



# City Research Online

## City St George's, University of London

**Citation:** Patterson, F., Zibarras, L. D., Kerrin, M., Lopes, S. & Price, R. (2014). Development of competency models for assessors and simulators in high-stakes selection processes. *Medical Teacher*, 36(12), pp. 1082-1085. doi: 10.3109/0142159x.2014.930112

This is the accepted version of the paper.

This version of the publication may differ from the final published version. To cite this item please consult the publisher's version.

**Permanent repository link:** <https://city-ref-test.eprints-hosting.org/id/eprint/12510/>

**Link to published version:** <https://doi.org/10.3109/0142159x.2014.930112>

**Copyright and Reuse:** Copyright and Moral Rights remain with the author(s) and/or copyright holders. Copies of full items can be used for personal research or study, educational, or not-for-profit purposes without prior permission or charge, unless otherwise indicated, provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way. For full details of reuse please refer to [City Research Online policy](#).

## SHORT COMMUNICATIONS

## Development of competency models for assessors and simulators in high-stakes selection processes

FIONA PATTERSON<sup>1,2</sup>, LARA ZIBARRAS<sup>3</sup>, MAIRE KERR<sup>4</sup>  SAFIATU LOPES<sup>4</sup> & ROGER PRICE<sup>5</sup><sup>1</sup>Work Psychology Group, Derby, UK, <sup>2</sup>Department of Psychology, University of Cambridge, Cambridge, UK,<sup>3</sup>Department of Psychology, City University London, Northampton Square, London, UK, <sup>4</sup>Work Psychology Group, Derby, UK, <sup>5</sup>East Midlands Deanery, Nottingham, UK

## Abstract

**Background:** Selection for entry into UK medical specialty training is a high-stakes, high-volume process. For selection into General Practice, a large number of assessors and simulators are involved in the delivery of the selection centre, which represents the final stage of selection.

**Aim:** In order to standardize and quality-assure assessor and simulator involvement in the process, we developed two competency models outlining the knowledge, skills and attributes associated with each role using a previously validated job analysis methodology.

**Results:** The final qualitative analysis resulted in two competency models, each encompassing eight competency domains. In general, results from a validation questionnaire demonstrated positive feedback from various regional recruitment leads in the UK ( $n = 14$ ).

**Conclusion:** Both models are currently being used in practice for quality assurance and training purposes. We conclude that the competency models can be used in three ways: (1) recruiting assessors/simulators; (2) in measuring performance of assessors/simulators and highlighting areas for potential development; and (3) they can be used for training assessors/simulators.

## Introduction

Research evidence shows that selection centers (SCs) are a good indicator of future job performance (Patterson et al. 2005; Lievens & Patterson 2011), however, in large-scale recruitment there is a greater challenge in attaining standardization across different assessment days and locations to ensure fair and consistent treatment of applicants. For example, assessors, and potentially simulators, can be a major source of error during an interview or selection centre process (Chen 2006).

This study presents a case study from the UK General Practice (GP) selection process which is a three-stage, large-scale validated selection process (Patterson et al. 2009); attracting around 6000 applicants per year for approximately 3000 posts. The final stage of the process, a selection centre, involves a written exercise and three simulated consultations, for which assessors and simulators are required. The SCs are typically held over a two- to three-week period across 16 regional locations, with up to 144 candidates taking part each day. For every 48 candidates, approximately 24 assessors and 24 simulators are needed. Given the risk of potential variability between different assessors and simulators, there is a growing demand for competency models related to each role, in order to increase standardization and calibration of the overall process.

## The role of assessors in selection

In SCs, assessors are required to observe, record, and evaluate candidates' performance using standardized rating scales. Consequently, studies show that assessors' skills are vital to the success of any SC process (Chen 2006). For example, both "unqualified assessors" and "inadequate training" are thought to negatively influence the validity of SCs (Chen 2006, p. 254). Despite research recognizing the importance of training and developing proficient assessors (Brownell 2005), there is little research exploring the necessary knowledge, skills and attributes associated with success.

## The role of simulators in selection

Selection centers often make use of several high-fidelity work sample tests, also known as "role plays". These have been shown to exhibit high criterion-related validities (Wyatt et al. 2010) and are popular in medical education and assessment, since simulations can be used to assess the competence of doctors, whilst providing a real-world context to understand complex patient care needs (Austin et al. 2006). Standardization of simulators' performance (who sometimes plays the role of a patient or colleague) ensures consistency across experiences, which is necessary for making fair and reliable comparisons between candidates. However, there has

*Correspondence:* Fiona Patterson, Work Psychology Group; 27 Brunel Parkway; Pride Park; Derby; DE24 8HR, UK. E-mail: f.patterson@workpsychologygroup.com

been virtually no research regarding the competencies required of a good simulator or how to select simulators.

Given the paucity of research in this area, the present study identifies the core competencies and behaviors required for both assessor and simulator roles, in the context of the UK GP selection process.

## Methods

### Participants and procedure

In accordance with best practice selection, competency frameworks for each role were devised through the use of validated job analysis techniques (Patterson et al. 2000, 2013). Accordingly, a convenience sample was invited to participate in a Critical Incident Technique interview (Flanagan 1954). In total, seventeen interviews were conducted with: lead assessors ( $n=5$ ); recruitment administrators, who oversee delivery of the selection process ( $n=5$ ); senior managers and trainers ( $n=4$ ); and lead simulators ( $n=10$ ). Interviews elicited information about the tasks and responsibilities; knowledge, skills and attitudes required; and behaviors associated with effective/ineffective performance, in each role.

On the basis of the interviews, behavioral indicators were extracted and recorded on cards, with codes indicating whether it related to effective/ineffective performance. Second, behavioral indicators were grouped into similar themes via a card-sort procedure. This resulted in a number of overarching competencies, defined as “a set of specific behavior patterns, including knowledge, skills and abilities, a person is required to have to perform effectively as an assessor/simulator”. Competencies were then labeled, using a post-hoc approach and the model was validated by an expert panel of subject matter experts ( $n=5$ ).

### Initial validation of competency models

The GP deans, responsible for recruitment in each regional location, were then asked to complete an evaluation questionnaire via email, asking their views on the appropriateness of both competency models; e.g. how the models were used in their recruitment process and suggestions for improvement. Fourteen respondents (representing 14 of the 16 regional locations) completed the questionnaire.

## Results

The resulting competency models comprised eight competency domains for both assessor and simulator roles. Table 1 provides summary descriptions for these domains, classified into four areas, with examples of positive/negative behavioral indicators provided. As expected, there is substantial overlap between the competency domains for assessors and simulators; however, for each model the behavioral indicators vary, reflecting the specific knowledge, skills, behaviors and attitudes required for each role. For example, while “knowledge” requirements for an assessor include knowledge about the selection process, employment law and an understanding of the GP role; a simulator is only required to have

knowledge about the general principles of selection (including employment law) and the mechanics of the specific process.

### Initial validation of the competency models

#### Assessor model

All respondents ( $n=14$ ) agreed that the model had good potential to increase standardization and calibration of assessors, and most agreed that it was relevant (91%) and useful (82%). Some respondents remarked that it could be used to recruit assessors in their region, in particular for self-selection; as well as train assessors and improve quality assurance. In general, the model was positively received and appeared to provide legitimacy and credibility to the national process, as one respondent indicated, “there’s more confidence... we’ve now got something with external reference and authority. It gives legitimacy, everyone is doing the same”.

#### Simulator model

Respondents ( $n=14$ ) agreed that the model was relevant (92%) and had the potential to increase the standardization (75%) and calibration (70%) of simulators. Similarly, some respondents commented that the model could be used for the recruitment, selection and training of simulators in their region. Feedback was also encouraging, for example, as with one respondent suggesting that the model “helped to legitimize and confirm the need to have a professional and common standard for role playing”.

Finally, respondents indicated that they planned to use both assessor and simulator competency models more extensively in the following annual national selection process.

## Discussion

The assessor and simulator competency models were developed in response to a need for greater standardization and calibration of these roles in GP national selection. This was the first attempt to define the competencies required of assessors/simulators within this context; and the initial validation results indicate the models could improve the standardization of selection methodology delivery and the quality of the selection process overall. Moreover, the models could serve to provide a further degree of “professionalism” to process.

## Practical Implications

The competency models have the potential to add value in three key areas: (1) They can be used in recruiting assessors/simulators, providing criteria with which to select the most suitable individuals, and can also be used for self-selection, where potential assessor/simulators can determine whether they are suitable and willing to fulfil the responsibilities; (2) They can be useful tools for measuring performance and highlighting areas for potential development. The level of detail provided offers a common language with which to describe the desirable (or indeed undesirable) behaviors associated with each role, with clear examples of each behavior; (3) They can be referred to when developing

**Table 1.** Descriptions of assessor & simulator competencies.

| Competency                        | Type             | Definition                                                                                                | Example positive indicator                                                                         | Example negative indicator                                                               |
|-----------------------------------|------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| <b>Assessor Competencies</b>      | Knowledge        | Knowledge of the selection process, employment law and the specific context                               | Understands of the role of GP trainee & the context of the work environment                        | Fails to understand employment law & how it influences selection                         |
| <b>Assessor Skills</b>            | Technical skills | Understands principles of assessment for selection, uses ORCE model; relates observations to competencies | Perceptive in observations, attentive to whole interaction                                         | Records vague unsubstantiated comments, writes illegible & inconsistent recordings       |
| <b>Resilience</b>                 | Behaviors        | Remains focused throughout the day, able to cope with pressure/emotion                                    | Refocuses after each candidate                                                                     | Shifts focus throughout the day, becomes bored                                           |
| <b>Decision Making</b>            | Behaviors        | Confident and decisive; prepared to support decision if challenged                                        | Comfortable making important decisions & abides by the outcomes                                    | Uneasy in consensual decision making, prefers making decisions alone                     |
| <b>Communication Skills</b>       | Behaviors        | Clear written and verbal communication; active listening and articulate expression                        | Communicates effectively, articulates points succinctly & gives effective examples                 | Timid or loud/forceful, verbose, gives ambiguous examples                                |
| <b>Team Focus</b>                 | Behaviors        | Works well with assessors, simulators and administrators; not hierarchical                                | Respects all team members & encourages partnership                                                 | Exhibits intolerance or lack of respect for other team members                           |
| <b>Openness</b>                   | Attitude         | Takes actions to learn and develop by reviewing own performance and discussion with others                | Critically evaluates own performance, prepared to change behaviour                                 | Avoids opportunities for feedback, ignores feedback offered                              |
| <b>Commitment</b>                 | Attitude         | Commitment to upholding high standard in terms of selection process and ensuring equal opportunities      | Is committed to equal opportunities, treats all candidates the same                                | Mistrusts the system, regularly dismisses the outcome                                    |
| <b>Simulator Competencies</b>     |                  |                                                                                                           |                                                                                                    |                                                                                          |
| <b>Understanding of Selection</b> | Knowledge        | Understanding of the process, general principles of selection and employment law, logistics               | Aware of information selectors need to observe & record                                            | Disregards schedule, is in wrong place at wrong time, fails to consider knock-on effects |
| <b>Simulator Skills</b>           | Technical skills | Understands simulator skills, performs calibrated & consistent simulations.                               | Spends a sufficient amount of time rehearsing scenarios                                            | Over-empathises with candidates, fails to keep appropriate distance                      |
| <b>Resilience</b>                 | Behaviors        | Remains focused throughout the day, able to cope with pressure/emotion                                    | Reacts quickly to candidate, adapts behaviour and style appropriately in response to the candidate | Shifts focus throughout the day, becomes distracted or bored                             |
| <b>Observation Skills</b>         | Behaviors        | Confident and decisive; prepared to support decision if challenged                                        | Comfortable making important decisions & abides by the outcomes                                    | Uneasy in consensual decision making, prefers making decisions alone                     |
| <b>Communication Skills</b>       | Behaviors        | Clear written and verbal communication; active listening and articulate expression                        | Articulates point succinctly, presents evidence of behaviours & facts                              | Contributions to group discussions lack patient perspective                              |
| <b>Team Focus</b>                 | Behaviors        | Works well with assessors, simulators and administrators                                                  | Respects all team members & encourages partnership                                                 | Exhibits intolerance or lack of respect for other team members                           |
| <b>Openness</b>                   | Attitude         | Open to feedback from others, responds to direction & open to change                                      | Open to change in order to help the process                                                        | Uncomfortable role-playing in front of others, resists direction                         |
| <b>Commitment</b>                 | Attitude         | Commitment to upholding high standard in terms of selection process and ensuring equal opportunities      | Discrete, maintains confidentiality at all stages, ensures paperwork is kept secure                | Attempts to catch out candidate during scenario, is thoughtless in behaviour             |

ORCE = Observe, Record, Classify, Evaluate.

assessor/simulator training sessions; if all UK locations use these models, it can aid calibration. In sum, using this kind of competency model approach in high-stakes selection processes could reduce the potential variability among assessors/simulators and ensure fair and consistent treatment of all candidates.

## Notes on contributors

Professor FIONA PATTERSON is founding Director of the Work Psychology Group, Professor and Principal Researcher at the University of Cambridge, UK, Department of Psychology and Visiting Professor of Social Sciences for the Interdisciplinary Centre for Creativity in Professorial Practice at City University, London.

Dr. LARA ZIBARRAS is a Lecturer in Organizational Psychology at City University, London.

Dr. MAIRE KERRIN is a director of the Work psychology group and Visiting Lecturer at City University London.

SAFIATU LOPES is a consultant and researcher at the Work Psychology Group.

ROGER PRICE is Deputy GP Dean, Foundation School Deputy Director in East Midlands Deanery and Co-Chair of the National Recruitment Office.

## Acknowledgement

We gratefully thank Labhaoise Buckley for her support with data collection.

**Declaration of interest:** Professor Patterson and Dr. Maire Kerrin provide advice to the Department of Health in selection methodology through the Work Psychology Group Ltd.

## References

- Austin Z, Gregory P, Tabak D. (2006). Simulated patients vs. standardized patients in objective structured clinical examinations. *Am J Pharm Educ* 70(5):1–7.
- Brownell J. 2005. Predicting leadership: The assessment center's extended role. *Int J Contemp Hospit Manag* 17(1):7–21.
- Chen H.-C. 2006. Assessment center: A critical mechanism for assessing hrd effectiveness and accountability. *Adv Develop Hum Resour* 8(2):247–264.
- Flanagan JC. 1954. The critical incident technique. *Psychological Bulletin* 51(4):327–358.
- Lievens F, Patterson F. 2011. The validity and incremental validity of knowledge tests, low-fidelity simulations, and high-fidelity simulations for predicting job performance in advanced-level high-stakes selection. *J Appl Psychol* 96(5):927–940.
- Patterson F, Baron H, Carr V, Plint S, Lane P. 2009. Evaluation of three short-listing methodologies for selection into postgraduate training in general practice. *Med Edu* 43(1):50–57.
- Patterson F, Ferguson E, Lane P, Farrell K, Martlew J, Wells A. 2000. A competency model for general practice: Implications for selection, training, and development. *Brit J General Pract* 50:188–194.
- Patterson F, Ferguson E, Norfolk T, Lane P. 2005. A new selection system to recruit general practice registrars: Preliminary findings from a validation study. *Brit Med J* 330(7493):711–714.
- Wyatt MRR, Pathak SB, Zibarras L. 2010. Advancing selection in an SME: Is best practice methodology applicable? *Int Small Bus J* 28(3):258–273.