MRCPUK

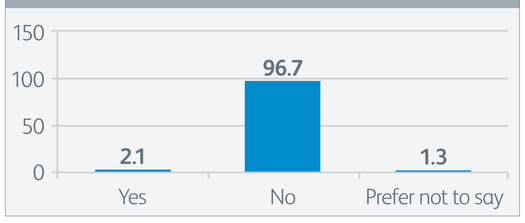
Membership of the Royal Colleges of Physicians of the United Kingdom

MRCP(UK)'s response to the BMA's examining equality report

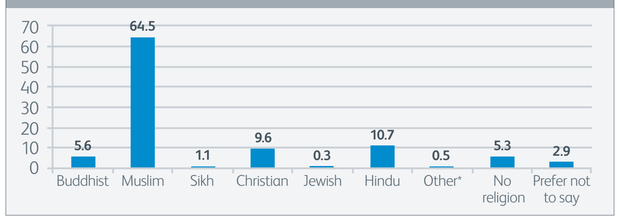
MRCP(UK) takes equal opportunities monitoring and reporting very seriously, and we have the following measures in place to support this:

1. A policy team is appointed to ensure that equal opportunities policies are in place and that best practice is implemented.
2. Data on gender, ethnicity and age is collected, monitored and reported on an annual basis. In 2014, a pilot scheme to collect data about all nine protected characteristics for 418 MRCP(UK) candidates was successful, and there are arrangements for full-scale data collection to take place from 2015.
3. Data on protected characteristics are routinely analysed at least three times a year and are reported to inform the examining boards.
4. Research papers were commissioned to analyse candidates' performance in relation to the equality and diversity data, such as gender and ethnicity.
5. Special arrangements are made during the examinations to accommodate candidates who have special needs.
6. All staff are required to attend equality and diversity training when they join MRCP(UK). Also, examiners and other clinicians are required to refresh their equality and diversity training every 3 years.
7. All clinicians involved in MRCP(UK) examinations are currently required to provide information about their gender, ethnicity and age; data on all nine protected characteristics will be collected from 2015.
8. Female clinicians and those from a minority ethnic background are actively encouraged to apply to become an examiner through open applications to all vacant positions.
9. Research on examiners' performance and behaviour in relation to their gender, ethnicity and age is published in medical journals.
10. Information related to equal opportunities including policies, procedures and monitoring results is accessible on the MRCP(UK) website and also in the *Examiner* and *Candidate* newsletters.

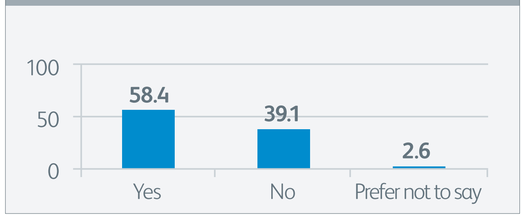
Pilot – candidates with self-declared disabilities (%)



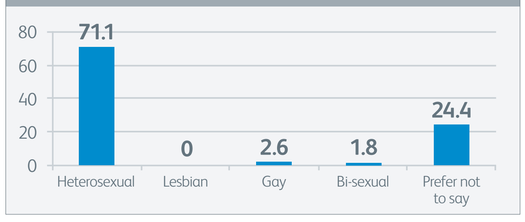
Pilot – candidates' self-declared religious beliefs (%)



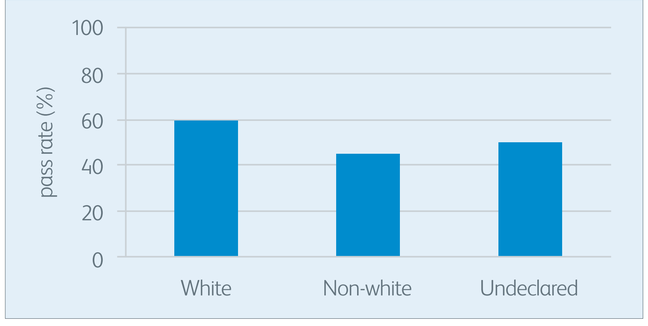
Pilot – candidates' self-declared marital status (%)



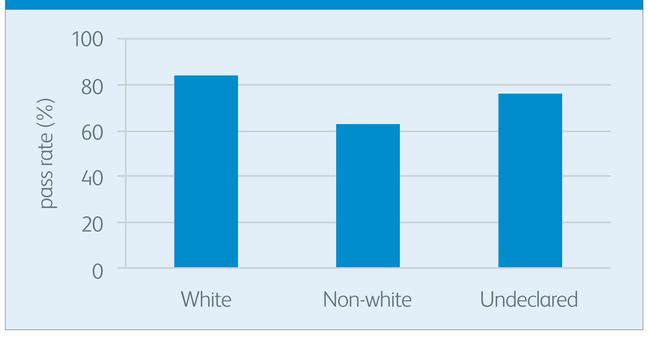
Pilot – candidates' self-declared sexual orientation (%)



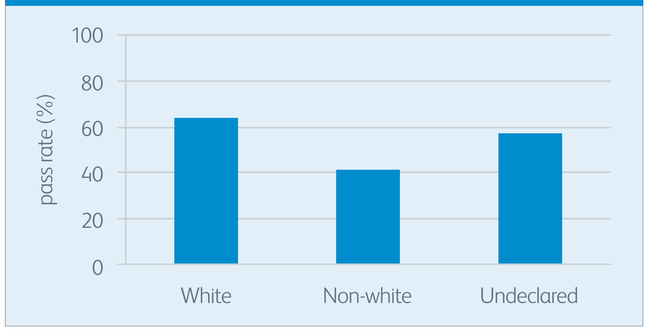
MRCP(UK) Part 1 written exam – UK trainees' pass rate by ethnicity



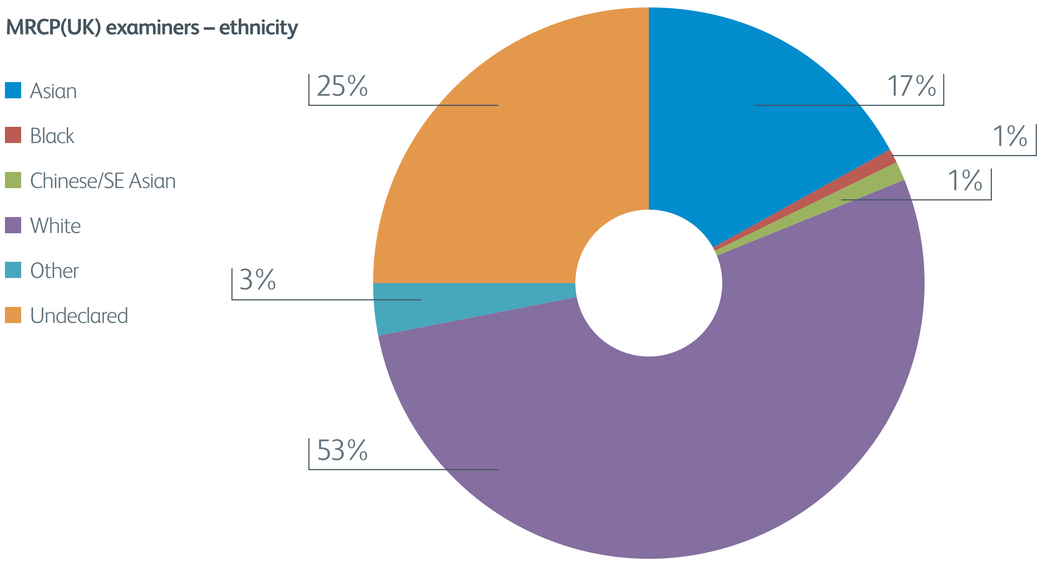
MRCP(UK) Part 2 written exam – UK trainees' pass rate by ethnicity



MRCP(UK) PACES clinical exam – UK trainees' pass rate by ethnicity



MRCP(UK) examiners – ethnicity



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Monitoring examiners' bias in clinical examinations

The results of 32 PACES exams were examined statistically, to assess the extent of hawkishness, as well as sex bias and ethnicity bias, in individual examiners (N=1,790). The findings were that no examiners showed significant sex bias, and only a single examiner showed evidence consistent with ethnicity bias.[1]

Method

Statistical analysis compared an examiner's judgement with the judgements made by their co-examiners.

Overall, 1,790 examiners from the old PACES exam were analysed, examining an average of 135 candidates (range: 13–912), and working with an average of 21 co-examiners (range: 1–136). The first 6 diets of nPACES were examined by 1,498 examiners (1,204 of whom had examined in the first 26 diets), who examined 65 candidates on average (range: 12–625) and co-examiners with an average of 8 co-examiners (range: 1–46%).

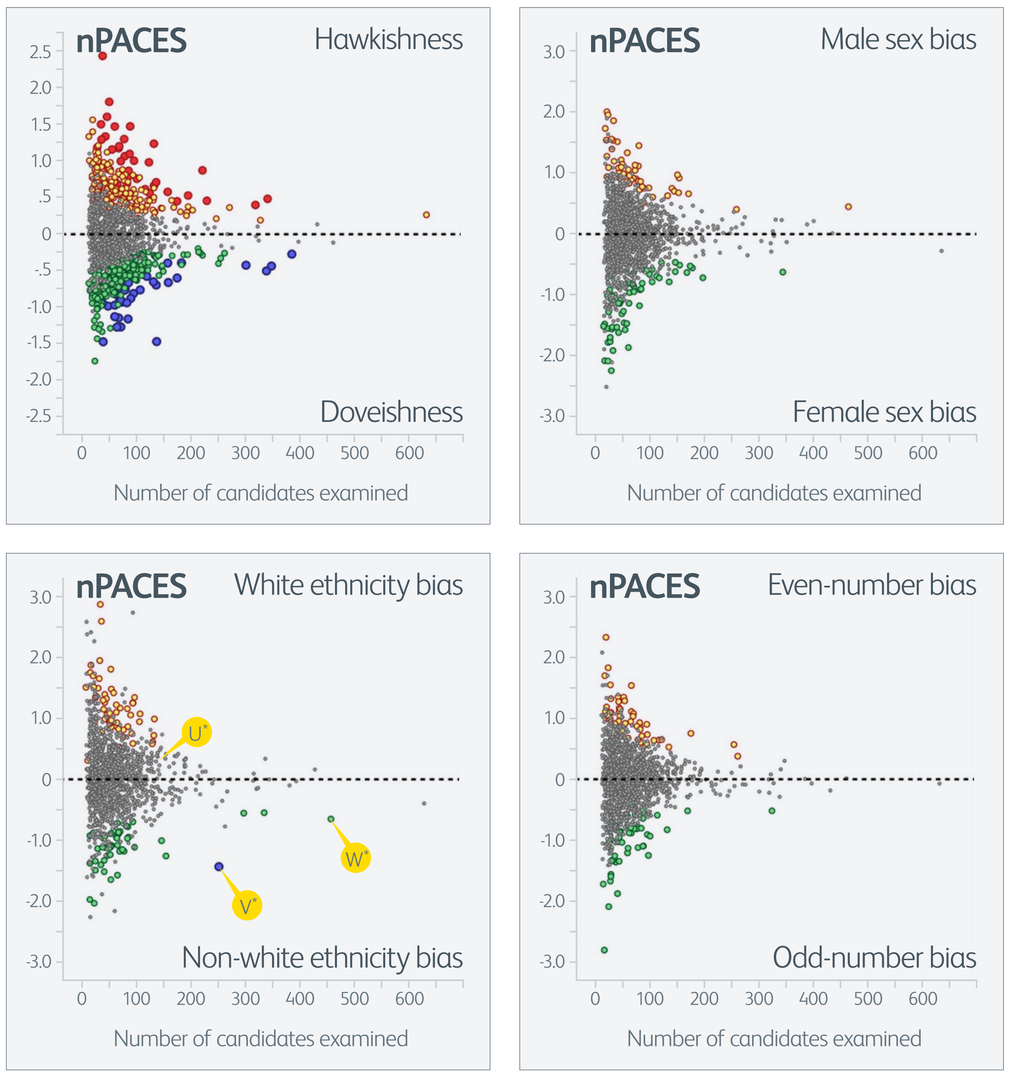
The present analysis did not require knowledge of the sex and ethnicity of the examiners, but in a recent census, 13.6% of UK examiners were female, 23% were non-white, and 24.2% were aged under 50 years. Examiners are therefore broadly representative of the fellowship of the Royal Colleges of Physicians.

Ethnicity was only known for 14,256 candidates, of whom 49.3% were non-white. Almost all candidates were aged under 50.

Examiner bias is a potential risk in any examination. Although techniques for assessing overall tendencies to be a hawk or a dove have been described previously, McManus, Elder and Dacre's analysis describes a method for identifying examiners who show specific biases towards individuals with particular characteristics, such as those defined by sex or ethnicity.

The method works effectively in an examination where there are two examiners per station.

'Bias of clinical examiners against some types of candidate, based on "characteristics" such as sex or ethnicity, would represent a threat to the validity of an examination, since sex or ethnicity are "construct-irrelevant" characteristics.'[1]



* Three examiners, labelled 'u', 'v' and 'w', who were significant on the Bonferroni corrected criterion with $p<0.05$ (one (u) a white examiner in favour of white candidates and two (v and w) non-white examiners in favour of non-white candidates), although 'w' would not reach significance on a stricter $p<0.001$ criterion.[1]

The individual graphs show for the first six diets of nPACES (27 to 32) the indices for hawkishness (top left), sex bias (top right), ethnic bias (lower left), and even-number bias (lower right). Each point represents an individual examiner, plotted against the number of candidates examined, and with the significance indicated (grey, NS; orange and green $p<0.05$ uncorrected; red and blue, $p<0.05$ Bonferroni corrected).[1]

[1] McManus IC, Elder AT, Dacre J. Investigating possible ethnicity and sex bias in clinical examiners: an analysis of data from the MRCP(UK) PACES and nPACES examinations. *BMC Med Educ* 2013;103.

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UK graduates' performance in relation to self-declared ethnicity and gender

Male students and students from ethnic minorities have been reported to underperform in undergraduate medical examinations. We examined the effects of ethnicity and gender on pass rates for UK medical graduates sitting the membership of the Royal Colleges of Physicians in the United Kingdom (MRCP(UK)) examination in 2003–4.[1]

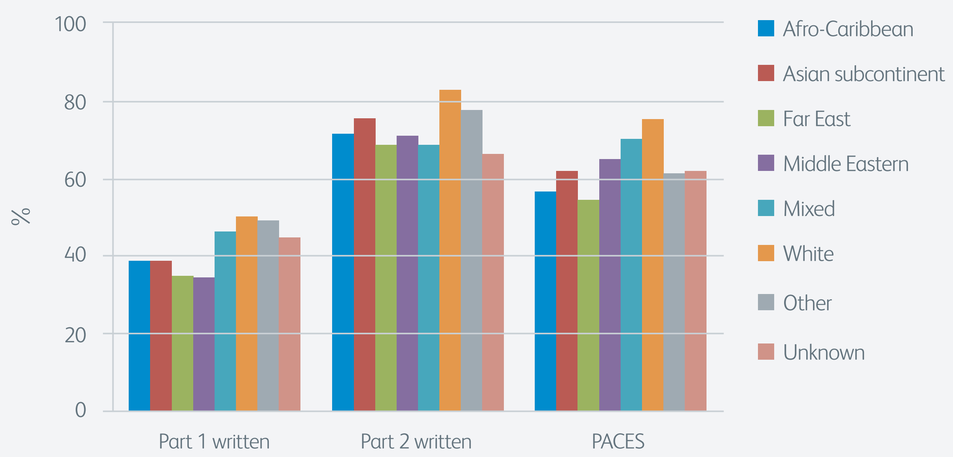
Method

Pass rates for each part of the MRCP(UK) examination were analysed for differences between graduate groupings based on self-declared ethnicity and gender.

Results

A total of 8,700 candidates sitting the MRCP(UK) examinations in 2003–4 declared their gender, and 84–90% declared their ethnicity. In all three parts of the examination, white candidates performed better than other ethnic groups ($p<0.001$). In the MRCP(UK) Part 1 and Part 2 written examinations, there was no significant difference in pass rate between male and female graduates, nor was there any interaction between gender and ethnicity. In the Part 2 clinical examination (practical assessment of clinical examination skills – PACES), women performed better than men ($p<0.001$). Non-white men performed more poorly than expected, relative to white men or non-white women. Analysis of individual station marks showed significant interaction between candidate and examiner ethnicity for performance on communication skills ($p=0.011$), but not on clinical skills ($p=0.176$). Analysis of the overall average marks showed no interaction between candidate gender and the number of assessments made by female examiners ($p=0.151$).

MRCP(UK) pass rates by ethnic group



Conclusion

Our study reveals that white candidates achieved the highest pass rates in all three parts of the MRCP(UK) examination, and it seems likely that trends already observed by others in undergraduate examinations continue through into the 'high-stakes' postgraduate arena. Female candidates performed better on PACES as a whole. Likewise, non-white candidates performed relatively poorly on both examination skills and communication. They performed particularly poorly on the communication skills and ethics station. The performance of non-white male trainees was particularly poor across all sections of the examination.

[1] Dewhurst NG, McManus C, Mollon J *et al*. Performance in the MRCP(UK) examination 2003–4: analysis of pass rates of UK graduates in relation to self-declared ethnicity and gender. *BMC Med Educ* 2007;8.

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