UNDERSTANDING TRAINEE PHYSICIAN SPECIALITY RECRUITMENT DURING COVID-19: INSIGHTS FROM A TRAINEE LEAD SURVEY

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Recruitment to specialty training in the UK has been significantly affected by the covid-19 pandemic and physician recruitment is no exception (1).

The recruitment model used by the Physician Speciality Recruitment Office (PSRO) prior to 2020 attributed 80% of the final assessment score to a candidate’s score at interview, where commitment to specialty, clinical and ethical skills are assessed. The remaining 20% of the final assessment score is determined through a self-assessment shortlisting score based on ten pre-specified criteria (Table 1). The final assessment score is used to rank candidates and National Training Numbers (NTNs) are allocated accordingly.

<table>
<thead>
<tr>
<th>Domain</th>
<th>Used in ranking</th>
<th>Shortlist score max</th>
<th>Weighting</th>
<th>Tie-break rank</th>
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<td>QIP</td>
<td>Yes</td>
<td>10</td>
<td>1.2</td>
<td>1</td>
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<tr>
<td>Teaching experience</td>
<td>Yes</td>
<td>7</td>
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<td>MRCP (UK)</td>
<td>Yes</td>
<td>12</td>
<td>1.0</td>
<td>3</td>
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<td>Training in teaching</td>
<td>Yes</td>
<td>5</td>
<td>1.0</td>
<td>4</td>
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<td>1.5</td>
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<tr>
<td>Postgraduate qualification</td>
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<td>8</td>
<td>N/A</td>
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</table>

*Table 1: PSRO ST3 Recruitment 2020 Model: QIP (Quality Improvement Project), MRCP (Membership of the Royal College of Physicians).*

In light of the current pandemic, various approaches have been adopted in 2020 to avoid the need for face-to-face interviews. Surgical, Intensive Care Medicine and Anaesthetic recruitment bodies have allocated National Training Numbers (NTNs) based upon candidates’ shortlisting scores. However, due to concerns about candidate under and over scoring in the self-assessment process, the PSRO introduced a revised model across all medical specialties.

The revised PSRO model removed 5 of the shortlisting score parameters and adjusted the weighting of the remaining 5. Unpublished PSRO analysis claims, the 5 chosen parameters correlated most closely with interview performance (2). To discriminate candidates in tie-break scenarios, the 10 shortlisting parameters were used in a set order determined by the PSRO, with 400 word free-text ‘commitment to speciality’ passages used if candidates still ranked identically.
In an attempt to understand the effects of this process on candidates ranking, the British Junior Cardiologists Association Starter Committee (BJCASC) surveyed ST3 applicants across the physicianly specialties to understand the effect of the revised model on the ranking process. The survey was administered using the Google Forms platform, advertised through Twitter and the BJCA Starter Committee mailing list and analysed with Microsoft® Excel (2018). Responses were collated for 48 hours from release on 21st April 2020 prior to the release of NTNs. Shortlist scores were converted to PSRO revised model scores using the published weighing factors (Table 1).

117 survey participants (52% cardiology applicants) provided complete datasets of their shortlisting score and the specialty they were applying for. Figure 1 demonstrates respondents shortlist scores ranked according to their revised PSRO model score. The median shortlist score of our participants was 53 (IQR = 12), while the median estimated interview score was 42.6 (IQR = 7). Figure 2 demonstrates that whilst the shortlist score provides a normally distributed cohort, the PSRO revised model transforms this to a negatively skewed cohort with clustering of candidates above the median and a marked reduction in the spread of candidate scores. This suggests that a small change in overall score could result in large shifts in ranking and a reduced ability to discriminate between candidates.

Figure 1: Shortlist scores of all respondents ranked according to PSRO interview score.
Figure 2: Distributions of PSRO revised model scores and shortlist scores of survey respondents (n=117).

Figure 3 demonstrates that almost all (92\% n=54) candidates scoring above the median on the PSRO revised model score (i.e. those that be assumed to be in contention for the places) had scored maximum points in ‘presentations’, ‘MRCP’ and ‘teaching experience’. Therefore, increases in score above the median were largely due to changes in scores for ‘training in teaching’ and to a lesser extent ‘QIP’.

Figure 3: Shortlist scores of all respondents ranked according to PSRO interview score.

To investigate this further a correlation analysis was performed using Spearman’s rank coefficient’s due to the non-normal distribution of the PSRO revised model scores. Above the median PSRO revised model score ‘training in teaching’ and ‘QIP’ were most strongly correlated with PSRO revised model score (Figure 4). Amongst respondents with PSRO revised model scores greater than the median, 5 respondents (8\%) failed to score maximum
marks in ‘QIP’ and 4 respondents (7%) failed to score maximum marks in ‘teaching experience’. The greater correlation coefficient of the ‘QIP’ component can be explained by the increased weighting provided to ‘QIP’ by the PSRO model and the nature of the scoring systems for each component. Scoring in the second bracket for ‘teaching experience’ scores a single point less than the top bracket whereas in ‘QIP’ the second bracket is worth 2 points less than the top bracket which is translated to a difference of 2.4 points with the PSRO model.

Limitations of this survey include the means of recruitment, which may have produced an increased proportion of candidates applying for cardiology and a median shortlist score greater than the nationwide median in 2020 (3). However, the Joint Royal College of Physicians Training Board (JRCPTB) has recently published the 2020 shortlisting and final assessment scores for individual medical specialties which support the results generated by our survey (3). Shortlisting and final assessment scores have previously followed a normal distribution (3). In 2020, shortlisting scores in almost all specialties and final assessment scores in specialties in which interviews were completed (e.g. Rheumatology) also approximate to a normal distribution. However, the distribution of final assessment scores in specialties using the PSRO revised model (e.g. Gastroenterology) are consistently negatively skewed (Figure 5).
Our survey also gave respondents the opportunity to offer their thoughts about the revised process in a free-text question (“Please describe your thoughts and feelings following this year's recruitment process”). Trainees reported concerns including the limited involvement of ‘commitment to specialty’ assessment, the exclusion of research and leadership components from the PSRO revised model, and financial discrimination of candidates unable to afford post graduate training in teaching.

**Conclusion**

The substantial differences in distribution of candidate scores between the ‘gold standard’ and revised PSRO model suggests that the revised model does not achieve the PSRO’s aim to mimic a process involving face-to-face interview. In reducing the spread of candidate scores and clustering them at the higher end of the range, the PSRO revised model has reduced the ability to discriminate between candidates and is reliant on variation in ‘QIP’ and ‘training in teaching’ to do this.
References