Examining the diversity of MRCS examiners

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ABSTRACT

Background: MRCS examiners are the face of the Royal College of Surgeons for early-career surgeons and should therefore represent the workforce they are examining as not to marginalise or negatively impact on the assessment experience of candidates from minoritised groups. This study aimed to explore the diversity of MRCS examiners and whether they represent the demographics of the MRCS candidates.

Methods: A retrospective observational study including all active examiners and examination candidates who attempted MRCS Part A or Part B between January 2020 and July 2021. Self-declared demographic data collected by the Intercollegiate Committee for Basic Surgical Examinations (ICBSE) included gender, sexual orientation, disability status and ethnicity. Following data anonymisation, total group response frequencies were made available to the research team for statistical analysis.

Results: Chi-squared analyses showed statistically significant differences in the representation of gender, disability and ethnicity between candidates and examiners (all $p < 0.001$). Men (83.9% ($n = 1121$) vs 70.9% ($n = 6017$) respectively), individuals without disability (98.7% ($n = 917$) vs 96.1% ($n = 6847$)) and individuals of White ethnicity (36.6% ($n = 346$) vs 20.4% ($n = 1223$)) were significantly overrepresented in the examiners compared to the examination candidates. There was no statistically significant difference in sexual orientation between examiners and candidates ($p = 0.712$).

Conclusions: Broadly speaking, the socio-demographic profile of MRCS examiners reflects that seen in senior and leadership positions in surgery in the UK – that is, predominantly male and White - but not that seen in early-career surgeons. Positive action is now required in examiner recruitment by the Royal Colleges to ensure that the cohort of MRCS examiners reflects the modern surgical workforce.

Introduction

The recently commissioned report on diversity and inclusivity at the Royal College of Surgeons of England (RCS Eng) highlighted stark disparities in career progression and representation experienced by some groups of surgeons.[1] Surgeons from Black and Minority Ethnic (BME) groups, female surgeons, surgeons with disabilities and LGBTQ + surgeons experience less supportive and inclusive working environments and are notably underrepresented within senior and leadership roles.[1–3] Reflecting this is a lack of

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Abbreviations

BME	Black and Minority Ethnic groups
FRCS	Fellowship of the Royal College of Surgeons Examinations
GMC	General Medical Council
ICBSE	Intercollegiate Committee for Basic Surgical Examinations
LGBTQ+	Lesbian, Gay, Bisexual, Transgender, Queer/ Questioning
MRCS	Intercollegiate Membership of the Royal College of Surgeons Examinations
UK	United Kingdom

diversity among Intercollegiate Membership of the Royal Colleges of Surgery examination (MRCS) examiners: only 11% of examiners were female and only 30% were from minority ethnic backgrounds.[1]

To date, however, there has been little information on how the diversity of examiners compares to that of the wider surgical workforce. This is an important gap in knowledge. Just as the General Medical Council (GMC) state that the medical workforce should 'reflect and represent the population they provide care for',[4] so should Intercollegiate Membership of the Royal Colleges of Surgery examination (MRCS) examiners represent the surgical workforce they are examining.

The MRCS examination, taken by more than 6000 candidates worldwide every year, has been described as a 'touchpoint' for surgical trainees in their interaction with the Royal Colleges of Surgery, and examiners are, therefore the face of the College for early-career surgeons.[1] A lack of diversity among examiners perpetuates the perception of College Membership as an exclusive club, potentially marginalising candidates from minoritised groups, and possibly altering the experience of the assessment environment for candidates.[5,6] Identifying whether this body represents the demographics of the surgical workforce that they examine is the first step in planning approaches to address under-representation and ensuring a fair and inclusive body of examiners. To address this gap, the current study aimed to examine the diversity of MRCS examiners.

Methods

This was a retrospective observational study including all active examiners and examination candidates who attempted MRCS Part A or Part B between January 2020 and July 2021. Data were collected from all UK, Ireland and international examination centres during the study period. Demographic data was self-declared by candidates and examiners as part of routine data collection, explicitly with permission to use this routine data for research purposes. Options were available during data collection for those not wishing to declare demographic data for each variable. Data were anonymised by administrators at the Intercollegiate Committee for Basic Surgical Examinations (ICBSE) on behalf of the four Royal Colleges of Surgery of the UK and Ireland before submission to the research team for statistical analysis.

Anonymised demographic data collected included gender, sexual orientation, disability status and ethnicity. Total group response frequencies were made available to the research team for each variable for chi-squared statistical analysis.

All univariate analyses were conducted on anonymised data using SPSS® v27.0 (IBM, Armonk, New York, USA). As there is no formal ethical committee, ICBSE and its Internal Quality Assurance (IQA) Subcommittee, which monitors standards and quality, approved this study. When handling, storing and analysing data, the highest standards of security, governance and confidentiality were maintained.

Results

During the study period, 8682 candidates attempted MRCS and there were 1339 active MRCS examiners. Self-declared demographic data for candidates and examiners are shown in Table 1. Missing data were excluded from analyses for each variable.

There was a statistically significant difference in the distribution of gender across roles (candidate vs examiner) ($p < 0.001$). A higher percentage of the examiners were male (83.9% ($n = 1121$)) compared to 70.9% ($n = 6017$) of candidates, with correspondingly fewer being female (16.0% ($n = 214$) and 29.1% ($n = 2468$), respectively). Very few examiners or candidates were transgender (0.1% ($n < 5$).

No statistically significant difference was found between role and sexual orientation ($p = 0.712$). A similar percentage of

Table 1 – Socio-demographic differences between MRCS candidates and examiners. All analyses exclude missing data.

	Candidates ($n = 8682$)	Examiners ($n = 1339$)
Gender		
Male	70.9% (6017)	83.9% (1121)
Female	29.1% (2468)	16.0% (214)
Transgender	0.1% (< 5)	0.1% (< 5)
Missing data	$n = 192$	$n = < 5$
p-value	< 0.001	
Sexual Orientation		
Heterosexual	97.4% (5542)	97.9% (774)
Bisexual	1.5% (85)	1.1% (9)
Homosexual	1.1% (63)	1.0% (8)
Missing data	$n = 2992$	$n = 548$
p-value	0.712	
Disability Status		
No Disability	96.1% (6847)	98.7% (917)
Disability	3.9% (277)	1.3% (12)
Missing data	$n = 1558$	$n = 410$
p-value	< 0.001	
Ethnicity		
Asian or Asian British	43.0% (2580)	39.8% (376)
White	20.4% (1223)	36.6% (346)
Black, African Caribbean, or Black British	5.9% (352)	3.0% (28)
Mixed or Multiple ethnic groups	7.6% (454)	9.2% (87)
Other ethnic group	23.1% (1388)	11.4% (108)
Missing data	$n = 2685$	$n = 394$
p-value	< 0.001	

examiners were heterosexual (97.9%, n = 774) compared to candidates (97.4%, n = 5542). The percentage of bisexual examiners was 1.1% (n = 9) and bisexual candidates 1.5% (n = 85), the percentage of homosexual examiners was 1.0% (n = 8) and homosexual candidates 1.1% (n = 63).

A statistically significant difference was found between role and ethnicity ($p < 0.001$). The majority of examiners and candidates were Asian or Asian British (39.8% (n = 376) and 43.0% (n = 2580), respectively). Significantly more examiners were White compared to candidates (36.6% (n = 346) vs 20.4% (n = 1223) respectively). Examiners from other ethnic groups made up 11.4% (n = 108) of examiners compared to 23.1% (1388) of candidates while 9.2% (n = 87) of examiners were of mixed ethnicity compared to 7.6% (n = 454) of candidates. Three percent (n = 28) of examiners were Black, African, Caribbean or Black British compared to 5.9% (n = 352) of candidates.

Finally, significantly more candidates declared a disability than examiners (3.9% (n = 277) vs 1.3% (n = 12) respectively, $p < 0.001$).

Discussion

This study has identified that some groups are disproportionately represented among MRCS examiners and the body of examiners does not reflect the current socio-demographics of MRCS candidates.

Broadly speaking, the socio-demographic profile of examiners reflects that seen in other senior and leadership positions in surgery – predominantly male and White. Women are significantly under-represented as examiners with a 13% difference between the proportion of female candidates (29%) vs female examiners (16%). This is not unexpected, given that only 14% of the surgical consultant workforce in the UK at the time of data collection were female, but it is particularly worrying given the considerable barriers experienced by women in surgery in the current system that likely contribute to differential attainment in exams, career progression and attrition rates of female trainees.[1,8,9] That only 14% of the surgical consultant workforce were female compared to 37% of consultants across all specialties in 2020 when the majority of medical school graduates are women (57%) is pathognomonic of the major barriers that women currently face in surgery.[1,10,11]

The proportionate representation of Asian and Asian British surgeons among examiners was reassuring. However, White examiners (37%) were notably over-represented within the total number of examiners and compared to the number of White candidates (20%). To some extent, this finding may be due to the nature of the study cohort which included international medical graduates attempting the examination in the UK, Ireland and in international centres worldwide. This could have contributed to the smaller percentage of candidates of White ethnicity compared to cohorts analysed in other studies.[5–7] In addition, examiners from the Royal Colleges of the UK and Ireland visit international examination centres as examiners and representatives of the Colleges. Given that a higher proportion of examiners from the UK and Ireland are likely to be White, then this would further skew the data.

Unfortunately, the data available did not allow a more granular look at the place of graduation or location of clinical practice for either cohort. It would be reasonable to expect differences in the socio-demographic representation of each cohort if all UK and Irish candidates and examiners could be analysed separately to those graduating from and practising in other countries. We hope that the publication of these data will prompt transparency by the Royal Colleges in the routine publication of demographics of examiners as well as members of other committees, working groups and positions of responsibility. This would allow further meaningful comparison between cohorts of examiners and candidates from the UK and Ireland alone.

Of note, a large proportion of the study cohorts were from 'Other ethnic groups' (11% of examiners and 23% of candidates). This heterogeneous category accounted for nearly one-quarter of all candidates attempting the examination. While arguably pragmatic, this approach highlights the limitations of artificially grouping ethnicities for data collection and statistical analysis purposes in ways which fail to recognize the diversity of individuals.

A significant number of candidates did not disclose their sexual orientation during the data collection period. This may be an artefact of the bias, discrimination and micro-aggressions experienced by LGBTQ + colleagues within training and the workplace.[12,13]

More candidates declared a disability than examiners. However, interestingly, this was considerably lower than the previous prevalence of disability of 6–7% declared by MRCS candidates between 2007 and 2017.[6] The prevalence is also much lower than is estimated amongst UK medical students.[14] Again this might be an artefact of our study cohort that included both UK and overseas candidates: definitions of and attitudes towards disability are context-specific and thus may differ across the world. Whether this difference is due to fewer doctors with disabilities choosing to pursue a career in surgery or whether those in surgery are less likely to disclose their disabilities because of fear of bullying, undermining and harassment remains unknown.[15]

Differential attainment has been found between groups of candidates at MRCS.[5,6] While the causes for this attainment gap are currently being investigated, it is likely that differences in experiences of surgical training and assessment environments are contributory factors. A lack of representation of some groups among examiners may alter the experience of the assessment environment for candidates and may therefore potentially impact on results. Future research should include a regular reassessment of differential attainment at the MRCS examination to assess the efficacy of changes to the training and assessment environments aimed at eliminating this attainment gap.

Being an MRCS examiner is considered prestigious and is often a stepping-stone for election to a senior or leadership position at the Royal Colleges of Surgeons or in other Specialty Surgical Associations, so it is perhaps not surprising that the lack of diversity seen in those positions is reflected among examiners. The Royal Colleges have been actively recruiting for both examiners and question writers for some time. However, there needs to be an appreciation for the barriers that may prevent or reduce the number of applications from

minoritised groups. Some of these reasons were highlighted in the report by Baroness Helena Kennedy, such as a lack of feeling of belonging at the RCSEng and concerns of bias within recruitment processes for leadership roles.[1] Pathways need to be developed in such a way to avoid individuals suffering from the so-called 'minority tax', a term used to describe the faculty responsibility disparity experienced by underrepresented minority groups within medicine.[16] A focus on representative leadership will contribute to a better understanding of the issues and barriers that exist for some groups and not others within surgical careers, improving alignment between policy decisions and stakeholders.

The notable strength of this study is the collection of data from multiple examination centres around the world, providing substantial cohort sizes for analysis. The large study population enabled meaningful statistical analyses and conclusions to be drawn despite some variables being categorised into a number of subgroups. Data collection occurred during the emergence of the COVID-19 pandemic which caused untold disruption to normal healthcare provision, surgical training and assessments.[17,18] This included changes to the format of MRCS examinations, such as the conversion of MRCS Part A from paper to a virtual format and the temporary cessation in the use of actors for clinical stations in Part B.[19] However, whether or not the COVID-19 pandemic resulted in changes to the demographic representation of cohorts attempting MRCS during the study period remains unknown.

There has been increasing diversification of the surgical profession over the last few decades. It is possible that a degree of the disproportionate representation of some groups found in this study is the result of a long lag time (at least seven years) between sitting MRCS and becoming eligible to be an MRCS examiner. If this is a contributing factor, then the Royal Colleges will have an increasingly diverse pool of surgical consultants to recruit as new examiners to establish a body of examiners that better represents the wider surgical workforce. A diverse pool of potential examiners already exists within the consultant workforce, but positive action is required to actively recruit these individuals to ensure that the cohort of examiners represents the modern surgical workforce.

Conclusions

As the 'face' of the Royal Colleges of Surgery, it is vital that the body of MRCS examiners reflects the diversity of the surgical workforce and the diversity of the MRCS candidates they are examining. This study found that some groups are disproportionately represented amongst MRCS examiners and the body of examiners as a whole does not reflect the current socio-demographics of MRCS candidates internationally. Positive action is now required in examiner recruitment by the Royal Colleges to ensure that the cohort of MRCS examiners reflects the modern surgical workforce.

Contributorship

RE analysed the data and wrote the first draft of the manuscript. AJL supervised the statistical analyses and presentation of data. JC edited the first draft of the manuscript. RE, PAB, JH, AJL and JC all edited the manuscript and approved the final version for publication. JC is the study guarantor.

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Declaration of competing interest

The authors declare that they have no conflict of interest.

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