nMRCGP: Statistics 2008

First Annual Report showing data from the AKT and CSA Assessments throughout the year

INTRODUCTION

This Report relates to the first full year of the formal nMRCGP assessments, 2008. It presents the statistics which summarise the outcomes of all the deliveries of the formal nMRCGP examinations during that year – the Applied Knowledge Test (AKT) and the Clinical Skills Assessment (CSA). They extend the basic data already reported to the Postgraduate Medical Education and Training Board (PMETB).

The Report first presents a brief summary of both of these assessment components and their current standard-setting procedures, to orientate any reader who may be unfamiliar with these. Full background information on the nMRCGP, AKT and 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. Each is prefaced by a summary of the principal background information on candidates, listed by training Deanery.

Please note that this report is descriptive and neither interpretative nor discursive. Data – and, where appropriate, statistical significances – are presented without comment.

Readers may be interested to see the demographics of candidates' backgrounds, and then the breakdown of exam performance according to these variables. Results are also presented by training Deaneries—though a word of caution is appropriate here as to interpretation of these and other results. There are clear differences between certain sub-groups in their performance on both the examinations 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. The RCGP Assessment Committee also notes, and is broadly reassured by, the largely parallel nature of the sub-group differences as between the AKT and the CSA.

In general, the Committee is pleased with the development of these two formal assessments. The AKT—essentially an evolution of an existing assessment procedure, the MCQ/MCP in the 'old' MRCGP examination—demonstrates extremely secure psychometric characteristics. The CSA, an entirely new assessment, will take time to bed down, but for a new assessment of this length it shows encouraging psychometrics; work is continuing under PMETB's advice towards refining the setting of its standard, and the CSA Core Group is working towards increasing its technical reliability, and also towards enhancing the fairness of its daily deliveries by improved equating of the requirements of each day's 'palette' of cases.

Richard Wakeford
Psychometric/Assessment Consultant to the RCGP
September 2009

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

The nMRCGP and its Function

The nMRCGP comprises three sets of assessment procedures – a so-called 'tripos' – 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 nMRCGP 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 nMRCGP'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 and others*

No compensation is permitted between the CSA and the AKT—each must be separately passed.

It should be noted that 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. (The College has other arrangements to support GPs practising in other countries and who seek affiliation with it or Membership of it – especially '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 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.

A 'just passing' score 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. 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 'just passing score'. The reliability of the AKT is estimated by calculating Cronbach's *co-efficient alpha*.

Candidates are subsequently 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). 13 cases long (12 + 1 pilot case), it is delivered in a purpose-built College assessment centre (in Croydon, S 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. 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 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 2008, 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 *co-efficient 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.

For the purposes of 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. 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 Table b), the statistics aggregate all candidate attempts in 2008 at the AKT. Some candidates appear twice (7.1 %), others three times (1.1 %). 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 another, parallel report.

Observant readers may notice that figures in this report do not always concur precisely with those given in various reports of AKT examinations in 2008 on the College website. The latter 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 nMRCGP.

Particular tables could be presented for first timers only, but have not been, so as to keep this document reasonably brief.

Note regarding the interpretation of the CSA statistics

Pending completion of a comprehensive relational database, two simple (though large) databases have been constructed for the 2008 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 and 'out of frame' candidates. 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 Table c), the statistics aggregate all 2,435 attempts by 2,030 nMRCGP candidates in 2008 at the CSA. Some candidates appear twice (12.8 % of all attempts), others three times (3.4 %) and a few (11) four times (0.5 %). 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
- Updatings 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*

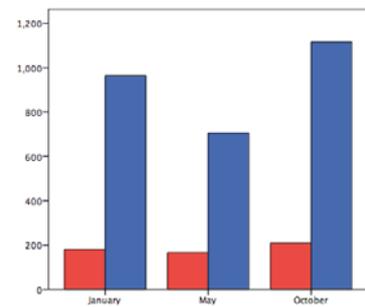## Summary of Demographic Information on AKT Candidates

Note that 3068 candidates made a total of 3340 attempts at the AKT during 2008. This table shows the background demographic characteristics of the 3068, by training Deanery. Other tables report on the 3340 attempts.

Training Deanery	Candidate Gender		Candidate Ethnicity (classified)					UK or non-UK Graduate			Total
	Female	Male	White	Asian	Black	Other Ethnicity	Unknown	UK Graduate	Non-UK Graduate	Unknown	
(Unknown)	11	4	2	1	0	1	11	1	0	14	15
	73.3%	26.7%	13.3%	6.7%	.0%	6.7%	73.3%	6.7%	.0%	93.3%	100.0%
Armed Forces (Defence)	21	31	39	10	1	2	0	43	9	0	52
	40.4%	59.6%	75.0%	19.2%	1.9%	3.8%	.0%	82.7%	17.3%	.0%	100.0%
East Midlands	93	55	66	56	15	10	1	99	49	0	148
	62.8%	37.2%	44.6%	37.8%	10.1%	6.8%	.7%	66.9%	33.1%	.0%	100.0%
East of England	122	105	78	113	20	13	3	127	100	0	227
	53.7%	46.3%	34.4%	49.8%	8.8%	5.7%	1.3%	55.9%	44.1%	.0%	100.0%
East Scotland	19	13	27	5	0	0	0	27	5	0	32
	59.4%	40.6%	84.4%	15.6%	.0%	.0%	.0%	84.4%	15.6%	.0%	100.0%
Kent, Surrey, Sussex	157	119	120	102	17	33	4	184	90	2	276
	56.9%	43.1%	43.5%	37.0%	6.2%	12.0%	1.4%	66.7%	32.6%	.7%	100.0%
London	213	126	133	161	24	19	2	254	83	2	339
	62.8%	37.2%	39.2%	47.5%	7.1%	5.6%	.6%	74.9%	24.5%	.6%	100.0%
Mersey	71	61	75	45	1	9	2	91	40	1	132
	53.8%	46.2%	56.8%	34.1%	.8%	6.8%	1.5%	68.9%	30.3%	.8%	100.0%
North Scotland	35	34	42	18	2	5	2	44	25	0	69
	50.7%	49.3%	60.9%	26.1%	2.9%	7.2%	2.9%	63.8%	36.2%	.0%	100.0%
North Western	138	106	119	97	9	16	3	167	77	0	244
	56.6%	43.4%	48.8%	39.8%	3.7%	6.6%	1.2%	68.4%	31.6%	.0%	100.0%
Northern	71	64	64	60	5	5	1	64	71	0	135
	52.6%	47.4%	47.4%	44.4%	3.7%	3.7%	.7%	47.4%	52.6%	.0%	100.0%
Northern Ireland	60	25	84	1	0	0	0	78	7	0	85
	70.6%	29.4%	98.8%	1.2%	.0%	.0%	.0%	91.8%	8.2%	.0%	100.0%
Oxford	77	42	66	43	3	7	0	93	26	0	119
	64.7%	35.3%	55.5%	36.1%	2.5%	5.9%	.0%	78.2%	21.8%	.0%	100.0%
Severn	81	38	96	15	1	7	0	92	27	0	119
	68.1%	31.9%	80.7%	12.6%	.8%	5.9%	.0%	77.3%	22.7%	.0%	100.0%
South East Scotland	51	48	62	27	5	5	0	63	36	0	99
	51.5%	48.5%	62.6%	27.3%	5.1%	5.1%	.0%	63.6%	36.4%	.0%	100.0%
South West Peninsula	26	26	41	7	1	3	0	45	7	0	52
	50.0%	50.0%	78.8%	13.5%	1.9%	5.8%	.0%	86.5%	13.5%	.0%	100.0%
South Yorkshire & South Humber	45	33	34	41	1	1	1	49	29	0	78
	57.7%	42.3%	43.6%	52.6%	1.3%	1.3%	1.3%	62.8%	37.2%	.0%	100.0%
Wales	103	84	98	81	3	4	1	113	74	0	187
	55.1%	44.9%	52.4%	43.3%	1.6%	2.1%	.5%	60.4%	39.6%	.0%	100.0%
Wessex	83	57	106	26	0	7	1	112	28	0	140
	59.3%	40.7%	75.7%	18.6%	.0%	5.0%	.7%	80.0%	20.0%	.0%	100.0%
West Midlands	123	96	71	119	7	14	8	132	87	0	219
	56.2%	43.8%	32.4%	54.3%	3.2%	6.4%	3.7%	60.3%	39.7%	.0%	100.0%
West Scotland	104	105	132	59	9	9	0	145	64	0	209
	49.8%	50.2%	63.2%	28.2%	4.3%	4.3%	.0%	69.4%	30.6%	.0%	100.0%
Yorkshire	58	34	42	39	5	3	3	63	29	0	92
	63.0%	37.0%	45.7%	42.4%	5.4%	3.3%	3.3%	68.5%	31.5%	.0%	100.0%
Total	1762	1306	1597	1126	129	173	43	2086	963	19	3068
	57.4%	42.6%	52.1%	36.7%	4.2%	5.6%	1.4%	68.0%	31.4%	.6%	100.0%

a) AKT Result by AKT DIET

df = 2, X^2 = 4.7, NS

		AKT Result		
		Fail	Pass	Total
AKT Diet	January	181	964	1145
		15.8%	84.2%	100.0%
	May	165	706	871
		18.9%	81.1%	100.0%
	October	208	1116	1324
		15.7%	84.3%	100.0%
Total		554	2786	3340
		16.6%	83.4%	100.0%

b) AKT Result by ATTEMPT at the AKT

df = 3, X^2 = 127.1, p<.0001

		AKT Result		
		Fail	Pass	Total
Attempt at the AKT	1	417	2554	2971
		14.0%	86.0%	100.0%
	2	113	186	299
		37.8%	62.2%	100.0%
	3	21	41	62
		33.9%	66.1%	100.0%
	4	3	5	8
		37.5%	62.5%	100.0%
Total		554	2786	3340
		16.6%	83.4%	100.0%
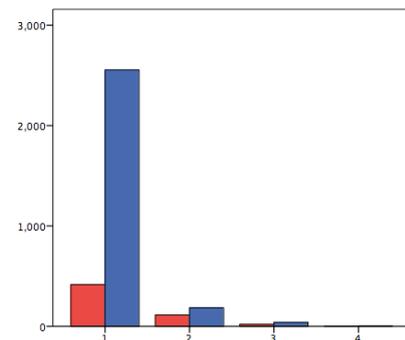
c) AKT Result by SOURCE OF PRIMARY MEDICAL QUALIFICATION (PMQ)

df = 3, X^2 = 261.8, p<.0001

		AKT Result		
		Fail	Pass	Total
Source of Primary Medical Qualification	UK	199	1988	2187
		9.1%	90.9%	100.0%
	EEA	64	120	184
		34.8%	65.2%	100.0%
	IMG	282	666	948
		29.7%	70.3%	100.0%
	(Unknown)	9	12	21
		42.9%	57.1%	100.0%
Total		554	2786	3340
		16.6%	83.4%	100.0%

d) AKT Result by YEAR in the TRAINING PROGRAMME

df = 2, X^2 = 14.6, p<.001

	AKT Result		
	Fail	Pass	Total
ST1	20	40	60
	33.3%	66.7%	100.0%
ST2	118	530	648
	18.2%	81.8%	100.0%
ST3	416	2216	2632
	15.8%	84.2%	100.0%
Total	554	2786	3340
	16.6%	83.4%	100.0%
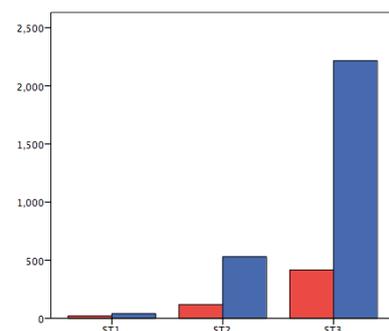
e) AKT Result by CANDIDATE GENDER

df = 1, X^2 = 42.7, p<.0001

		AKT Result		
		Fail	Pass	Total
Candidate Gender	Female	241	1632	1873
		12.9%	87.1%	100.0%
	Male	313	1154	1467
		21.3%	78.7%	100.0%
Total		554	2786	3340
		16.6%	83.4%	100.0%
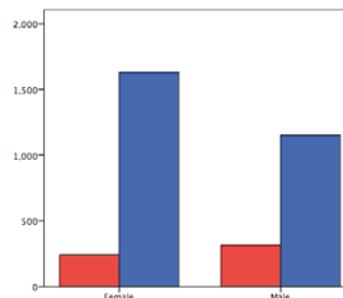
f) AKT Result by CANDIDATE GENDER *within* SOURCE OF PMQ

1 UK GRADUATES

df = 1, X^2 = 23.2, p<.0001

		AKT Result		
		Fail	Pass	Total
Candidate Gender	Female	90	1246	1336
		6.7%	93.3%	100.0%
	Male	109	742	851
		12.8%	87.2%	100.0%
Total		199	1988	2187
		9.1%	90.9%	100.0%
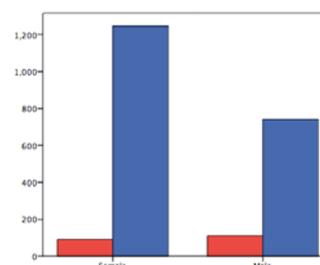
2 EEA GRADUATES

df = 1, X^2 = 5.2, p<.05

		AKT Result		
		Fail	Pass	Total
Candidate Gender	Female	26	70	96
		27.1%	72.9%	100.0%
	Male	38	50	88
		43.2%	56.8%	100.0%
Total		64	120	184
		34.8%	65.2%	100.0%
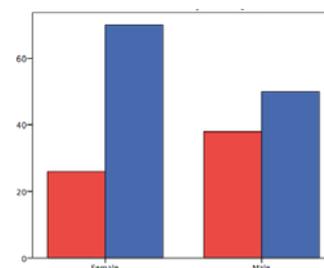
3 INTERNATIONAL GRADUATES (IMG)

df = 1, X^2 = 0.8, NS

		AKT Result		
		Fail	Pass	Total
Candidate Gender	Female	120	305	425
		28.2%	71.8%	100.0%
	Male	162	361	523
		31.0%	69.0%	100.0%
Total		282	666	948
		29.7%	70.3%	100.0%
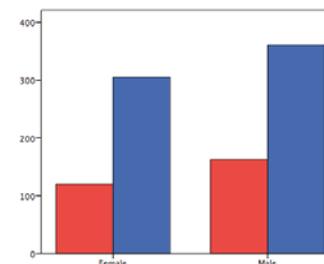
g) AKT Result by CLASSIFIED CANDIDATE ETHNICITY (self-reported)

df = 4, X^2 = 231.7, p<.0001

		AKT Result		
		Fail	Pass	Total
Candidate Ethnicity (classified)	White	116	1537	1653
		7.0%	93.0%	100.0%
	Asian	339	968	1307
		25.9%	74.1%	100.0%
	Black	50	91	141
		35.5%	64.5%	100.0%
	Other Ethnicity	37	153	190
		19.5%	80.5%	100.0%
	(Unknown)	12	37	49
		24.5%	75.5%	100.0%
Total		554	2786	3340
		16.6%	83.4%	100.0%

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

1 UK GRADUATES

df =4 , X^2 = 107.1, p<.0001

		AKT Result		
		Fail	Pass	Total
Candidate Ethnicity (classified)	White	78	1418	1496
		5.2%	94.8%	100.0%
	Asian	93	433	526
		17.7%	82.3%	100.0%
	Black	11	17	28
		39.3%	60.7%	100.0%
	Other Ethnicity	14	104	118
		11.9%	88.1%	100.0%
	(Unknown)	3	16	19
		15.8%	84.2%	100.0%
Total		199	1988	2187
		9.1%	90.9%	100.0%

2 EEA GRADUATES   (X^2 n/a)

		AKT Result		
		Fail	Pass	Total
Candidate Ethnicity (classified)	White	21	73	94
		22.3%	77.7%	100.0%
	Asian	29	33	62
		46.8%	53.2%	100.0%
	Black	9	4	13
		69.2%	30.8%	100.0%
	Other Ethnicity	4	6	10
		40.0%	60.0%	100.0%
	(Unknown)	1	4	5
		20.0%	80.0%	100.0%
Total		64	120	184
		34.8%	65.2%	100.0%

3 INTERNATIONAL GRADUATES (IMG)

df = 4, X^2 = 0.5, NS

		AKT Result		
		Fail	Pass	Total
Candidate Ethnicity (classified)	White	16	43	59
		27.1%	72.9%	100.0%
	Asian	216	502	718
		30.1%	69.9%	100.0%
	Black	28	70	98
		28.6%	71.4%	100.0%
	Other Ethnicity	19	42	61
		31.1%	68.9%	100.0%
	(Unknown)	3	9	12
		25.0%	75.0%	100.0%
Total		282	666	948
		29.7%	70.3%	100.0%

i) AKT Result by TRAINING DEANERY

df = 21, X^2 = 63.1, p<.0001

	AKT Result		Total
	Fail	Pass	
(Unknown)	7	10	17
	41.2%	58.8%	100.0%
Armed Forces (Defence)	6	49	55
	10.9%	89.1%	100.0%
East Midlands	25	133	158
	15.8%	84.2%	100.0%
East of England	58	192	250
	23.2%	76.8%	100.0%
East Scotland	3	32	35
	8.6%	91.4%	100.0%
Kent, Surrey, Sussex	50	249	299
	16.7%	83.3%	100.0%
London	61	307	368
	16.6%	83.4%	100.0%
Mersey	27	119	146
	18.5%	81.5%	100.0%
North Scotland	11	67	78
	14.1%	85.9%	100.0%
North Western	56	221	277
	20.2%	79.8%	100.0%
Northern	36	121	157
	22.9%	77.1%	100.0%
Northern Ireland	2	85	87
	2.3%	97.7%	100.0%
Oxford	29	102	131
	22.1%	77.9%	100.0%
Severn	7	115	122
	5.7%	94.3%	100.0%
South East Scotland	18	87	105
	17.1%	82.9%	100.0%
South West Peninsula	7	48	55
	12.7%	87.3%	100.0%
South Yorkshire & South Humber	19	64	83
	22.9%	77.1%	100.0%
Wales	21	176	197
	10.7%	89.3%	100.0%
Wessex	20	131	151
	13.2%	86.8%	100.0%
West Midlands	33	205	238
	13.9%	86.1%	100.0%
West Scotland	39	188	227
	17.2%	82.8%	100.0%
Yorkshire	19	85	104
	18.3%	81.7%	100.0%
Total	554	2786	3340
	16.6%	83.4%	100.0%
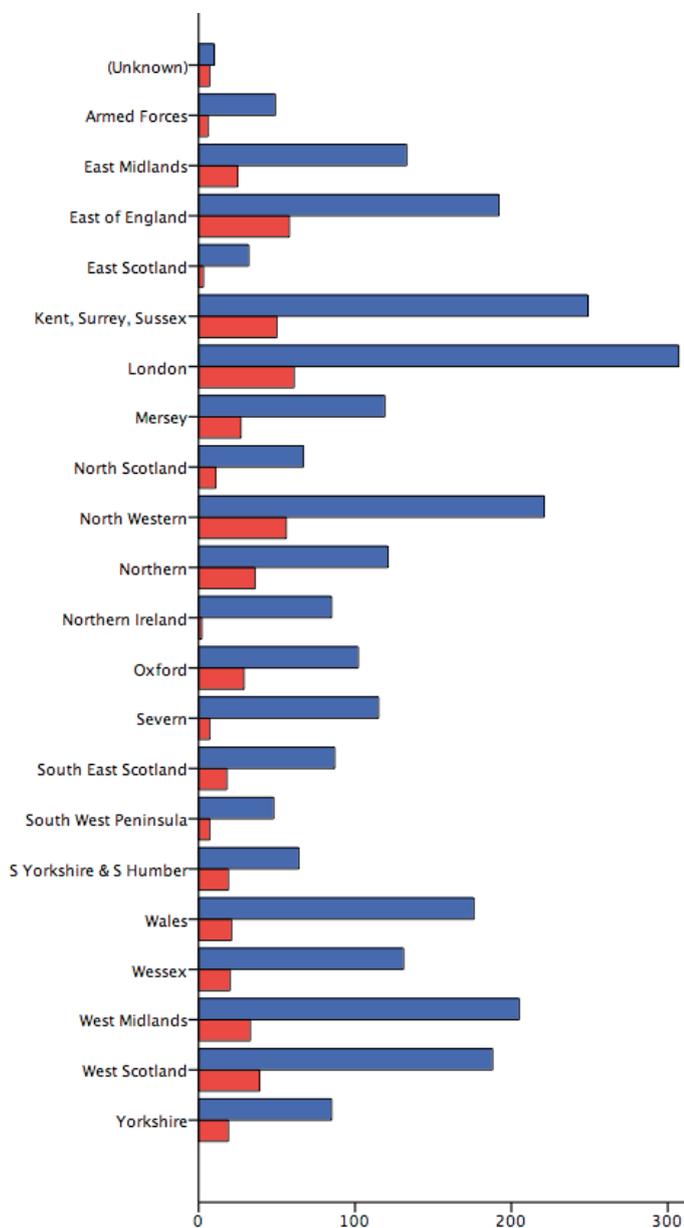
j) AKT Result by SOURCE OF PRIMARY MEDICAL QUALIFICATION, subdivided

1 BY UK MEDICAL SCHOOL

	AKT Result		
	Fail	Pass	Total
Aberdeen	4	82	86
	4.7%	95.3%	100.0%
Belfast, Queen's University	1	71	72
	1.4%	98.6%	100.0%
Birmingham	3	100	103
	2.9%	97.1%	100.0%
Bristol	0	45	45
	.0%	100.0%	100.0%
Cambridge	1	32	33
	3.0%	97.0%	100.0%
Cardiff (incl. U of Wales, WNSM)	4	95	99
	4.0%	96.0%	100.0%
Dundee (incl. St Andrews)	7	59	66
	10.6%	89.4%	100.0%
East Anglia	0	1	1
	.0%	100.0%	100.0%
Edinburgh	4	88	92
	4.3%	95.7%	100.0%
Glasgow	16	113	129
	12.4%	87.6%	100.0%
Leeds	1	85	86
	1.2%	98.8%	100.0%
Leicester	6	103	109
	5.5%	94.5%	100.0%
Liverpool	24	87	111
	21.6%	78.4%	100.0%
London Barts & London (Q Mary)	22	83	105
	21.0%	79.0%	100.0%
London Imperial College	13	87	100
	13.0%	87.0%	100.0%
London King's College (incl. Guys, St T, UMDS)	17	161	178
	9.6%	90.4%	100.0%
London St George's	3	79	82
	3.7%	96.3%	100.0%
Manchester	32	155	187
	17.1%	82.9%	100.0%
Newcastle (incl. Durham)	2	59	61
	3.3%	96.7%	100.0%
Nottingham	5	77	82
	6.1%	93.9%	100.0%
Oxford	1	28	29
	3.4%	96.6%	100.0%
Peninsula	0	1	1
	.0%	100.0%	100.0%
Royal Free & University College London	11	125	136
	8.1%	91.9%	100.0%
Sheffield	17	83	100
	17.0%	83.0%	100.0%
Southampton	4	84	88
	4.5%	95.5%	100.0%
Warwick	1	5	6
	16.7%	83.3%	100.0%
Total	199	1988	2187
	9.1%	90.9%	100.0%

2 BY EEA COUNTRY OF GRADUATION

	AKT Result		
	Fail	Pass	Total
Austria	15	20	35
	42.9%	57.1%	100.0%
Belgium	1	2	3
	33.3%	66.7%	100.0%
Bulgaria	4	4	8
	50.0%	50.0%	100.0%
Cyprus	0	1	1
	.0%	100.0%	100.0%
Czech Republic	19	11	30
	63.3%	36.7%	100.0%
Denmark	0	1	1
	.0%	100.0%	100.0%
Estonia	0	1	1
	.0%	100.0%	100.0%
Germany	2	24	26
	7.7%	92.3%	100.0%
Greece	1	3	4
	25.0%	75.0%	100.0%
Hungary	2	3	5
	40.0%	60.0%	100.0%
Irish Republic	8	35	43
	18.6%	81.4%	100.0%
Italy	1	1	2
	50.0%	50.0%	100.0%
Latvia	1	3	4
	25.0%	75.0%	100.0%
Netherlands	0	1	1
	.0%	100.0%	100.0%
Poland	0	6	6
	.0%	100.0%	100.0%
Romania	4	3	7
	57.1%	42.9%	100.0%
Spain	6	1	7
	85.7%	14.3%	100.0%
Total	64	120	184
	34.8%	65.2%	100.0%

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

|	AKT Result		
	Fail	Pass	Total
Africa (other)	17	32	49
	34.7%	65.3%	100.0%
Americas (other)	6	5	11
	54.5%	45.5%	100.0%
Asia & Oceania (other)	25	58	83
	30.1%	69.9%	100.0%
Australia & NZ	1	13	14
	7.1%	92.9%	100.0%
Bangladesh	2	4	6
	33.3%	66.7%	100.0%
Burma	3	5	8
	37.5%	62.5%	100.0%
Czechoslovakia	0	1	1
	.0%	100.0%	100.0%
Egypt	4	5	9
	44.4%	55.6%	100.0%
Europe (other)	3	7	10
	30.0%	70.0%	100.0%
Ghana	0	4	4
	.0%	100.0%	100.0%
India	106	318	424
	25.0%	75.0%	100.0%
Iran	2	6	8
	25.0%	75.0%	100.0%
Iraq	13	19	32
	40.6%	59.4%	100.0%
Libya	0	1	1
	.0%	100.0%	100.0%
Malaysia	0	1	1
	.0%	100.0%	100.0%
Middle East (other)	2	10	12
	16.7%	83.3%	100.0%
Nigeria	18	42	60
	30.0%	70.0%	100.0%
Pakistan	63	76	139
	45.3%	54.7%	100.0%
Russia & all former USSR	8	14	22
	36.4%	63.6%	100.0%
Serbia & all former Yugoslavia	0	1	1
	.0%	100.0%	100.0%
South Africa	0	15	15
	.0%	100.0%	100.0%
Sri Lanka	2	13	15
	13.3%	86.7%	100.0%
Syria	0	1	1
	.0%	100.0%	100.0%
USA & Canada	0	1	1
	.0%	100.0%	100.0%
West Indies	7	12	19
	36.8%	63.2%	100.0%
Zimbabwe	0	2	2
	.0%	100.0%	100.0%
Total	282	666	948
	29.7%	70.3%	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.

Year of Training		N	Minimum	Maximum	Mean	Std. Deviation
ST1	Clinical Management Score	60	48.72	90.38	73.99	10.26
	Evidence Interpretation Score	60	30	100	72.75	19.69
	Organisational Questions Score	60	31.82	90.91	66.22	12.62
	Total Score (%)	60	48.48	88.89	73.05	10.35
	Valid N (listwise)	60				
ST2	Clinical Management Score	648	52.56	95.63	77.02	7.80
	Evidence Interpretation Score	648	20	100	73.89	16.58
	Organisational Questions Score	648	31.82	100.00	69.25	11.22
	Total Score (%)	648	50.00	94.95	75.91	7.77
	Valid N (listwise)	648				
ST3	Clinical Management Score	2632	47.44	98.13	78.64	7.90
	Evidence Interpretation Score	2632	15	100	74.88	15.05
	Organisational Questions Score	2632	27.27	100.00	70.47	11.21
	Total Score (%)	2632	45.45	96.97	77.48	7.78
	Valid N (listwise)	2632				

Distribution of Total Score, by Year
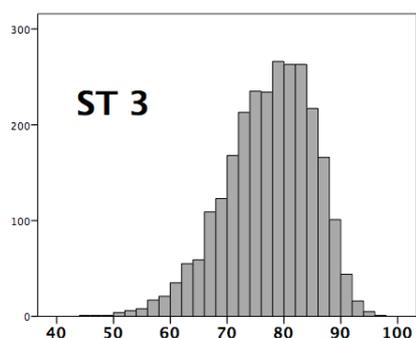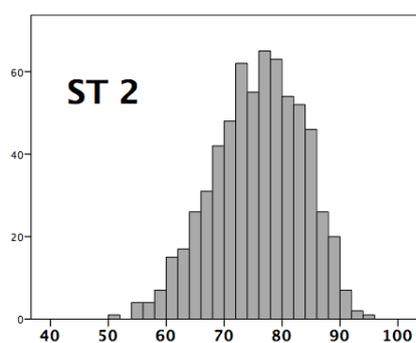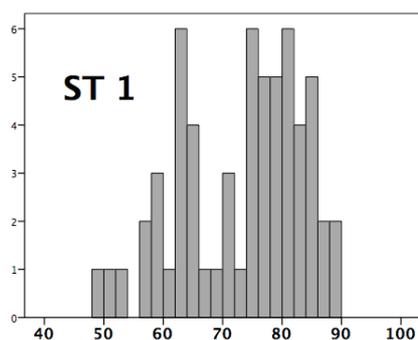
4: CSA Statistics

Summary of Demographic Information on CSA Candidates

Note that 2030 candidates made a total of 2435 attempts at the CSA during 2008. This table shows the background demographic characteristics of the 2030, by training Deanery. Other tables report on the 2435 attempts.

Training Deanery	Candidate Gender		Classified Candidate Ethnicity					UK or non-UK Graduate			
	Female	Male	White	Asian	Black	Other Ethnicity	Unknown	Non-UK Graduate	UK Graduate	Unknown	Total
(Unknown)	6	3	1	1	0	1	6	0	1	8	9
	66.7%	33.3%	11.1%	11.1%	.0%	11.1%	66.7%	.0%	11.1%	88.9%	100.0%
Armed Forces (Defence)	19	16	30	5	0	0	0	3	32	0	35
	54.3%	45.7%	85.7%	14.3%	.0%	.0%	.0%	8.6%	91.4%	.0%	100.0%
East Midlands	44	20	30	25	5	2	2	27	37	0	64
	68.8%	31.3%	46.9%	39.1%	7.8%	3.1%	3.1%	42.2%	57.8%	.0%	100.0%
East of England	77	61	55	66	8	6	3	53	83	2	138
	55.8%	44.2%	39.9%	47.8%	5.8%	4.3%	2.2%	38.4%	60.1%	1.4%	100.0%
East Scotland	20	10	26	4	0	0	0	2	28	0	30
	66.7%	33.3%	86.7%	13.3%	.0%	.0%	.0%	6.7%	93.3%	.0%	100.0%
Kent, Surrey, Sussex	96	81	78	66	10	17	6	67	110	0	177
	54.2%	45.8%	44.1%	37.3%	5.6%	9.6%	3.4%	37.9%	62.1%	.0%	100.0%
London	160	83	92	118	17	14	2	55	187	1	243
	65.8%	34.2%	37.9%	48.6%	7.0%	5.8%	.8%	22.6%	77.0%	.4%	100.0%
Mersey	56	29	46	30	0	5	4	24	61	0	85
	65.9%	34.1%	54.1%	35.3%	.0%	5.9%	4.7%	28.2%	71.8%	.0%	100.0%
North Scotland	24	25	33	13	0	1	2	15	34	0	49
	49.0%	51.0%	67.3%	26.5%	.0%	2.0%	4.1%	30.6%	69.4%	.0%	100.0%
North Western	86	83	73	76	6	9	5	63	106	0	169
	50.9%	49.1%	43.2%	45.0%	3.6%	5.3%	3.0%	37.3%	62.7%	.0%	100.0%
Northern	42	36	32	40	3	2	1	42	36	0	78
	53.8%	46.2%	41.0%	51.3%	3.8%	2.6%	1.3%	53.8%	46.2%	.0%	100.0%
Northern Ireland	36	20	56	0	0	0	0	4	52	0	56
	64.3%	35.7%	100.0%	.0%	.0%	.0%	.0%	7.1%	92.9%	.0%	100.0%
Oxford	47	22	35	29	0	5	0	18	51	0	69
	68.1%	31.9%	50.7%	42.0%	.0%	7.2%	.0%	26.1%	73.9%	.0%	100.0%
Severn	50	25	66	6	1	2	0	12	63	0	75
	66.7%	33.3%	88.0%	8.0%	1.3%	2.7%	.0%	16.0%	84.0%	.0%	100.0%
South East Scotland	42	26	47	15	2	4	0	21	47	0	68
	61.8%	38.2%	69.1%	22.1%	2.9%	5.9%	.0%	30.9%	69.1%	.0%	100.0%
South West Peninsula	13	14	21	3	2	1	0	4	23	0	27
	48.1%	51.9%	77.8%	11.1%	7.4%	3.7%	.0%	14.8%	85.2%	.0%	100.0%
South Yorkshire & South Humber	20	23	15	25	1	1	1	23	20	0	43
	46.5%	53.5%	34.9%	58.1%	2.3%	2.3%	2.3%	53.5%	46.5%	.0%	100.0%
Wales	55	60	53	55	4	2	1	51	63	1	115
	47.8%	52.2%	46.1%	47.8%	3.5%	1.7%	.9%	44.3%	54.8%	.9%	100.0%
Wessex	63	51	86	23	0	4	1	28	86	0	114
	55.3%	44.7%	75.4%	20.2%	.0%	3.5%	.9%	24.6%	75.4%	.0%	100.0%
West Midlands	97	88	51	111	5	11	7	93	91	1	185
	52.4%	47.6%	27.6%	60.0%	2.7%	5.9%	3.8%	50.3%	49.2%	.5%	100.0%
West Scotland	72	57	93	32	2	2	0	32	96	1	129
	55.8%	44.2%	72.1%	24.8%	1.6%	1.6%	.0%	24.8%	74.4%	.8%	100.0%
Yorkshire	35	37	37	29	2	2	2	24	48	0	72
	48.6%	51.4%	51.4%	40.3%	2.8%	2.8%	2.8%	33.3%	66.7%	.0%	100.0%
Total	1160	870	1056	772	68	91	43	661	1355	14	2030
	57.1%	42.9%	52.0%	38.0%	3.3%	4.5%	2.1%	32.6%	66.7%	.7%	100.0%

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

	N	Minimum	Maximum	Mean	Std. Deviation
CSA Cases Passed	2435	1	12	9.17	2.168
	2435				

	Frequency	Percent
Fail	517	21.2
Pass	1918	78.8
Total	2435	100.0

	Frequency	Percent	Valid Percent	Cumulative Percent
1	4	.2	.2	.2
2	12	.5	.5	.7
3	18	.7	.7	1.4
4	48	2.0	2.0	3.4
5	81	3.3	3.3	6.7
6	135	5.5	5.5	12.2
7	219	9.0	9.0	21.2
8	295	12.1	12.1	33.3
9	372	15.3	15.3	48.6
10	455	18.7	18.7	67.3
11	496	20.4	20.4	87.7
12	300	12.3	12.3	100.0
Total	2435	100.0	100.0	
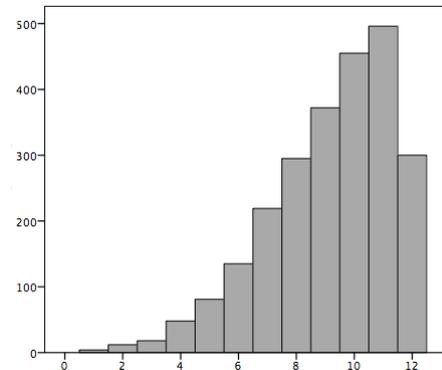
b) CSA Result, overall; No of Cases Passed - by CSA DIET

Result: df = 4, X^2 = 52.5, p<.0001

		CSA Result		
		Fail	Pass	Total
CSA Diet	February	126	582	708
		17.8%	82.2%	100.0%
	April	138	633	771
		17.9%	82.1%	100.0%
	May	77	147	224
		34.4%	65.6%	100.0%
	October	139	500	639
		21.8%	78.2%	100.0%
	December	37	56	93
		39.8%	60.2%	100.0%
Total		517	1918	2435
		21.2%	78.8%	100.0%
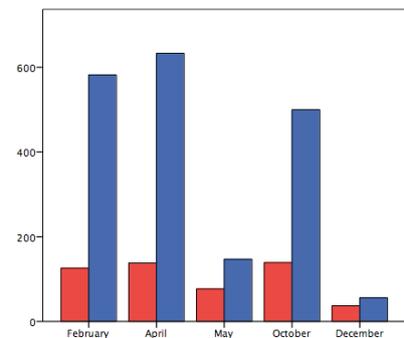
CSA Diet	N	Minimum	Maximum	Mean	Std. Deviation
February	708	2	12	9.34	2.044
	708				
April	771	1	12	9.41	2.145
	771				
May	224	2	12	8.33	2.266
	224				
October	639	1	12	9.18	2.190
	639				
December	93	3	12	7.94	2.010
	93				
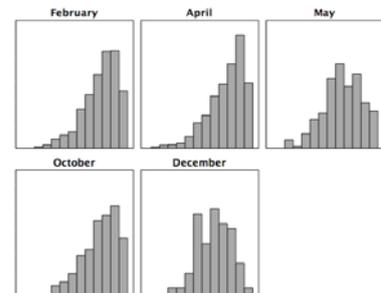
c) CSA Result, overall; No of Cases Passed - by ATTEMPT at the CSA

Result: df = 3, X^2 = 51.3, p<.0001

		CSA Result		
		Fail	Pass	Total
Attempt at the CSA	1	375	1643	2018
		18.6%	81.4%	100.0%
	2	109	211	320
		34.1%	65.9%	100.0%
	3	31	55	86
		36.0%	64.0%	100.0%
	4	2	9	11
		18.2%	81.8%	100.0%
Total		517	1918	2435
		21.2%	78.8%	100.0%
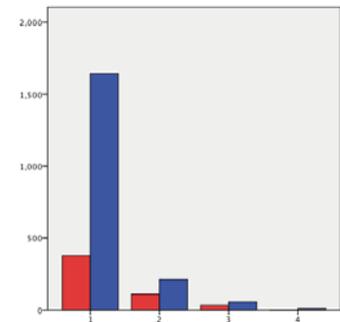
Cases Passed

Attempt at the CSA	N	Minimum	Maximum	Mean	Std. Deviation
1	2018	1	12	9.37	2.149
2	320	1	12	8.28	2.038
3	86	3	11	8.02	1.976
4	11	6	11	8.64	1.567
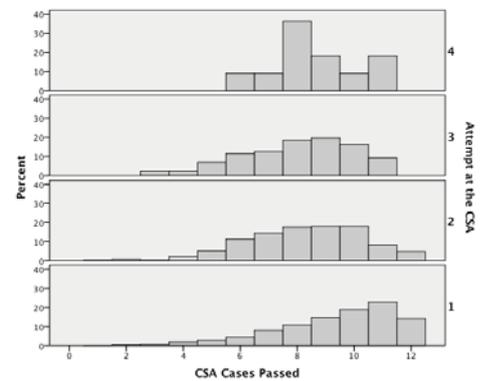
d) CSA Result, overall; No of Cases Passed - by SOURCE OF PRIMARY MEDICAL QUALIFICATION (PMQ)

Result: df = 2, X^2 = 49.0, p<.0001

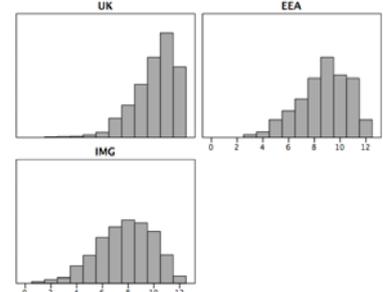|		CSA Result		
		Fail	Pass	Total
Source of Primary Medical Qualification	UK	120	1344	1464
		8.2%	91.8%	100.0%
	EEA	31	94	125
		24.8%	75.2%	100.0%
	IMG	358	473	831
		43.1%	56.9%	100.0%
Total		509	1911	2420
		21.0%	79.0%	100.0%

Source of Primary Medical Qualification	N	Minimum	Maximum	Mean	Std. Deviation
UK	1464	2	12	10.04	1.666
	1464				
EEA	125	3	12	8.73	1.969
	125				
IMG	831	1	12	7.76	2.183
	831				
(Unknown)	15	2	10	6.87	2.295
	15				

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

Result: df = 1, X^2 = 109.4, p<.0001

		CSA Result		
		Fail	Pass	Total
Candidate Gender	Female	169	1123	1292
		13.1%	86.9%	100.0%
	Male	348	795	1143
		30.4%	69.6%	100.0%
Total		517	1918	2435
		21.2%	78.8%	100.0%
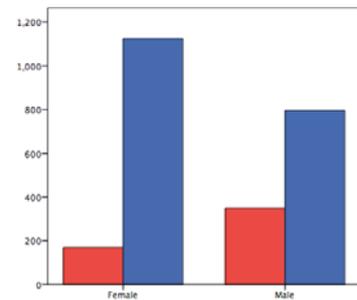
Candidate Gender	N	Minimum	Maximum	Mean	Std. Deviation
Female	1292	1	12	9.72	1.883
	1292				
Male	1143	1	12	8.55	2.297
	1143				
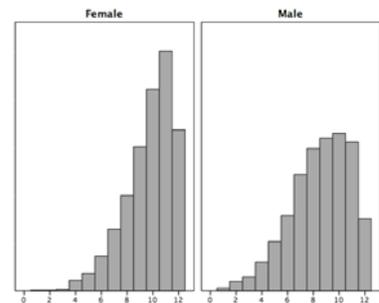
f) CSA Result, overall - by CANDIDATE GENDER *within* SOURCE OF PMQ

1 UK GRADUATES
df = 1, X^2 = 39.1, p<.0001

	CSA Result		
	Fail	Pass	Total
Female	42	855	897
	4.7%	95.3%	100.0%
Male	79	489	568
	13.9%	86.1%	100.0%
Total	121	1344	1465
	8.3%	91.7%	100.0%
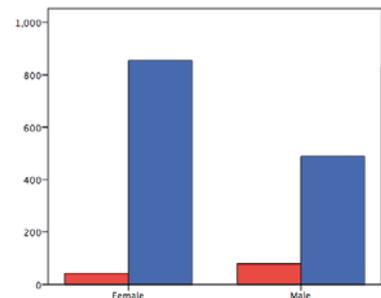
2 EEA GRADUATES
df = 1, X^2 = 7.2, p<.01

	CSA Result		
	Fail	Pass	Total
Female	12	62	74
	16.2%	83.8%	100.0%
Male	19	32	51
	37.3%	62.7%	100.0%
Total	31	94	125
	24.8%	75.2%	100.0%
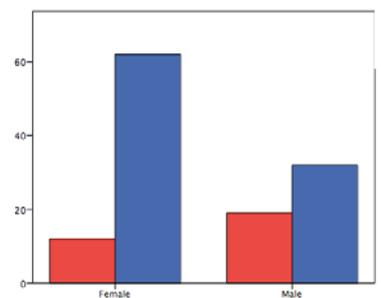
3 INTERNATIONAL MEDICAL GRADUATES
df = 1, X^2 = 9.4, p<.005

	CSA Result		
	Fail	Pass	Total
Female	113	199	312
	36.2%	63.8%	100.0%
Male	244	274	518
	47.1%	52.9%	100.0%
Total	357	473	830
	43.0%	57.0%	100.0%
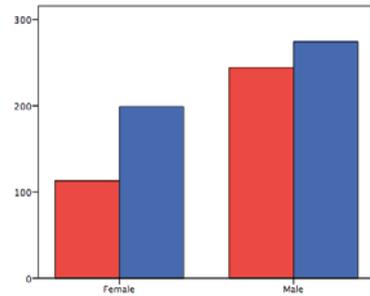
g) CSA Result, overall; No of Cases Passed - by CLASSIFIED CANDIDATE ETHNICITY

Result: df = 4, X^2 = 278.6, p<.0001

	CSA Result		
	Fail	Pass	Total
White	73	1045	1118
	6.5%	93.5%	100.0%
Asian	364	697	1061
	34.3%	65.7%	100.0%
Black	40	56	96
	41.7%	58.3%	100.0%
Other Ethnicity	26	83	109
	23.9%	76.1%	100.0%
(Unknown)	14	37	51
	27.5%	72.5%	100.0%
Total	517	1918	2435
	21.2%	78.8%	100.0%
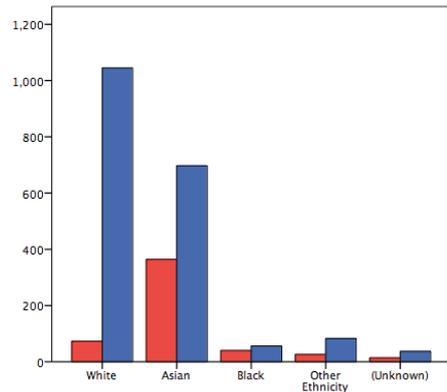
Classified Candidate Ethnicity	N	Minimum	Maximum	Mean	Std. Deviation
White	1118	3	12	10.23	1.524
	1118				
Asian	1061	1	12	8.22	2.202
	1061				
Black	96	1	12	7.95	2.485
	96				
Other Ethnicity	109	2	12	9.07	2.251
	109				
(Unknown)	51	4	12	8.53	1.983
	51				
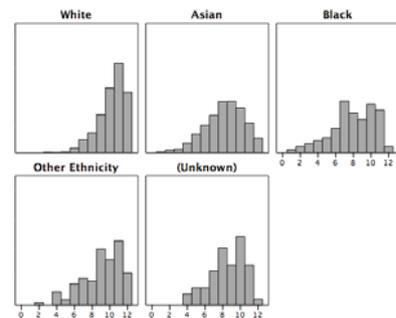
h) CSA Result - by CLASSIFIED CANDIDATE ETHNICITY *within* SOURCE OF PMQ
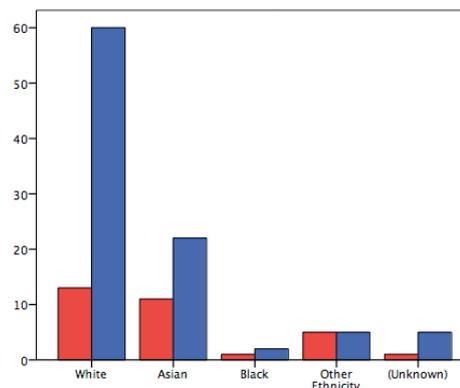
1 UK GRADUATES
df = 4, X^2 = 61.9, p<.0001

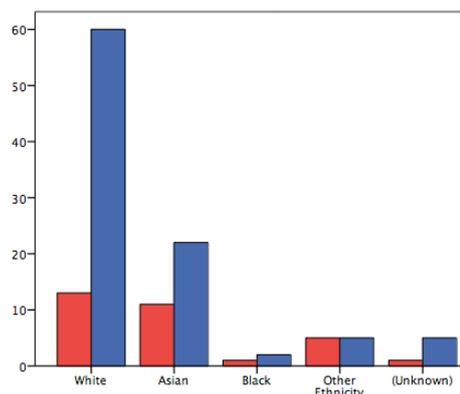|	CSA Result		
	Fail	Pass	Total
White	46	953	999
	4.6%	95.4%	100.0%
Asian	58	298	356
	16.3%	83.7%	100.0%
Black	5	12	17
	29.4%	70.6%	100.0%
Other Ethnicity	10	57	67
	14.9%	85.1%	100.0%
(Unknown)	2	24	26
	7.7%	92.3%	100.0%
Total	121	1344	1465
	8.3%	91.7%	100.0%

2 EEA GRADUATES
(X^2 n/a)

	CSA Result		
	Fail	Pass	Total
White	13	60	73
	17.8%	82.2%	100.0%
Asian	11	22	33
	33.3%	66.7%	100.0%
Black	1	2	3
	33.3%	66.7%	100.0%
Other Ethnicity	5	5	10
	50.0%	50.0%	100.0%
(Unknown)	1	5	6
	16.7%	83.3%	100.0%
Total	31	94	125
	24.8%	75.2%	100.0%

3 INTERNATIONAL MEDICAL GRADUATES
df =4, X^2 = 11.3, p<.05

	CSA Result		
	Fail	Pass	Total
White	12	30	42
	28.6%	71.4%	100.0%
Asian	291	377	668
	43.6%	56.4%	100.0%
Black	34	42	76
	44.7%	55.3%	100.0%
Other Ethnicity	10	21	31
	32.3%	67.7%	100.0%
(Unknown)	10	3	13
	76.9%	23.1%	100.0%
Total	357	473	830
	43.0%	57.0%	100.0%
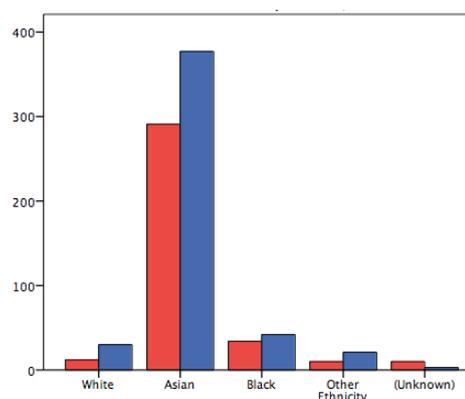
i) CSA Result, overall - by TRAINING DEANERY

$df = 21$, $X^2 = 80.3$, $p<.0001$

	CSA Result		
	Fail	Pass	Total
(Unknown)	3	6	9
	33.3%	66.7%	100.0%
Armed Forces (Defence)	1	35	36
	2.8%	97.2%	100.0%
East Midlands	13	60	73
	17.8%	82.2%	100.0%
East of England	49	124	173
	28.3%	71.7%	100.0%
East Scotland	5	30	35
	14.3%	85.7%	100.0%
Kent, Surrey, Sussex	53	166	219
	24.2%	75.8%	100.0%
London	39	231	270
	14.4%	85.6%	100.0%
Mersey	17	82	99
	17.2%	82.8%	100.0%
North Scotland	8	48	56
	14.3%	85.7%	100.0%
North Western	63	160	223
	28.3%	71.7%	100.0%
Northern	29	66	95
	30.5%	69.5%	100.0%
Northern Ireland	3	56	59
	5.1%	94.9%	100.0%
Oxford	18	65	83
	21.7%	78.3%	100.0%
Severn	9	73	82
	11.0%	89.0%	100.0%
South East Scotland	13	67	80
	16.3%	83.8%	100.0%
South West Peninsula	5	27	32
	15.6%	84.4%	100.0%
South Yorkshire & South Humber	8	39	47
	17.0%	83.0%	100.0%
Wales	55	110	165
	33.3%	66.7%	100.0%
Wessex	15	112	127
	11.8%	88.2%	100.0%
West Midlands	52	173	225
	23.1%	76.9%	100.0%
West Scotland	45	120	165
	27.3%	72.7%	100.0%
Yorkshire	14	68	82
	17.1%	82.9%	100.0%
Total	517	1918	2435
	21.2%	78.8%	100.0%
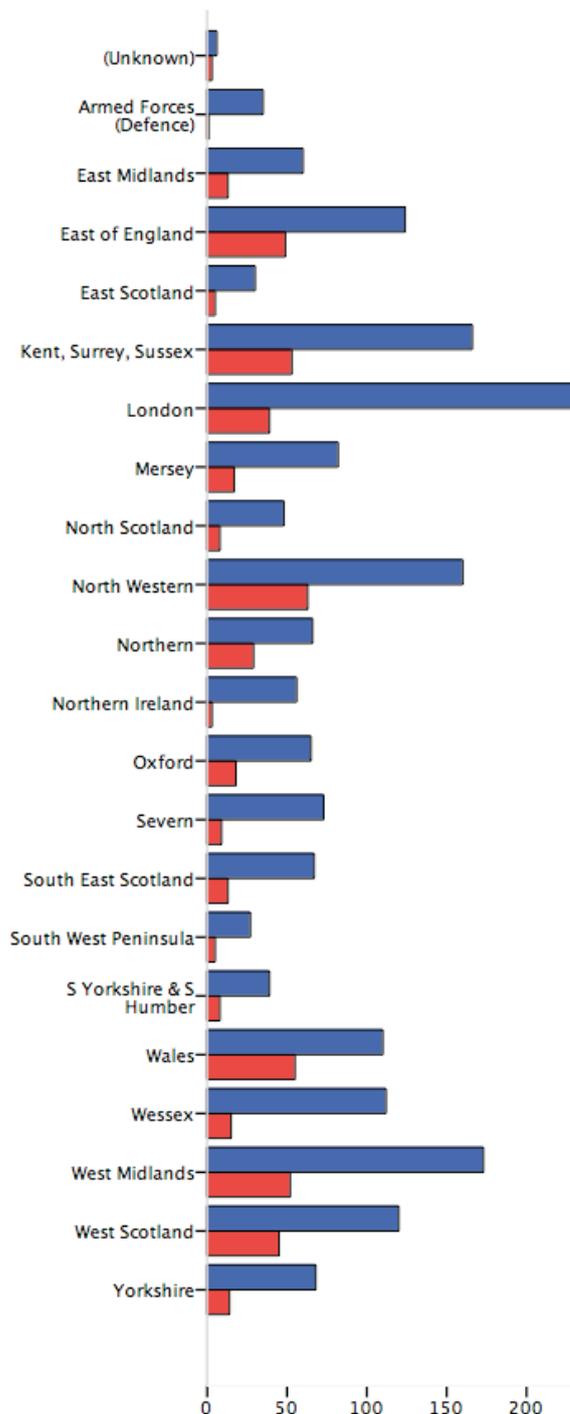
j) CSA No of Cases Passed - by TRAINING DEANERY

Anova F = 5.4, p<.0001

Training Deanery	N	Minimum	Maximum	Mean	Std. Deviation
(Unknown)	9 9	4	11	7.78	2.489
Armed Forces (Defence)	36 36	3	12	10.17	1.732
East Midlands	73 73	3	12	9.19	2.259
East of England	173 173	1	12	8.76	2.329
East Scotland	35 35	2	12	9.63	2.059
Kent, Surrey, Sussex	219 219	2	12	8.89	2.261
London	270 270	3	12	9.70	1.948
Mersey	99 99	2	12	9.13	2.188
North Scotland	56 56	2	12	9.41	1.970
North Western	223 223	1	12	8.64	2.285
Northern	95 95	3	12	8.78	2.406
Northern Ireland	59 59	6	12	9.92	1.304
Oxford	83 83	1	12	9.14	2.073
Severn	82 82	2	12	9.96	1.997
South East Scotland	80 80	2	12	9.73	2.170
South West Peninsula	32 32	6	12	10.06	1.759
South Yorkshire & South Humber	47 47	6	12	9.64	1.938
Wales	165 165	3	12	8.56	2.179
Wessex	127 127	2	12	9.76	1.875
West Midlands	225 225	3	12	8.90	2.072
West Scotland	165 165	2	12	9.00	2.258
Yorkshire	82 82	2	12	9.29	2.082

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

1 BY UK MEDICAL SCHOOL

	CSA Result		
	Fail	Pass	Total
Aberdeen	6	69	75
	8.0%	92.0%	100.0%
Belfast, Queen's University	4	45	49
	8.2%	91.8%	100.0%
Birmingham	4	65	69
	5.8%	94.2%	100.0%
Bristol	2	40	42
	4.8%	95.2%	100.0%
Cambridge	5	21	26
	19.2%	80.8%	100.0%
Cardiff (incl. U of Wales, WNSM)	11	55	66
	16.7%	83.3%	100.0%
Dundee (incl. St Andrews)	3	42	45
	6.7%	93.3%	100.0%
East Anglia	1	1	2
	50.0%	50.0%	100.0%
Edinburgh	0	52	52
	.0%	100.0%	100.0%
Glasgow	10	90	100
	10.0%	90.0%	100.0%
Leeds	3	54	57
	5.3%	94.7%	100.0%
Leicester	4	47	51
	7.8%	92.2%	100.0%
Liverpool	10	60	70
	14.3%	85.7%	100.0%
London Barts & London (Q Mary)	4	62	66
	6.1%	93.9%	100.0%
London Imperial College	1	62	63
	1.6%	98.4%	100.0%
London King's College (incl. Guys, St T, UMDS)	6	109	115
	5.2%	94.8%	100.0%
London St George's	4	53	57
	7.0%	93.0%	100.0%
Manchester	15	115	130
	11.5%	88.5%	100.0%
Newcastle (incl. Durham)	5	33	38
	13.2%	86.8%	100.0%
Nottingham	2	53	55
	3.6%	96.4%	100.0%
Oxford	0	16	16
	.0%	100.0%	100.0%
Royal Free & University College London	15	88	103
	14.6%	85.4%	100.0%
Sheffield	4	57	61
	6.6%	93.4%	100.0%
Southampton	2	54	56
	3.6%	96.4%	100.0%
Warwick	0	1	1
	.0%	100.0%	100.0%
Total	121	1344	1465
	8.3%	91.7%	100.0%

2 BY EEA COUNTRY

| | CSA Result | | |
	Fail	Pass	Total
Austria	8	18	26
	30.8%	69.2%	100.0%
Belgium	1	1	2
	50.0%	50.0%	100.0%
Bulgaria	2	5	7
	28.6%	71.4%	100.0%
Cyprus	0	1	1
	.0%	100.0%	100.0%
Czech Republic	3	8	11
	27.3%	72.7%	100.0%
Estonia	0	1	1
	.0%	100.0%	100.0%
Germany	2	17	19
	10.5%	89.5%	100.0%
Greece	0	4	4
	.0%	100.0%	100.0%
Hungary	0	2	2
	.0%	100.0%	100.0%
Irish Republic	4	27	31
	12.9%	87.1%	100.0%
Italy	0	1	1
	.0%	100.0%	100.0%
Netherlands	0	1	1
	.0%	100.0%	100.0%
Poland	3	4	7
	42.9%	57.1%	100.0%
Romania	3	3	6
	50.0%	50.0%	100.0%
Spain	5	1	6
	83.3%	16.7%	100.0%
Total	31	94	125
	24.8%	75.2%	100.0%

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

	CSA Result		
	Fail	Pass	Total
Africa (other)	15	23	38
	39.5%	60.5%	100.0%
Americas (other)	1	3	4
	25.0%	75.0%	100.0%
Asia & Oceania (other)	36	46	82
	43.9%	56.1%	100.0%
Australia & NZ	1	6	7
	14.3%	85.7%	100.0%
Bangladesh	2	3	5
	40.0%	60.0%	100.0%
Burma	2	3	5
	40.0%	60.0%	100.0%
Egypt	3	3	6
	50.0%	50.0%	100.0%
Europe (other)	5	6	11
	45.5%	54.5%	100.0%
Ghana	0	1	1
	.0%	100.0%	100.0%
India	181	227	408
	44.4%	55.6%	100.0%
Iran	5	4	9
	55.6%	44.4%	100.0%
Iraq	5	9	14
	35.7%	64.3%	100.0%
Middle East (other)	2	2	4
	50.0%	50.0%	100.0%
Nigeria	22	27	49
	44.9%	55.1%	100.0%
Pakistan	44	66	110
	40.0%	60.0%	100.0%
Russia & all former USSR	10	10	20
	50.0%	50.0%	100.0%
South Africa	4	14	18
	22.2%	77.8%	100.0%
Sri Lanka	15	9	24
	62.5%	37.5%	100.0%
Syria	0	1	1
	.0%	100.0%	100.0%
USA & Canada	2	1	3
	66.7%	33.3%	100.0%
West Indies	2	8	10
	20.0%	80.0%	100.0%
Zimbabwe	0	1	1
	.0%	100.0%	100.0%
Total	357	473	830
	43.0%	57.0%	100.0%

l) CSA Feedback Statements, AS % OF ALL 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 given feedback of all cases seen in that candidate group. ***Note that this table (and the next) relates only to CSA diets before October 2008, when some changes were made to the feedback statements.*** See also note on p 4.

ALL CANDIDATES (n = 1703 incl 10 with unknown medical school) = 20436 CASES

06 Does not develop a management plan (including prescribing and referral) that is appropriate and in line with current best practice	12.7%
14 Does not recognise the challenge (e.g. the patient's problem, ethical dilemma etc.)	8.7%
09 Does not identify patient's agenda, health beliefs & preferences / does not make use of verbal & non-verbal cues	8.1%
10 Does not develop a shared management plan or clarify the roles of doctor and patient	8.1%
05 Does not make appropriate diagnosis	6.6%
01 Disorganised and unsystematic in gathering information from history taking, examination and investigation	6.3%
02 Does not identify abnormal findings or results or fails to recognise their implications	5.6%
03 Data gathering does not appear to be guided by the probabilities of disease	5.4%
11 Does not use explanations that are relevant and understandable to the patient	5.2%
16 Shows inappropriate doctor- centeredness	5.2%
07 Follow-up arrangements and safety netting are inadequate	4.5%
13 Disorganised / unstructured consultation	4.5%
08 Does not demonstrate an awareness of management of risk, and health promotion	3.9%
15 Shows poor time management	3.8%
12 Does not show sensitivity for the patient's feelings in all aspects of the consultation including physical examination	3.5%
04 Does not undertake physical examination competently, or use instruments proficiently	2.0%

UK GRADUATES only (n = 1146) = 13752 CASES

06 Does not develop a management plan (including prescribing and referral) that is appropriate and in line with current best practice	9.6%
14 Does not recognise the challenge (e.g. the patient's problem, ethical dilemma etc.)	6.3%
10 Does not develop a shared management plan or clarify the roles of doctor and patient	5.2%
05 Does not make appropriate diagnosis	5.1%
09 Does not identify patient's agenda, health beliefs & preferences / does not make use of verbal & non-verbal cues	5.1%
02 Does not identify abnormal findings or results or fails to recognise their implications	4.3%
03 Data gathering does not appear to be guided by the probabilities of disease	4.0%
01 Disorganised and unsystematic in gathering information from history taking, examination and investigation	3.7%
11 Does not use explanations that are relevant and understandable to the patient	3.1%
07 Follow-up arrangements and safety netting are inadequate	3.1%
16 Shows inappropriate doctor- centeredness	2.9%
08 Does not demonstrate an awareness of management of risk, and health promotion	2.9%
15 Shows poor time management	2.7%
13 Disorganised / unstructured consultation	2.5%
12 Does not show sensitivity for the patient's feelings in all aspects of the consultation including physical examination	2.2%
04 Does not undertake physical examination competently, or use instruments proficiently	1.6%

EEA GRADUATES only (n = 75) = 900 CASES

06 Does not develop a management plan (including prescribing and referral) that is appropriate and in line with current best practice	14.3%
14 Does not recognise the challenge (e.g. the patient's problem, ethical dilemma etc.)	10.7%
10 Does not develop a shared management plan or clarify the roles of doctor and patient	9.6%
01 Disorganised and unsystematic in gathering information from history taking, examination and investigation	9.6%
09 Does not identify patient's agenda, health beliefs & preferences / does not make use of verbal & non-verbal cues	9.2%
05 Does not make appropriate diagnosis	7.8%
03 Data gathering does not appear to be guided by the probabilities of disease	7.7%
02 Does not identify abnormal findings or results or fails to recognise their implications	7.0%
13 Disorganised / unstructured consultation	6.9%
16 Shows inappropriate doctor- centeredness	6.2%
07 Follow-up arrangements and safety netting are inadequate	5.7%
08 Does not demonstrate an awareness of management of risk, and health promotion	5.4%
11 Does not use explanations that are relevant and understandable to the patient	5.3%
15 Shows poor time management	5.2%
12 Does not show sensitivity for the patient's feelings in all aspects of the consultation including physical examination	4.6%
04 Does not undertake physical examination competently, or use instruments proficiently	3.3%

INTERNATIONAL MEDICAL GRADUATES, NOT EEA, only (n = 472) = 5664 CASES

06 Does not develop a management plan (including prescribing and referral) that is appropriate and in line with current best practice	20.0%
09 Does not identify patient's agenda, health beliefs & preferences / does not make use of verbal & non-verbal cues	14.9%
10 Does not develop a shared management plan or clarify the roles of doctor and patient	14.5%
14 Does not recognise the challenge (e.g. the patient's problem, ethical dilemma etc.)	13.8%
01 Disorganised and unsystematic in gathering information from history taking, examination and investigation	11.8%
11 Does not use explanations that are relevant and understandable to the patient	10.3%
16 Shows inappropriate doctor- centeredness	10.2%
05 Does not make appropriate diagnosis	9.7%
13 Disorganised / unstructured consultation	8.7%
03 Data gathering does not appear to be guided by the probabilities of disease	8.5%
02 Does not identify abnormal findings or results or fails to recognise their implications	8.4%
07 Follow-up arrangements and safety netting are inadequate	7.8%
12 Does not show sensitivity for the patient's feelings in all aspects of the consultation including physical examination	6.4%
08 Does not demonstrate an awareness of management of risk, and health promotion	6.2%
15 Shows poor time management	6.1%
04 Does not undertake physical examination competently, or use instruments proficiently	2.9%

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

Table gives the numbered feedback statements as previous Table, but **as % of failed cases only**.

ALL CANDIDATES (n = 1703 incl 10 with unknown medical school) = 4702 FAILED CASES	
06 Does not develop a management plan (including prescribing and referral) that is appropriate and in line with current best practice	55.1%
14 Does not recognise the challenge (e.g. the patient's problem, ethical dilemma etc.)	37.5%
09 Does not identify patient's agenda, health beliefs & preferences / does not make use of verbal & non-verbal cues	35.0%
10 Does not develop a shared management plan or clarify the roles of doctor and patient	34.8%
05 Does not make appropriate diagnosis	28.4%
01 Disorganised and unsystematic in gathering information from history taking, examination and investigation	27.0%
02 Does not identify abnormal findings or results or fails to recognise their implications	24.2%
03 Data gathering does not appear to be guided by the probabilities of disease	23.5%
11 Does not use explanations that are relevant and understandable to the patient	22.7%
16 Shows inappropriate doctor- centeredness	22.3%
07 Follow-up arrangements and safety netting are inadequate	19.6%
13 Disorganised / unstructured consultation	19.4%
08 Does not demonstrate an awareness of management of risk, and health promotion	17.0%
15 Shows poor time management	16.1%
12 Does not show sensitivity for the patient's feelings in all aspects of the consultation including physical examination	15.2%
04 Does not undertake physical examination competently, or use instruments proficiently	8.7%

UK GRADUATES only (n = 1146) = 2318 FAILED CASES	
06 Does not develop a management plan (including prescribing and referral) that is appropriate and in line with current best practice	56.4%
14 Does not recognise the challenge (e.g. the patient's problem, ethical dilemma etc.)	37.4%
10 Does not develop a shared management plan or clarify the roles of doctor and patient	30.9%
09 Does not identify patient's agenda, health beliefs & preferences / does not make use of verbal & non-verbal cues	30.3%
05 Does not make appropriate diagnosis	30.3%
02 Does not identify abnormal findings or results or fails to recognise their implications	25.5%
03 Data gathering does not appear to be guided by the probabilities of disease	23.5%
01 Disorganised and unsystematic in gathering information from history taking, examination and investigation	21.5%
11 Does not use explanations that are relevant and understandable to the patient	18.4%
07 Follow-up arrangements and safety netting are inadequate	18.2%
16 Shows inappropriate doctor- centeredness	17.2%
08 Does not demonstrate an awareness of management of risk, and health promotion	16.9%
15 Shows poor time management	15.6%
13 Disorganised / unstructured consultation	14.7%
12 Does not show sensitivity for the patient's feelings in all aspects of the consultation including physical examination	13.2%
04 Does not undertake physical examination competently, or use instruments proficiently	9.2%

EEA GRADUATES only (n = 75) = 256 FAILED CASES	
06 Does not develop a management plan (including prescribing and referral) that is appropriate and in line with current best practice	50.4%
14 Does not recognise the challenge (e.g. the patient's problem, ethical dilemma etc.)	37.5%
10 Does not develop a shared management plan or clarify the roles of doctor and patient	33.6%
01 Disorganised and unsystematic in gathering information from history taking, examination and investigation	33.6%
09 Does not identify patient's agenda, health beliefs & preferences / does not make use of verbal & non-verbal cues	32.4%
05 Does not make appropriate diagnosis	27.3%
03 Data gathering does not appear to be guided by the probabilities of disease	27.0%
02 Does not identify abnormal findings or results or fails to recognise their implications	24.6%
13 Disorganised / unstructured consultation	24.2%
16 Shows inappropriate doctor- centeredness	21.9%
07 Follow-up arrangements and safety netting are inadequate	19.9%
08 Does not demonstrate an awareness of management of risk, and health promotion	19.1%
11 Does not use explanations that are relevant and understandable to the patient	18.8%
15 Shows poor time management	18.4%
12 Does not show sensitivity for the patient's feelings in all aspects of the consultation including physical examination	16.0%
04 Does not undertake physical examination competently, or use instruments proficiently	11.7%

| INTERNATIONAL MEDICAL GRADUATES, NOT EEA, only (n = 472) = 2076 FAILED CASES	
06 Does not develop a management plan (including prescribing and referral) that is appropriate and in line with current best practice	54.3%
09 Does not identify patient's agenda, health beliefs & preferences / does not make use of verbal & non-verbal cues	40.3%
10 Does not develop a shared management plan or clarify the roles of doctor and patient	39.2%
14 Does not recognise the challenge (e.g. the patient's problem, ethical dilemma etc.)	37.6%
01 Disorganised and unsystematic in gathering information from history taking, examination and investigation	32.1%
11 Does not use explanations that are relevant and understandable to the patient	28.0%
16 Shows inappropriate doctor- centeredness	27.5%
05 Does not make appropriate diagnosis	26.5%
13 Disorganised / unstructured consultation	23.7%
03 Data gathering does not appear to be guided by the probabilities of disease	23.1%
02 Does not identify abnormal findings or results or fails to recognise their implications	22.7%
07 Follow-up arrangements and safety netting are inadequate	21.1%
12 Does not show sensitivity for the patient's feelings in all aspects of the consultation including physical examination	17.3%
08 Does not demonstrate an awareness of management of risk, and health promotion	16.7%
15 Shows poor time management	16.5%
04 Does not undertake physical examination competently, or use instruments proficiently	7.9%

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 late in ST2 or 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 between 0.4 and 0.5.

The accompanying scatterplot is an exampleshowing such a relationship between an October AKT (2007) and the CSA the following February (2008). n = 374, r = 0.39
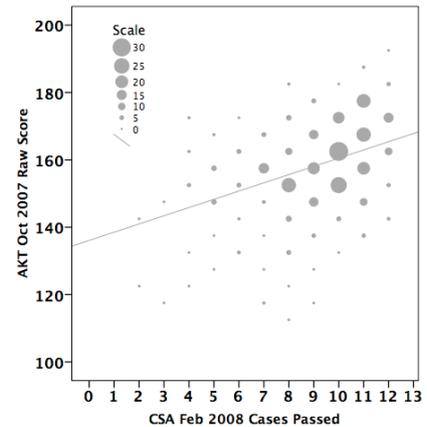
Test Quality Information

Coefficient alpha (and the measurement error estimate) of the three diets of the AKT is straightforwardly calculated. It was constant at 0.88/0.89 over the three diets; no more than two items were excluded from the 200 in any diet.

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 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.

Thus the quality of the CSA is monitored 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 very dependent on the variance in candidate ability. And our 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, the CSA daily alpha averaged 0.70 in 2008 with the 12 cases presently used. The level of these estimates is confirmed by a recent more complex generalisability study ("G-study") undertaken for the College by statisticians at Peninsula College of Medicine and Dentistry: their analyses of 'G' were in extremely close concordance (on the January/February 2009 CSA data) with our local ones of alpha.

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