95	3.0
London - University College	133	4.2
Manchester	179	5.7
Newcastle-upon-Tyne	67	2.1
Nottingham	79	2.5
Oxford	20	.6
Peninsula	1	.0
Sheffield	118	3.8
Southampton	81	2.6
Warwick	30	1.0

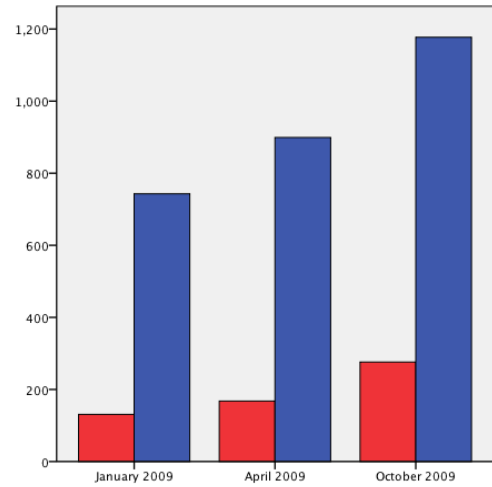
Non-UK Medical Graduates: Country of Primary Medical Qualification	n	%
Albania	2	.1
Algeria	2	.1
Armenia	1	.0
Australia	1	.0
Austria	44	1.4
Bangladesh	13	.4
Belarus	1	.0
Belize	1	.0
Bulgaria	5	.2
Burundi	1	.0
China	1	.0
Colombia	5	.2
Czech Republic	30	1.0
Denmark	1	.0
Egypt	4	.1
France	1	.0
Germany	12	.4
Ghana	5	.2
Greece	1	.0
Grenada	1	.0
Hungary	3	.1
India	391	12.5
Iran	8	.3
Iraq	25	.8
Irish Republic	22	.7
Israel	1	.0
Italy	1	.0
Jordan	1	.0
Kenya	3	.1
Kyrgyzstan	1	.0
Libya	1	.0
Lithuania	1	.0
Macedonia	3	.1
Myanmar	4	.1
Nepal	8	.3
Netherlands	3	.1
Netherlands Antilles	1	.0
New Zealand	3	.1
Nicaragua	1	.0
Nigeria	59	1.9
Pakistan	166	5.3
Philippines	4	.1
Poland	8	.3
Portugal	1	.0
Romania	10	.3
Russia	19	.6
Sierra Leone	1	.0
Singapore	1	.0
Slovakia	1	.0
South Africa	17	.5
Spain	6	.2
Sri Lanka	19	.6
Sudan	1	.0
Syria	4	.1
Tunisia	2	.1
Turkey	1	.0
Ukraine	9	.3
Uzbekistan	1	.0
Venezuela	1	.0
West Indies	10	.3
Zimbabwe	7	.2

Deanery	Candidate Gender		Classified Candidate Ethnicity					UK or non-UK Medical School		Total
	Female	Male	White	Asian	Black	Other Ethnicity	(Unknown)	UK	non-UK	
(Unknown)	2 50.0%	2 50.0%	1 25.0%	1 25.0%	0 .0%	0 .0%	2 50.0%	1 25.0%	3 75.0%	4 100.0%
Armed Forces (Defence)	15 41.7%	21 58.3%	31 86.1%	3 8.3%	1 2.8%	0 .0%	1 2.8%	35 97.2%	1 2.8%	36 100.0%
East Midlands	88 51.5%	83 48.5%	77 45.0%	77 45.0%	8 4.7%	7 4.1%	2 1.2%	117 68.4%	54 31.6%	171 100.0%
East of England	115 52.0%	106 48.0%	63 28.5%	123 55.7%	19 8.6%	15 6.8%	1 .5%	101 45.7%	120 54.3%	221 100.0%
East Scotland	21 60.0%	14 40.0%	26 74.3%	9 25.7%	0 .0%	0 .0%	0 .0%	25 71.4%	10 28.6%	35 100.0%
Kent, Surrey, Sussex	153 59.1%	106 40.9%	105 40.5%	121 46.7%	12 4.6%	20 7.7%	1 .4%	184 71.0%	75 29.0%	259 100.0%
London	272 65.1%	146 34.9%	143 34.2%	198 47.4%	24 5.7%	47 11.2%	6 1.4%	328 78.5%	90 21.5%	418 100.0%
Mersey	86 66.2%	44 33.8%	78 60.0%	42 32.3%	4 3.1%	6 4.6%	0 .0%	92 70.8%	38 29.2%	130 100.0%
North Scotland	37 57.8%	27 42.2%	39 60.9%	22 34.4%	2 3.1%	1 1.6%	0 .0%	42 65.6%	22 34.4%	64 100.0%
North Western	138 53.7%	119 46.3%	107 41.6%	132 51.4%	5 1.9%	11 4.3%	2 .8%	169 65.8%	88 34.2%	257 100.0%
Northern	81 68.1%	38 31.9%	55 46.2%	50 42.0%	6 5.0%	8 6.7%	0 .0%	68 57.1%	51 42.9%	119 100.0%
Northern Ireland	58 68.2%	27 31.8%	84 98.8%	1 1.2%	0 .0%	0 .0%	0 .0%	82 96.5%	3 3.5%	85 100.0%
Oxford	57 61.3%	36 38.7%	40 43.0%	37 39.8%	10 10.8%	4 4.3%	2 2.2%	57 61.3%	36 38.7%	93 100.0%
Severn	76 67.3%	37 32.7%	87 77.0%	20 17.7%	2 1.8%	3 2.7%	1 .9%	94 83.2%	19 16.8%	113 100.0%
South East Scotland	47 55.3%	38 44.7%	62 72.9%	17 20.0%	2 2.4%	4 4.7%	0 .0%	69 81.2%	16 18.8%	85 100.0%
South West Peninsula	35 59.3%	24 40.7%	44 74.6%	11 18.6%	0 .0%	2 3.4%	2 3.4%	49 83.1%	10 16.9%	59 100.0%
Wales	87 58.0%	63 42.0%	85 56.7%	54 36.0%	2 1.3%	8 5.3%	1 .7%	97 64.7%	53 35.3%	150 100.0%
Wessex	66 62.3%	40 37.7%	80 75.5%	19 17.9%	1 .9%	4 3.8%	2 1.9%	88 83.0%	18 17.0%	106 100.0%
West Midlands	150 50.7%	146 49.3%	88 29.7%	169 57.1%	13 4.4%	22 7.4%	4 1.4%	161 54.4%	135 45.6%	296 100.0%
West Scotland	102 53.1%	90 46.9%	123 64.1%	58 30.2%	5 2.6%	6 3.1%	0 .0%	139 72.4%	53 27.6%	192 100.0%
Yorkshire & The Humber	144 58.5%	102 41.5%	135 54.9%	94 38.2%	5 2.0%	9 3.7%	3 1.2%	180 73.2%	66 26.8%	246 100.0%
Total	1830 58.3%	1309 41.7%	1553 49.5%	1258 40.1%	121 3.9%	177 5.6%	30 1.0%	2178 69.4%	961 30.6%	3139 100.0%

a) AKT Result by AKT DIET

df = 2, $X^2 = 7.8$, $p < .05$

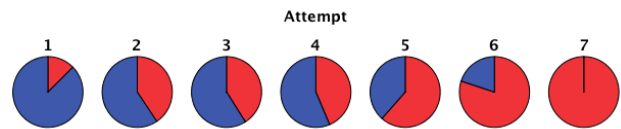
		AKT Result		Total
		Fail	Pass	
AKT Diet	January 2009	131 15.0%	743 85.0%	874 100.0%
	April 2009	168 15.7%	899 84.3%	1067 100.0%
	October 2009	276 19.0%	1177 81.0%	1453 100.0%
Total		575 16.9%	2819 83.1%	3394 100.0%



b) AKT Result by ATTEMPT at the AKT

df = 6, $X^2 = 276.9$, $p < .0001$

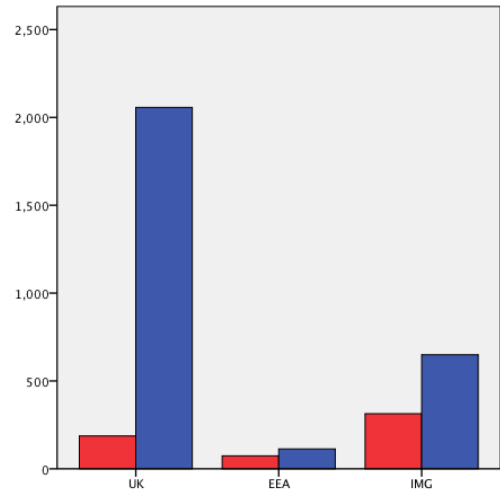
	AKT Result		Total
	Fail	Pass	
1	365 12.6%	2530 87.4%	2895 100.0%
2	129 40.6%	189 59.4%	318 100.0%
3	50 41.0%	72 59.0%	122 100.0%
4	17 43.6%	22 56.4%	39 100.0%
5	8 61.5%	5 38.5%	13 100.0%
6	4 80.0%	1 20.0%	5 100.0%
7	2 100.0%	0 .0%	2 100.0%
Total	575 16.9%	2819 83.1%	3394 100.0%



c) AKT Result by SOURCE OF PRIMARY MEDICAL QUALIFICATION (PMQ)

df = 2, $X^2 = 354.2$, $p < .0001$

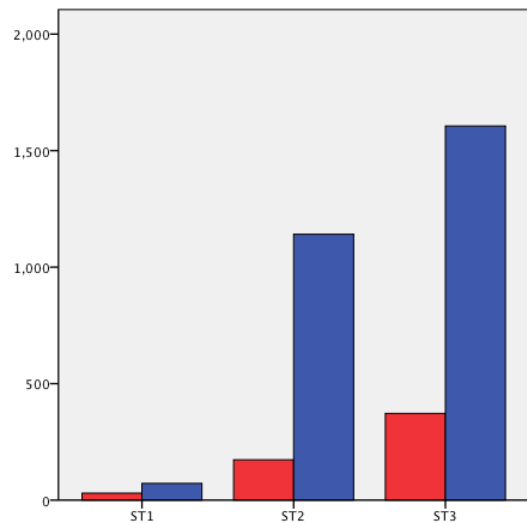
		AKT Result		Total
		Fail	Pass	
Source of Primary Medical Qualification	UK	187 8.3%	2057 91.7%	2244 100.0%
	EEA	74 39.6%	113 60.4%	187 100.0%
	IMG	314 32.6%	649 67.4%	963 100.0%
Total		575 16.9%	2819 83.1%	3394 100.0%



d) AKT Result by YEAR in the TRAINING PROGRAMME

df = 2, $X^2 = 29.5$, $p < .0001$

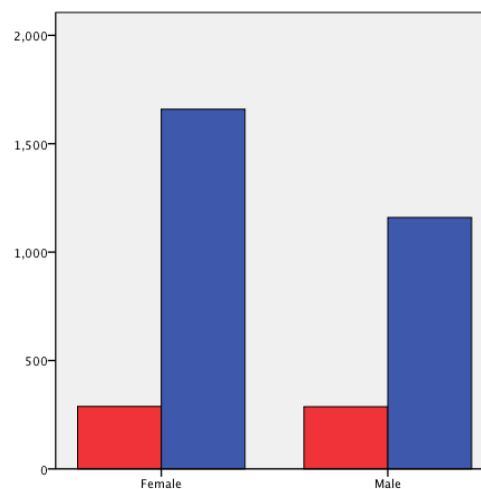
		AKT Result		Total
		Fail	Pass	
Year in Training Programme	ST1	30 29.4%	72 70.6%	102 100.0%
	ST2	173 13.2%	1141 86.8%	1314 100.0%
	ST3	372 18.8%	1606 81.2%	1978 100.0%
Total		575 16.9%	2819 83.1%	3394 100.0%



e) AKT Result by CANDIDATE GENDER

df = 1, $X^2 = 15.0$, $p < .0001$

		AKT Result		Total
		Fail	Pass	
Candidate Gender	Female	288 14.8%	1659 85.2%	1947 100.0%
	Male	287 19.8%	1160 80.2%	1447 100.0%
Total		575 16.9%	2819 83.1%	3394 100.0%



f) AKT Result by CANDIDATE GENDER *within* SOURCE OF PMQ

Area of primary Medical Training			AKT Result		Total
			Fail	Pass	
UK	Candidate Gender	Female	112 7.9%	1298 92.1%	1410 100.0%
		Male	75 9.0%	759 91.0%	834 100.0%
	Total	187 8.3%	2057 91.7%	2244 100.0%	
EEA	Candidate Gender	Female	30 33.3%	60 66.7%	90 100.0%
		Male	44 45.4%	53 54.6%	97 100.0%
	Total	74 39.6%	113 60.4%	187 100.0%	
IMG	Candidate Gender	Female	146 32.7%	301 67.3%	447 100.0%
		Male	168 32.6%	348 67.4%	516 100.0%
	Total	314 32.6%	649 67.4%	963 100.0%	

UK GRADUATES
df = 1, $X^2 = 0.8$, NS

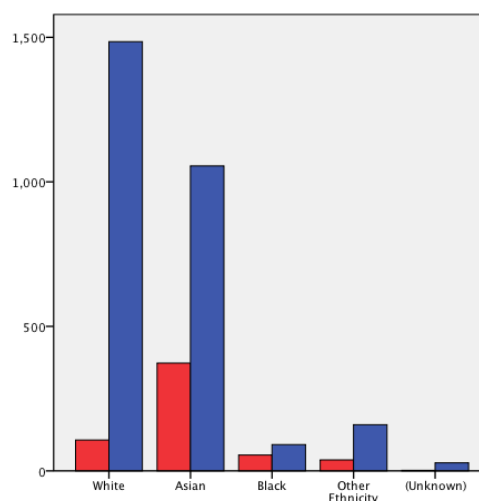
EEA GRADUATES
df = 1, $X^2 = 2.8$, NS

INTERNATIONAL GRADUATES (IMG)
df = 1, $X^2 = 0.0$, NS

g) AKT Result by CLASSIFIED CANDIDATE ETHNICITY (self-reported)

df = 4, $X^2 = 251.2$, $p < .0001$

		AKT Result		Total
		Fail	Pass	
Candidate's Ethnic Group	White	107 6.7%	1485 93.3%	1592 100.0%
	Asian	373 26.1%	1055 73.9%	1428 100.0%
	Black	55 37.7%	91 62.3%	146 100.0%
	Other Ethnicity	38 19.2%	160 80.8%	198 100.0%
	(Unknown)	2 6.7%	28 93.3%	30 100.0%
Total		575 16.9%	2819 83.1%	3394 100.0%



h) AKT Result by CLASSIFIED CANDIDATE ETHNICITY *within* SOURCE OF PMQ

Area of Primary Medical Training		AKT Result		Total
		Fail	Pass	
UK	White	79 5.4%	1395 94.6%	1474 100.0%
	Asian	91 15.6%	493 84.4%	584 100.0%
	Black	6 14.3%	36 85.7%	42 100.0%
	Other Ethnicity	10 8.3%	111 91.7%	121 100.0%
	(Unknown)	1 4.3%	22 95.7%	23 100.0%
	Total	187 8.3%	2057 91.7%	2244 100.0%
EEA	White	15 21.4%	55 78.6%	70 100.0%
	Asian	48 53.9%	41 46.1%	89 100.0%
	Black	7 58.3%	5 41.7%	12 100.0%
	Other Ethnicity	3 23.1%	10 76.9%	13 100.0%
	(Unknown)	1 33.3%	2 66.7%	3 100.0%
	Total	74 39.6%	113 60.4%	187 100.0%
IMG	White	13 27.1%	35 72.9%	48 100.0%
	Asian	234 31.0%	521 69.0%	755 100.0%
	Black	42 45.7%	50 54.3%	92 100.0%
	Other Ethnicity	25 39.1%	39 60.9%	64 100.0%
	(Unknown)	0 .0%	4 100.0%	4 100.0%
	Total	314 32.6%	649 67.4%	963 100.0%

UK GRADUATES

df = 4, $X^2 = 59.7$, $p < .0001$

EEA GRADUATES

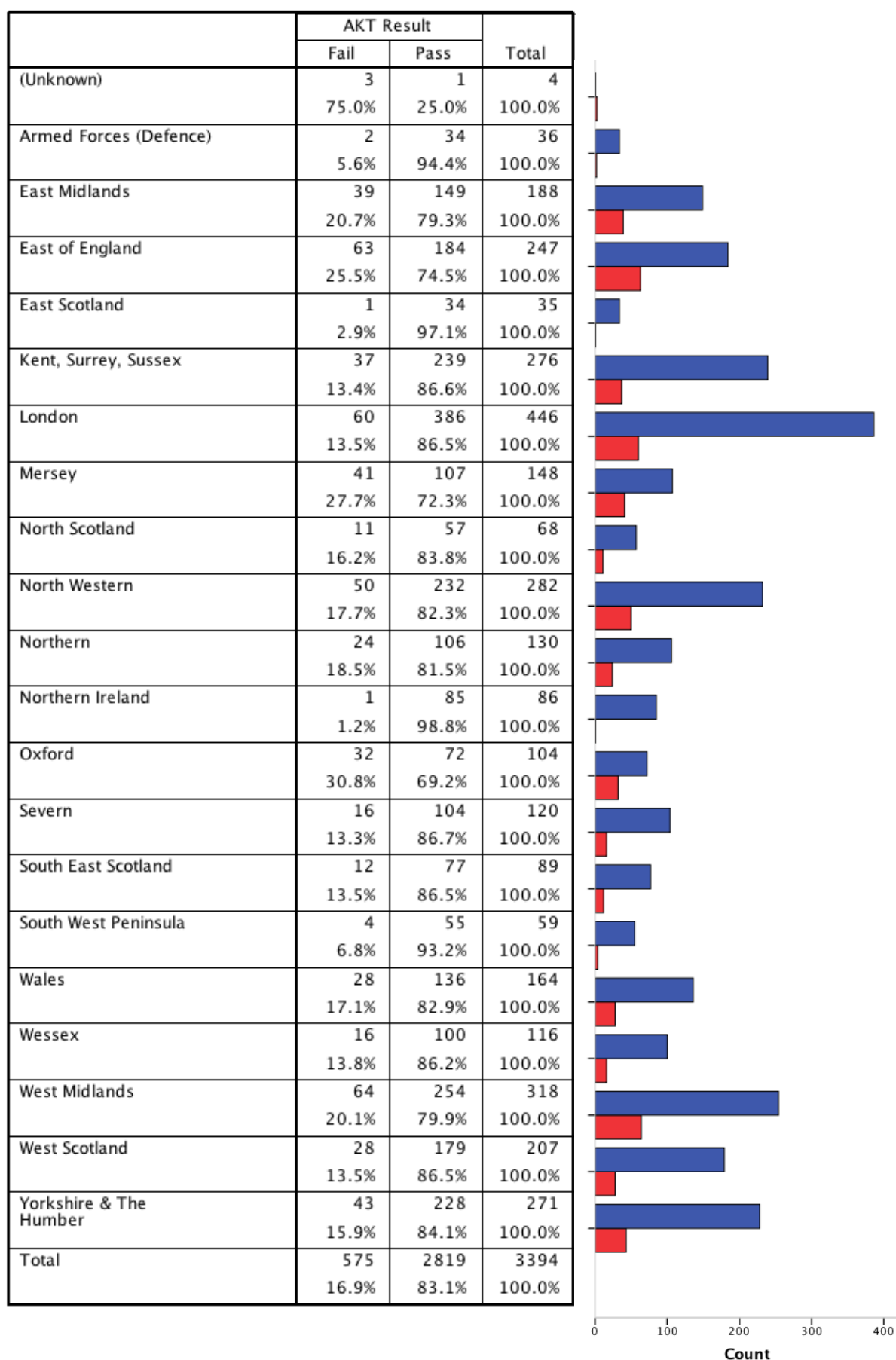
X^2 n/a

INTERNATIONAL GRADUATES (IMG)

df = 4, $X^2 = 11.8$, $p < .02$

i) AKT Result by TRAINING DEANERY

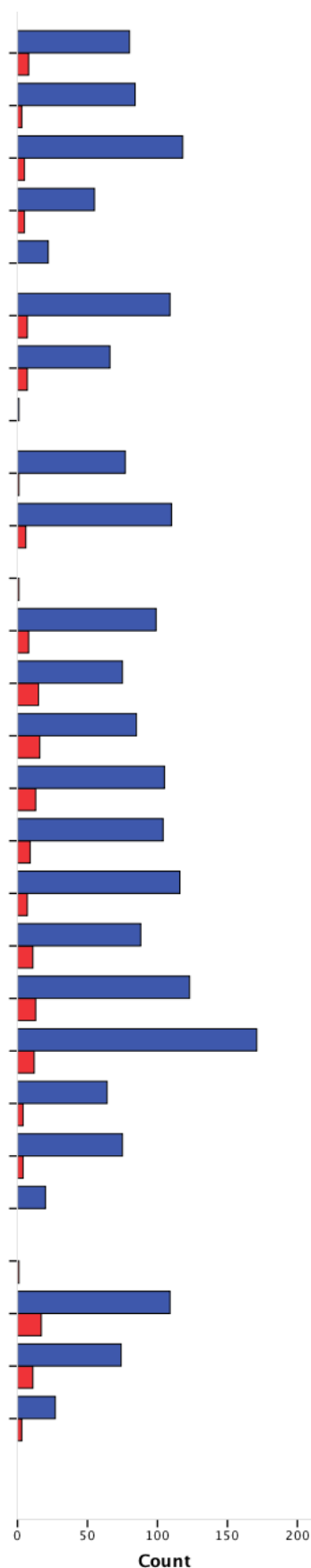
df = 20, $\chi^2 = 92.1$, $p < .0001$



j) AKT Result by SOURCE OF PRIMARY MEDICAL QUALIFICATION, subdivided

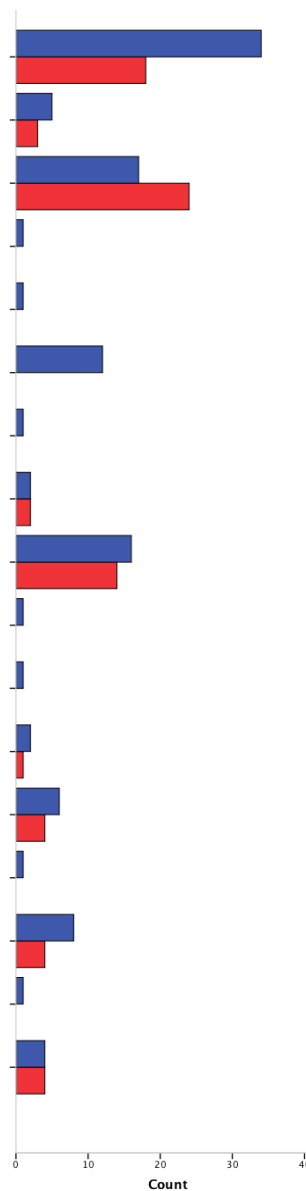
1 BY UK MEDICAL SCHOOL

	AKT Result		Total
	Fail	Pass	
Aberdeen	8 9.1%	80 90.9%	88 100.0%
Belfast, Queen's University	3 3.4%	84 96.6%	87 100.0%
Birmingham	5 4.1%	118 95.9%	123 100.0%
Bristol	5 8.3%	55 91.7%	60 100.0%
Cambridge	0 .0%	22 100.0%	22 100.0%
Cardiff	7 6.0%	109 94.0%	116 100.0%
Dundee	7 9.6%	66 90.4%	73 100.0%
East Anglia	0 .0%	1 100.0%	1 100.0%
Edinburgh	1 1.3%	77 98.7%	78 100.0%
Glasgow	6 5.2%	110 94.8%	116 100.0%
Hull & York	1 100.0%	0 .0%	1 100.0%
Leeds	8 7.5%	99 92.5%	107 100.0%
Leicester	15 16.7%	75 83.3%	90 100.0%
Liverpool	16 15.8%	85 84.2%	101 100.0%
London – Barts & London (Q Mary)	13 11.0%	105 89.0%	118 100.0%
London – Imperial College	9 8.0%	104 92.0%	113 100.0%
London – King's College	7 5.7%	116 94.3%	123 100.0%
London – St George's	11 11.1%	88 88.9%	99 100.0%
London – University College	13 9.6%	123 90.4%	136 100.0%
Manchester	12 6.6%	171 93.4%	183 100.0%
Newcastle-upon-Tyne	4 5.9%	64 94.1%	68 100.0%
Nottingham	4 5.1%	75 94.9%	79 100.0%
Oxford	0 .0%	20 100.0%	20 100.0%
Peninsula	1 100.0%	0 .0%	1 100.0%
Sheffield	17 13.5%	109 86.5%	126 100.0%
Southampton	11 12.9%	74 87.1%	85 100.0%
Warwick	3 10.0%	27 90.0%	30 100.0%
Total	187 8.3%	2057 91.7%	2244 100.0%



2 BY EEA COUNTRY OF GRADUATION

	AKT Result		Total
	Fail	Pass	
Austria	18 34.6%	34 65.4%	52 100.0%
Bulgaria	3 37.5%	5 62.5%	8 100.0%
Czech Republic	24 58.5%	17 41.5%	41 100.0%
Denmark	0 .0%	1 100.0%	1 100.0%
France	0 .0%	1 100.0%	1 100.0%
Germany	0 .0%	12 100.0%	12 100.0%
Greece	0 .0%	1 100.0%	1 100.0%
Hungary	2 50.0%	2 50.0%	4 100.0%
Irish Republic	14 46.7%	16 53.3%	30 100.0%
Italy	0 .0%	1 100.0%	1 100.0%
Lithuania	0 .0%	1 100.0%	1 100.0%
Netherlands	1 33.3%	2 66.7%	3 100.0%
Poland	4 40.0%	6 60.0%	10 100.0%
Portugal	0 .0%	1 100.0%	1 100.0%
Romania	4 33.3%	8 66.7%	12 100.0%
Slovakia	0 .0%	1 100.0%	1 100.0%
Spain	4 50.0%	4 50.0%	8 100.0%
Total	74 39.6%	113 60.4%	187 100.0%



3 BY COUNTRY OF GRADUATION, INTERNATIONALLY, OTHER THAN THE EEA

	AKT Result		Total
	Fail	Pass	
Albania	1 33.3%	2 66.7%	3 100.0%
Algeria	2 66.7%	1 33.3%	3 100.0%
Armenia	0 .0%	1 100.0%	1 100.0%
Australia	0 .0%	1 100.0%	1 100.0%
Bangladesh	15 71.4%	6 28.6%	21 100.0%
Belarus	0 .0%	1 100.0%	1 100.0%
Belize	0 .0%	1 100.0%	1 100.0%
Burundi	0 .0%	1 100.0%	1 100.0%
China	2 66.7%	1 33.3%	3 100.0%
Colombia	1 16.7%	5 83.3%	6 100.0%
Czech Republic	1 100.0%	0 .0%	1 100.0%
Egypt	4 57.1%	3 42.9%	7 100.0%
Ghana	1 20.0%	4 80.0%	5 100.0%
Grenada	0 .0%	1 100.0%	1 100.0%
India	116 25.9%	332 74.1%	448 100.0%
Iran	2 22.2%	7 77.8%	9 100.0%
Iraq	13 43.3%	17 56.7%	30 100.0%
Israel	0 .0%	1 100.0%	1 100.0%
Jordan	0 .0%	1 100.0%	1 100.0%
Kenya	1 33.3%	2 66.7%	3 100.0%
Kyrgyzstan	0 .0%	1 100.0%	1 100.0%
Libya	0 .0%	1 100.0%	1 100.0%

Macedonia	1 25.0%	3 75.0%	4 100.0%
Myanmar	0 .0%	4 100.0%	4 100.0%
Nepal	4 40.0%	6 60.0%	10 100.0%
Netherlands Antilles	0 .0%	1 100.0%	1 100.0%
New Zealand	0 .0%	3 100.0%	3 100.0%
Nicaragua	2 100.0%	0 .0%	2 100.0%
Nigeria	36 48.0%	39 52.0%	75 100.0%
Pakistan	77 38.3%	124 61.7%	201 100.0%
Philippines	3 50.0%	3 50.0%	6 100.0%
Russia	10 40.0%	15 60.0%	25 100.0%
Sierra Leone	0 .0%	1 100.0%	1 100.0%
Singapore	0 .0%	1 100.0%	1 100.0%
South Africa	1 5.9%	16 94.1%	17 100.0%
Sri Lanka	6 27.3%	16 72.7%	22 100.0%
Sudan	1 50.0%	1 50.0%	2 100.0%
Syria	0 .0%	4 100.0%	4 100.0%
Tunisia	0 .0%	2 100.0%	2 100.0%
Turkey	0 .0%	1 100.0%	1 100.0%
Ukraine	2 20.0%	8 80.0%	10 100.0%
Uzbekistan	3 100.0%	0 .0%	3 100.0%
Venezuela	0 .0%	1 100.0%	1 100.0%
West Indies	7 58.3%	5 41.7%	12 100.0%
Zimbabwe	2 28.6%	5 71.4%	7 100.0%
Total	314 32.6%	649 67.4%	963 100.0%

k) AKT Total and Component SCORES, by YEAR IN THE TRAINING PROGRAMME

Note: Interpret cautiously, as this is an aggregation of scores across diets which have slightly different distributions and overall pass-marks. The charts are shown to give a general impression of score differences between the components, and by training period.

Distribution of Total Score, by Year

Year of Training		N	Minimum	Maximum	Mean	Std. Deviation
ST1	Clinical Medicine Score	102	48.43	91.77	72.45	9.48
	Evidence Interpretation Score	102	28.57	95.24	67.41	14.80
	Organisational Questions Score	102	35.00	90.00	61.91	12.35
	Total Score (%)	102	48.74	90.45	70.86	9.20
ST2	Clinical Medicine Score	1314	34.59	93.67	75.50	8.51
	Evidence Interpretation Score	1314	15.00	100.00	71.04	14.96
	Organisational Questions Score	1314	20.00	100.00	62.98	13.57
	Total Score (%)	1314	36.68	91.96	73.78	8.31
ST3	Clinical Medicine Score	1978	38.99	94.97	74.51	8.60
	Evidence Interpretation Score	1978	20.00	100.00	71.90	15.01
	Organisational Questions Score	1978	15.00	100.00	67.21	14.57
	Total Score (%)	1978	38.19	93.47	73.50	8.64

4: CSA Statistics

Summary of Demographic Information on CSA Candidates

Note that 2351 candidates made a total of 2792 attempts at the CSA during 2009. The tables below show the origin of the 2351 candidates, by UK medical school or non-UK country of primary medical qualification—and the percentage from each out of the total candidature. On the next page, the background demographic characteristics of the 2351 are shown, by training Deanery. Other tables report on the 2792 attempts.

UK Medical Graduates: Medical Schools	n	%
Aberdeen	47	2.0
Belfast, Queen's University	54	2.3
Birmingham	91	3.9
Bristol	34	1.4
Cambridge	20	.9
Cardiff	73	3.1
Dundee	47	2.0
East Anglia	2	.1
Edinburgh	67	2.8
Glasgow	73	3.1
Leeds	77	3.3
Leicester	94	4.0
Liverpool	79	3.4
London - Barts & London (Q Mary)	80	3.4
London - Imperial College	76	3.2
London - King's College	110	4.7
London - St George's	62	2.6
London - University College	106	4.5
Manchester	99	4.2
Newcastle-upon-Tyne	62	2.6
Nottingham	55	2.3
Oxford	22	.9
Peninsula	1	.0
Sheffield	84	3.6
Southampton	63	2.7
Warwick	5	.2

Non-UK Medical Graduates: Country of Primary Medical Qualification	n	%
Albania	2	.1
Algeria	1	.0
Armenia	1	.0
Australia	5	.2
Austria	21	.9
Bangladesh	7	.3
Belarus	1	.0
Belgium	1	.0
Belize	1	.0
Bulgaria	4	.2
China (incl. Hong Kong)	2	.1
Colombia	3	.1
Czech Republic	19	.8
Denmark	1	.0
Egypt	7	.3
Germany	15	.6
Ghana	7	.3
Grenada	1	.0
Hungary	2	.1
India	326	13.9
Iran	8	.3
Iraq	24	1.0
Irish Republic	22	.9
Italy	2	.1
Kenya	2	.1
Latvia	3	.1
Libya	2	.1
Macedonia	1	.0
Malaysia	1	.0
Morocco	1	.0
Myanmar	5	.2
Nepal	5	.2
Netherlands	2	.1
Netherlands Antilles	1	.0
New Zealand	4	.2
Nicaragua	1	.0
Nigeria	54	2.3
Pakistan	98	4.2
Philippines	2	.1
Poland	4	.2
Romania	4	.2
Ruanda	1	.0
Russia	12	.5
Serbia & Montenegro	1	.0
Sierra Leone	1	.0
Singapore	1	.0
Slovakia	1	.0
South Africa	12	.5
Spain	4	.2
Sri Lanka	21	.9
Sudan	3	.1
Syria	4	.2
Tadjikistan	1	.0
Tanzania	2	.1
Tunisia	1	.0
Uganda	1	.0
Ukraine	10	.4
United Arab Emirates	1	.0
Uzbekistan	1	.0
West Indies	8	.3
Zambia	2	.1
Zimbabwe	7	.3

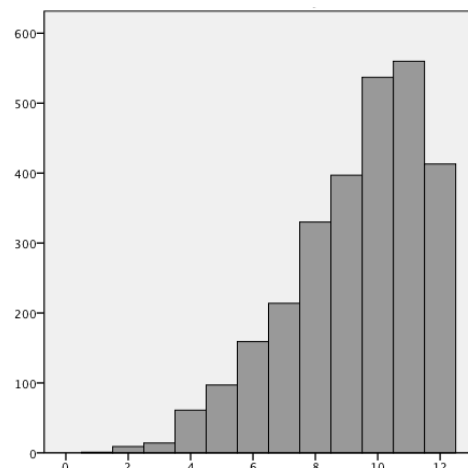
Deanery	Candidate Gender		Classified Candidate Ethnicity					UK or non-UK Medical School		Total
	Female	Male	White	Asian	Black	Other Ethnicity	Not known	UK Medical School	Non-UK Medical School	
(Unknown)	1 50.0%	1 50.0%	0 .0%	1 50.0%	0 .0%	0 .0%	1 50.0%	0 .0%	2 100.0%	2 100.0%
Armed Forces (Defence)	18 37.5%	30 62.5%	36 75.0%	9 18.8%	1 2.1%	1 2.1%	1 2.1%	43 89.6%	5 10.4%	48 100.0%
East Midlands	72 56.3%	56 43.8%	51 39.8%	54 42.2%	12 9.4%	9 7.0%	2 1.6%	81 63.3%	47 36.7%	128 100.0%
East of England	99 50.0%	99 50.0%	60 30.3%	102 51.5%	20 10.1%	13 6.6%	3 1.5%	101 51.0%	97 49.0%	198 100.0%
East Scotland	12 54.5%	10 45.5%	17 77.3%	5 22.7%	0 .0%	0 .0%	0 .0%	16 72.7%	6 27.3%	22 100.0%
Kent, Surrey, Sussex	111 57.5%	82 42.5%	86 44.6%	68 35.2%	15 7.8%	23 11.9%	1 .5%	133 68.9%	60 31.1%	193 100.0%
London	171 59.8%	115 40.2%	109 38.1%	131 45.8%	19 6.6%	23 8.0%	4 1.4%	198 69.2%	88 30.8%	286 100.0%
Mersey	47 51.1%	45 48.9%	58 63.0%	24 26.1%	2 2.2%	6 6.5%	2 2.2%	69 75.0%	23 25.0%	92 100.0%
North Scotland	20 46.5%	23 53.5%	23 53.5%	12 27.9%	4 9.3%	4 9.3%	0 .0%	25 58.1%	18 41.9%	43 100.0%
North Western	78 53.8%	67 46.2%	70 48.3%	59 40.7%	7 4.8%	8 5.5%	1 .7%	99 68.3%	46 31.7%	145 100.0%
Northern	61 51.3%	58 48.7%	58 48.7%	49 41.2%	3 2.5%	8 6.7%	1 .8%	60 50.4%	59 49.6%	119 100.0%
Northern Ireland	45 72.6%	17 27.4%	60 96.8%	2 3.2%	0 .0%	0 .0%	0 .0%	57 91.9%	5 8.1%	62 100.0%
Oxford	55 61.1%	35 38.9%	48 53.3%	32 35.6%	4 4.4%	4 4.4%	2 2.2%	71 78.9%	19 21.1%	90 100.0%
Severn	58 62.4%	35 37.6%	69 74.2%	17 18.3%	1 1.1%	6 6.5%	0 .0%	72 77.4%	21 22.6%	93 100.0%
South East Scotland	31 42.5%	42 57.5%	45 61.6%	21 28.8%	4 5.5%	3 4.1%	0 .0%	49 67.1%	24 32.9%	73 100.0%
South West Peninsula	25 55.6%	20 44.4%	37 82.2%	5 11.1%	0 .0%	3 6.7%	0 .0%	38 84.4%	7 15.6%	45 100.0%
Wales	74 53.2%	65 46.8%	71 51.1%	61 43.9%	2 1.4%	5 3.6%	0 .0%	80 57.6%	59 42.4%	139 100.0%
Wessex	53 60.2%	35 39.8%	63 71.6%	17 19.3%	1 1.1%	5 5.7%	2 2.3%	70 79.5%	18 20.5%	88 100.0%
West Midlands	103 58.2%	74 41.8%	55 31.1%	106 59.9%	3 1.7%	9 5.1%	4 2.3%	113 63.8%	64 36.2%	177 100.0%
West Scotland	58 39.7%	88 60.3%	74 50.7%	54 37.0%	8 5.5%	10 6.8%	0 .0%	87 59.6%	59 40.4%	146 100.0%
Yorkshire & The Humber	95 58.6%	67 41.4%	86 53.1%	63 38.9%	5 3.1%	6 3.7%	2 1.2%	122 75.3%	40 24.7%	162 100.0%
Total	1287 54.7%	1064 45.3%	1176 50.0%	892 37.9%	111 4.7%	146 6.2%	26 1.1%	1584 67.4%	767 32.6%	2351 100.0%

a) CSA Result, OVERALL; No of Cases Passed, OVERALL

	N	Minimum	Maximum	Mean	Std. Deviation
CSA Cases Passed	2792	1	12	9.29	2.155

	Frequency	Percent
Valid Fail	555	19.9
Pass	2237	80.1
Total	2792	100.0

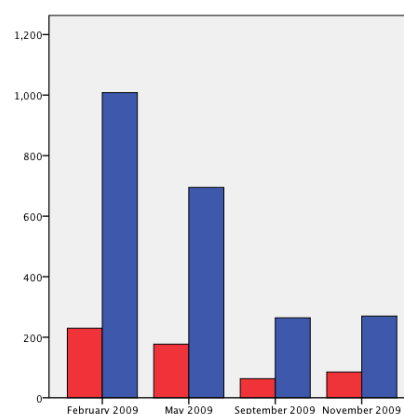
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 1	1	.0	.0	.0
2	9	.3	.3	.4
3	14	.5	.5	.9
4	61	2.2	2.2	3.0
5	97	3.5	3.5	6.5
6	159	5.7	5.7	12.2
7	214	7.7	7.7	19.9
8	330	11.8	11.8	31.7
9	397	14.2	14.2	45.9
10	537	19.2	19.2	65.2
11	560	20.1	20.1	85.2
12	413	14.8	14.8	100.0
Total	2792	100.0	100.0	



b) CSA Result, overall; No of Cases Passed - by CSA DIET

Result: $df = 3, X^2 = 5.17, NS$

	CSA Result		Total
	Fail	Pass	
February 2009	230 18.6%	1008 81.4%	1238 100.0%
May 2009	177 20.3%	695 79.7%	872 100.0%
September 2009	63 19.3%	264 80.7%	327 100.0%
November 2009	85 23.9%	270 76.1%	355 100.0%
Total	555 19.9%	2237 80.1%	2792 100.0%

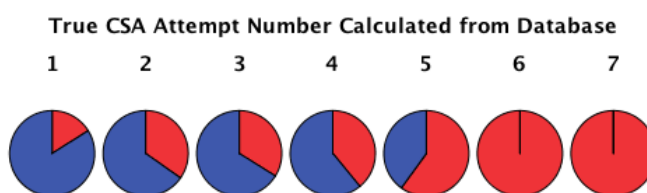


	N	Minimum	Maximum	Mean	Std. Deviation
February 2009 CSA Cases Passed	1238	2	12	9.41	2.122
May 2009 CSA Cases Passed	872	2	12	9.27	2.196
September 2009 CSA Cases Passed	327	3	12	9.21	1.936
November 2009 CSA Cases Passed	355	1	12	8.99	2.325

c) CSA Result, overall; No of Cases Passed - by ATTEMPT at the CSA

Result: $df = 6, X^2 = 124.1, p < .0001$

	CSA Result		Total
	Fail	Pass	
1	364 16.1%	1897 83.9%	2261 100.0%
2	122 34.8%	229 65.2%	351 100.0%
3	42 33.9%	82 66.1%	124 100.0%
4	16 39.0%	25 61.0%	41 100.0%
5	6 60.0%	4 40.0%	10 100.0%
6	4 100.0%	0 .0%	4 100.0%
7	1 100.0%	0 .0%	1 100.0%
Total	555 19.9%	2237 80.1%	2792 100.0%



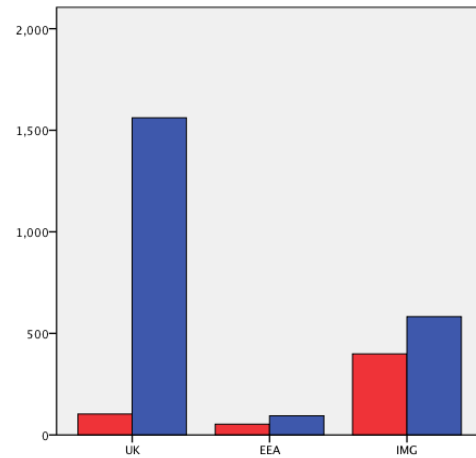
Cases Passed

CSA Attempt	N	Minimum	Maximum	Mean	Std. Deviation
1	2261	2	12	9.56	2.072
2	351	1	12	8.23	2.187
3	124	3	12	8.02	2.010
4	41	5	12	8.12	1.805
5	10	5	9	6.80	1.619
6	4	5	7	6.00	1.155
7	1	7	7	7.00	.

d) CSA Result, overall; No of Cases Passed - by SOURCE OF PRIMARY MEDICAL QUALIFICATION (PMQ)

Result: $df = 2, X^2 = 486.3, p < .0001$

	CSA Result		Total
	Fail	Pass	
UK	103 6.2%	1561 93.8%	1664 100.0%
EEA	53 36.1%	94 63.9%	147 100.0%
IMG	399 40.7%	582 59.3%	981 100.0%
Total	555 19.9%	2237 80.1%	2792 100.0%

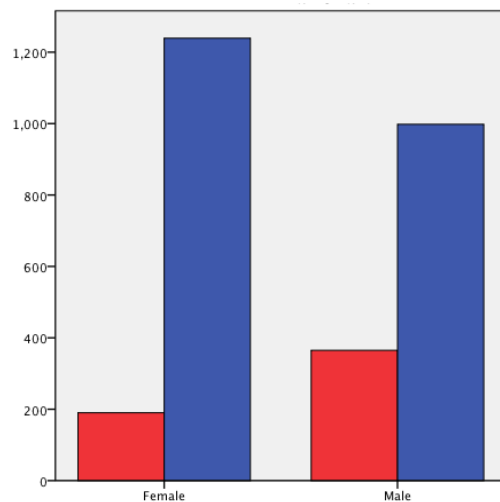


Source of PMQ	N	Minimum	Maximum	Mean	Std. Deviation
UK	1664	2	12	10.23	1.587
EEA	147	3	12	8.36	2.037
IMG	981	1	12	7.84	2.148

e) CSA Result, overall; No of Cases Passed - by CANDIDATE GENDER

Result: $df = 1, X^2 = 79.6, p < .0001$

	CSA Result		Total
	Fail	Pass	
Female	190 13.3%	1239 86.7%	1429 100.0%
Male	365 26.8%	998 73.2%	1363 100.0%
Total	555 19.9%	2237 80.1%	2792 100.0%



Candidate Gender		N	Minimum	Maximum	Mean	Std. Deviation
Female	CSA Cases Passed	1429	2	12	9.80	1.965
Male	CSA Cases Passed	1363	1	12	8.76	2.218

f) CSA Result, overall - by CANDIDATE GENDER *within* SOURCE OF PMQ

Source of PMQ		CSA Result		Total
		Fail	Pass	
UK	Female	29 3.1%	920 96.9%	949 100.0%
	Male	74 10.3%	641 89.7%	715 100.0%
	Total	103 6.2%	1561 93.8%	1664 100.0%
EEA	Female	21 30.9%	47 69.1%	68 100.0%
	Male	32 40.5%	47 59.5%	79 100.0%
	Total	53 36.1%	94 63.9%	147 100.0%
IMG	Female	140 34.0%	272 66.0%	412 100.0%
	Male	259 45.5%	310 54.5%	569 100.0%
	Total	399 40.7%	582 59.3%	981 100.0%

UK:
df = 1, $X^2 = 37.4$ p<.0001

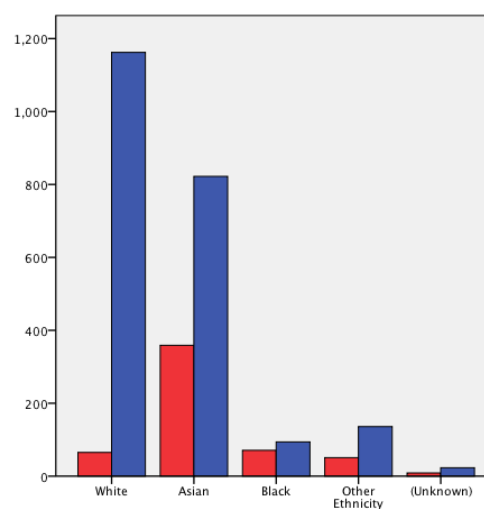
EEA:
df=1, $X^2 = 1.5$, NS

IMG:
Df=1, $X^2 = 132.$, P<.0001

g) CSA Result, overall; No of Cases Passed - by CLASSIFIED CANDIDATE ETHNICITY

Result: df = 4, $X^2 = 309.2$, p<.0001

	CSA Result		Total
	Fail	Pass	
White	65 5.3%	1162 94.7%	1227 100.0%
Asian	359 30.4%	822 69.6%	1181 100.0%
Black	71 43.0%	94 57.0%	165 100.0%
Other Ethnicity	51 27.3%	136 72.7%	187 100.0%
(Unknown)	9 28.1%	23 71.9%	32 100.0%
Total	555 19.9%	2237 80.1%	2792 100.0%



h) CSA Result - by CLASSIFIED CANDIDATE ETHNICITY *within* SOURCE OF PMQ

Source of PMQ		CSA Result		Total
		Fail	Pass	
UK	White	35 3.1%	1080 96.9%	1115 100.0%
	Asian	46 11.5%	354 88.5%	400 100.0%
	Black	5 17.2%	24 82.8%	29 100.0%
	Other Ethnicity	13 12.7%	89 87.3%	102 100.0%
	(Unknown)	4 22.2%	14 77.8%	18 100.0%
	Total	103 6.2%	1561 93.8%	1664 100.0%
	EEA	White	20 31.7%	43 68.3%
Asian	19 33.3%	38 66.7%	57 100.0%	
Black	11 64.7%	6 35.3%	17 100.0%	
Other Ethnicity	2 25.0%	6 75.0%	8 100.0%	
(Unknown)	1 50.0%	1 50.0%	2 100.0%	
Total	53 36.1%	94 63.9%	147 100.0%	
IMG	White	10 20.4%	39 79.6%	49 100.0%
	Asian	294 40.6%	430 59.4%	724 100.0%
	Black	55 46.2%	64 53.8%	119 100.0%
	Other Ethnicity	36 46.8%	41 53.2%	77 100.0%
	(Unknown)	4 33.3%	8 66.7%	12 100.0%
	Total	399 40.7%	582 59.3%	981 100.0%

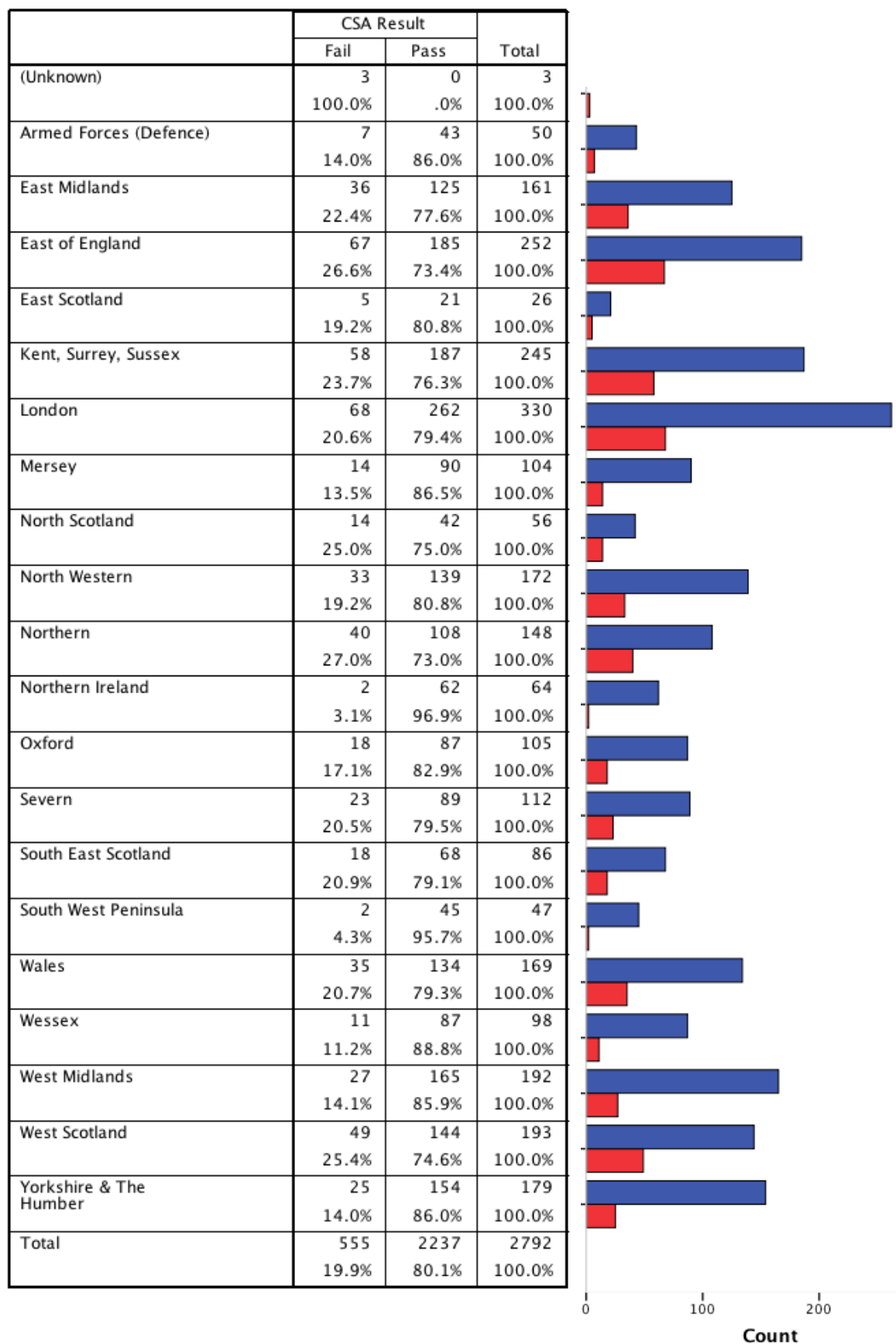
UK:
df = 4, $X^2 = 58.9$, $p < .0001$

EEA:
df = 4, $X^2 = 7.3$, NS

IMG:
df = 4, $X^2 = 11.3$, $p < .05$

i) CSA Result, overall - by TRAINING DEANERY

df = 20, $\chi^2 = 67.1$, $p < .0001$



j) CSA No of Cases Passed - by TRAINING DEANERY

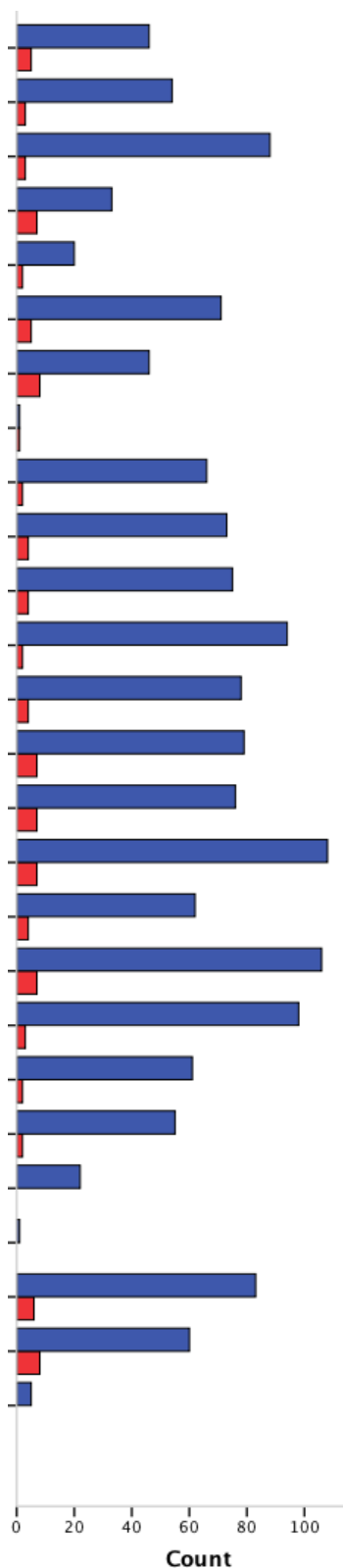
Anova F = 4.0, p<.0001

	N	Minimum	Maximum	Mean	Std. Deviation
(Unknown)	3	1	7	4.00	3.000
Armed Forces (Defence)	50	4	12	9.90	1.972
East Midlands	161	2	12	9.24	2.199
East of England	252	2	12	8.89	2.166
East Scotland	26	4	12	9.27	2.554
Kent, Surrey, Sussex	245	3	12	9.05	2.185
London	330	2	12	9.29	2.209
Mersey	104	4	12	9.41	2.022
North Scotland	56	3	12	8.73	2.220
North Western	172	3	12	9.26	2.112
Northern	148	2	12	8.73	2.337
Northern Ireland	64	7	12	10.55	1.321
Oxford	105	4	12	9.48	2.135
Severn	112	4	12	9.68	2.186
South East Scotland	86	4	12	9.24	2.185
South West Peninsula	47	6	12	10.04	1.351
Wales	169	3	12	9.13	2.069
Wessex	98	4	12	9.93	1.933
West Midlands	192	2	12	9.48	2.084
West Scotland	193	2	12	8.91	2.217
Yorkshire & The Humber	179	3	12	9.79	1.916

k) CSA Result - by SOURCE OF PRIMARY MEDICAL QUALIFICATION, subdivided

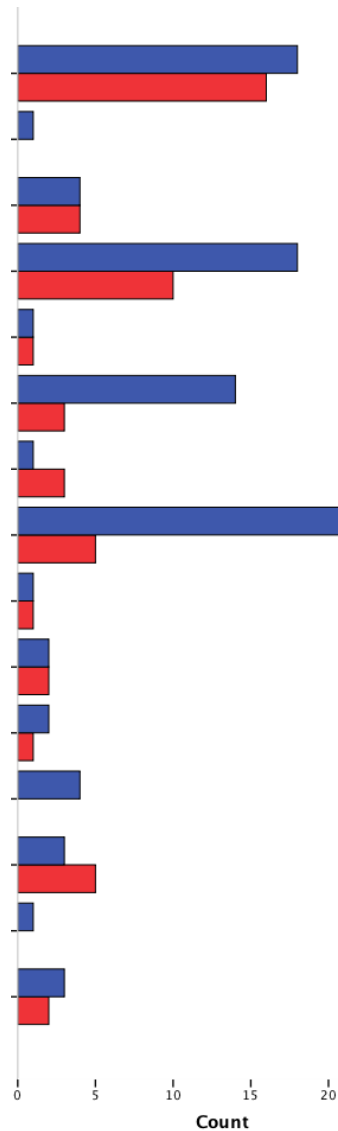
1 BY UK MEDICAL SCHOOL

	CSA Result		Total
	Fail	Pass	
Aberdeen	5 9.8%	46 90.2%	51 100.0%
Belfast, Queen's University	3 5.3%	54 94.7%	57 100.0%
Birmingham	3 3.3%	88 96.7%	91 100.0%
Bristol	7 17.5%	33 82.5%	40 100.0%
Cambridge	2 9.1%	20 90.9%	22 100.0%
Cardiff	5 6.6%	71 93.4%	76 100.0%
Dundee	8 14.8%	46 85.2%	54 100.0%
East Anglia	1 50.0%	1 50.0%	2 100.0%
Edinburgh	2 2.9%	66 97.1%	68 100.0%
Glasgow	4 5.2%	73 94.8%	77 100.0%
Leeds	4 5.1%	75 94.9%	79 100.0%
Leicester	2 2.1%	94 97.9%	96 100.0%
Liverpool	4 4.9%	78 95.1%	82 100.0%
London – Barts & London (Q Mary)	7 8.1%	79 91.9%	86 100.0%
London – Imperial College	7 8.4%	76 91.6%	83 100.0%
London – King's College	7 6.1%	108 93.9%	115 100.0%
London – St George's	4 6.1%	62 93.9%	66 100.0%
London – University College	7 6.2%	106 93.8%	113 100.0%
Manchester	3 3.0%	98 97.0%	101 100.0%
Newcastle-upon-Tyne	2 3.2%	61 96.8%	63 100.0%
Nottingham	2 3.5%	55 96.5%	57 100.0%
Oxford	0 .0%	22 100.0%	22 100.0%
Peninsula	0 .0%	1 100.0%	1 100.0%
Sheffield	6 6.7%	83 93.3%	89 100.0%
Southampton	8 11.8%	60 88.2%	68 100.0%
Warwick	0 .0%	5 100.0%	5 100.0%
Total	103 6.2%	1561 93.8%	1664 100.0%



2 BY EEA COUNTRY

	CSA Result		Total
	Fail	Pass	
Austria	16 47.1%	18 52.9%	34 100.0%
Belgium	0 .0%	1 100.0%	1 100.0%
Bulgaria	4 50.0%	4 50.0%	8 100.0%
Czech Republic	10 35.7%	18 64.3%	28 100.0%
Denmark	1 50.0%	1 50.0%	2 100.0%
Germany	3 17.6%	14 82.4%	17 100.0%
Hungary	3 75.0%	1 25.0%	4 100.0%
Irish Republic	5 19.2%	21 80.8%	26 100.0%
Italy	1 50.0%	1 50.0%	2 100.0%
Latvia	2 50.0%	2 50.0%	4 100.0%
Netherlands	1 33.3%	2 66.7%	3 100.0%
Poland	0 .0%	4 100.0%	4 100.0%
Romania	5 62.5%	3 37.5%	8 100.0%
Slovakia	0 .0%	1 100.0%	1 100.0%
Spain	2 40.0%	3 60.0%	5 100.0%
Total	53 36.1%	94 63.9%	147 100.0%



3 BY COUNTRY OF GRADUATION, INTERNATIONALLY, OTHER THAN THE EEA

	CSA Result		Total
	Fail	Pass	
Albania	3 75.0%	1 25.0%	4 100.0%
Algeria	1 50.0%	1 50.0%	2 100.0%
Armenia	0 .0%	1 100.0%	1 100.0%
Australia	0 .0%	5 100.0%	5 100.0%
Bangladesh	7 70.0%	3 30.0%	10 100.0%
Belarus	1 50.0%	1 50.0%	2 100.0%
Belize	0 .0%	1 100.0%	1 100.0%
Burundi	1 50.0%	1 50.0%	2 100.0%
China (incl. Hong Kong)	0 .0%	2 100.0%	2 100.0%
Colombia	3 60.0%	2 40.0%	5 100.0%
Egypt	5 45.5%	6 54.5%	11 100.0%
Ghana	1 12.5%	7 87.5%	8 100.0%
Grenada	0 .0%	1 100.0%	1 100.0%
India	192 39.7%	292 60.3%	484 100.0%
Iran	3 30.0%	7 70.0%	10 100.0%
Iraq	26 57.8%	19 42.2%	45 100.0%
Kenya	1 33.3%	2 66.7%	3 100.0%
Libya	0 .0%	2 100.0%	2 100.0%
Macedonia	1 50.0%	1 50.0%	2 100.0%
Malaysia	0 .0%	1 100.0%	1 100.0%
Morocco	1 50.0%	1 50.0%	2 100.0%
Myanmar	7 58.3%	5 41.7%	12 100.0%
Nepal	1 20.0%	4 80.0%	5 100.0%
Netherlands Antilles	0 .0%	1 100.0%	1 100.0%

New Zealand	0 .0%	4 100.0%	4 100.0%
Nicaragua	1 50.0%	1 50.0%	2 100.0%
Nigeria	38 46.9%	43 53.1%	81 100.0%
Pakistan	63 43.2%	83 56.8%	146 100.0%
Philippines	0 .0%	2 100.0%	2 100.0%
Russia	8 44.4%	10 55.6%	18 100.0%
Serbia & Montenegro	0 .0%	1 100.0%	1 100.0%
Sierra Leone	1 50.0%	1 50.0%	2 100.0%
Singapore	0 .0%	1 100.0%	1 100.0%
South Africa	1 8.3%	11 91.7%	12 100.0%
Sri Lanka	12 38.7%	19 61.3%	31 100.0%
Sudan	1 25.0%	3 75.0%	4 100.0%
Syria	0 .0%	4 100.0%	4 100.0%
Tadjikistan	0 .0%	1 100.0%	1 100.0%
Tanzania	2 50.0%	2 50.0%	4 100.0%
Tunisia	3 100.0%	0 .0%	3 100.0%
Uganda	0 .0%	1 100.0%	1 100.0%
Ukraine	6 37.5%	10 62.5%	16 100.0%
United Arab Emirates	0 .0%	1 100.0%	1 100.0%
Uzbekistan	1 50.0%	1 50.0%	2 100.0%
West Indies	2 20.0%	8 80.0%	10 100.0%
Zambia	4 80.0%	1 20.0%	5 100.0%
Zimbabwe	2 22.2%	7 77.8%	9 100.0%
Total	399 40.7%	582 59.3%	981 100.0%

I) CSA Feedback Statements, AS % OF ALL 'FAILED' CASES: ALL CANDIDATES, and by SOURCE OF PRIMARY MEDICAL QUALIFICATION

Table gives the numbered feedback statements in order of prevalence, by candidate group, together with the percentage of all cases 'failed' in that candidate group receiving the feedback statement.

Feedback Statements	% of 'failed' cases receiving the feedback		
	All Grads	UK	Non-UK
06 Does not develop a management plan (including prescribing and referral) that is appropriate and in line with current best practice or make adequate arrangements for follow-up and safety netting	61.5%	62.0%	61.1%
14 Does not recognise the challenge (e.g. the patient's problem, ethical dilemma etc.)	36.2%	36.4%	36.0%
10 Does not develop a shared management plan or clarify the roles of doctor and patient	35.1%	32.5%	36.8%
05 Does not make appropriate diagnosis	28.8%	32.3%	26.5%
01 Disorganised and unsystematic in gathering information from history taking, examination and investigation	27.7%	22.6%	31.0%
08 Does not identify patient's agenda, health beliefs & preferences / does not make use of verbal & non-verbal cues	27.6%	23.9%	30.0%
02 Does not identify abnormal findings or results or fails to recognise their implications	25.5%	27.6%	24.1%
09 Does not identify or use appropriate psychological or social information to place the problem in context	22.7%	21.6%	23.4%
13 Disorganised / unstructured consultation	20.6%	15.4%	24.1%
16 Shows inappropriate doctor-centredness	20.5%	17.4%	22.6%
11 Does not use explanations that are relevant and understandable to the patient	20.0%	14.1%	23.9%
07 Does not demonstrate an awareness of management of risk and health promotion	19.2%	20.7%	18.1%
03 Data gathering does not appear to be guided by the probabilities of disease	17.4%	17.2%	17.6%
15 Shows poor time management	17.0%	16.5%	17.3%
12 Does not show sensitivity for the patient's feelings in all aspects of the consultation including physical examination	11.5%	9.6%	12.8%
04 Does not undertake physical examination competently, or use instruments proficiently	8.5%	7.9%	8.8%

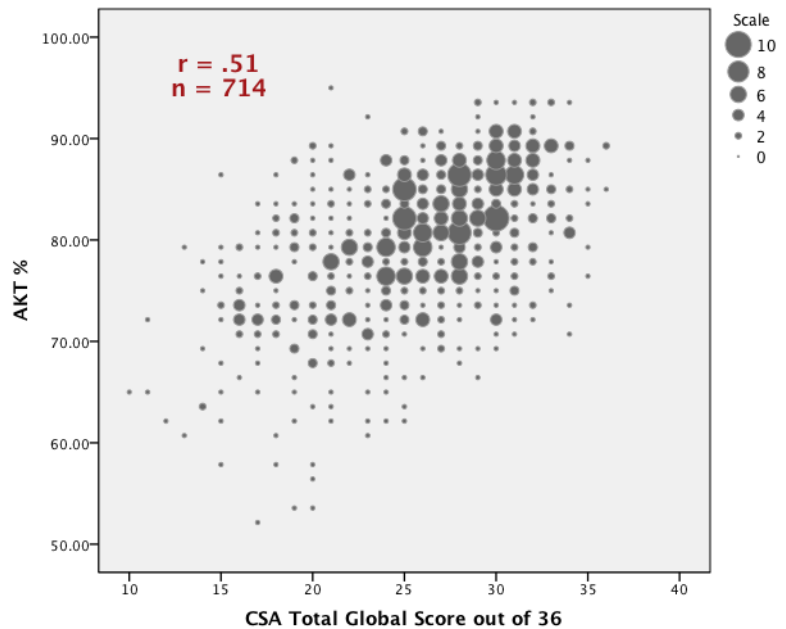
5: Inter-component Statistics and Analytical Statistics of Test Quality

Inter-component Statistics

Currently it is only possible to make comparisons between the performance of candidates between the AKT and the CSA. Even this is not straightforward: candidates may take the AKT at any time in their training, and the CSA at any time in their final year; thus one candidate may take both tests at about the same time in their training, another might take them two years apart; and of course candidates can have more than one attempt at either test.

That said, many candidates take the AKT early in ST3 and the CSA in the middle of ST3. When numbers are large (hundreds) in this situation, typical correlations between AKT and CSA are around 0.5.

The accompanying scatterplot is an example showing such a relationship between an October AKT (2008) and the CSA the following February (2009).



Test Quality Information: AKT

Coefficient alpha (and the measurement error estimate) of the three diets of the AKT is straightforwardly calculated. Alpha continues to be constant at 0.88 – 0.90 over the three diets; again, no more than two items were excluded from the 200 in any diet; and the SEM is 2.7% - 2.8%. These figures describe a multi-choice assessment which is performing at 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 (roughly 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 good consistency 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 stability vs test security and fairness. The number taking the CSA varies from between about 325 and 1250 candidates at a diet.

Thus the quality of the CSA is monitored both qualitatively and quantitatively, the latter at a number of levels of detail with different objectives—but with reliability and fairness always foremost in mind. 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 varies greatly day on day: 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 global scores which, having limited variance (0, 1, 2 or 3), tend to minimise the consequent alpha coefficients.

On this basis, overall, in 2009 the CSA daily alpha averaged 0.72 (0.70 in 2008) with the 12 cases presently used. The range was 0.57 to 0.85, and a SD of 0.062.

In the next year, a number of developments will take place:

- The difficulty of the daily 'palette' will be better monitored better and more formally equated;
- the way in which the CSA is scored will be modified, so as to make use of the three domain scores as opposed to the global score alone;
- the sophistication of the standard-setting process will be enhanced using a more conventional borderline group system, with, possibly additional criteria based on the individual domains; and
- the number of operational stations will be increased from 12 to 13.

This is expected to improve equity to candidates across the days and circuits and also modestly to enhance the assessment's reliability.

There are technical issues and arguments which propose that the alpha coefficient, whose importance is emphasised by PMETB particularly, may not be the only important (or best) indicator of the quality of an assessment such as the CSA, and the assessment will work on reducing its measurement error alongside these developments. However, from a psychometric point of view, it is unlikely that candidate performance in a specialty with the unique breadth and dimensions of general practice and the range of skills necessarily to be tested under examination conditions, can ever be assessed to the accuracy sought by PMETB (consistently, $\alpha = 0.8 - 0.9$) with the testing time currently permitted (approx 2 hrs). For the RCGP, this is exacerbated by the singular tribulation amongst Royal Colleges of having to make payment to its examiners, which provides an inevitable additional restraint on test length.

* * *