2013

BEST PRACTICES IN APPLICATIONS & SELECTION

FINAL REPORT (DRAFT MAY 2013)

PREPARED BY THE BEST PRACTICES IN APPLICATIONS & SELECTION WORKING GROUP (BPAS):

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1. EXECUTIVE SUMMARY

Recent initiatives such as the Future of Medical Education in Canada (UGME and PGME) and the Thomson Report have drawn attention to the process by which residency programs assess and select applicants to their programs with particular attention to training the right mix of physicians to serve population health needs. In addition, there has recently been a substantial amount of interest in the literature around the psychometric properties of assessment tools. In light of the importance and timeliness of this topic, the University of Toronto Postgraduate Medical Education Office struck the Best Practices in Application and Selection (BPAS) Working Group, to carry out a comprehensive literature review and environmental scan to develop recommendations and an implementation strategy of best practices in admissions and selection at the University of Toronto. The working group, chaired by Dr. Glen Bandiera, Associate Dean, Admissions & Evaluations, PGME, was comprised of Residency Program Directors, Undergraduate Medical Education representatives, trainees, external consultants and PGME staff. This report outlines the review process and the subsequent recommendations set forward by the BPAS working group, which consists of 13 principles and 20 best practices

2. BACKGROUND

A number of recent national and provincial initiatives such as The Future of Medical Education in Canada (FMEC): A Collective Vision for MD Education, A Collective Vision for Postgraduate Medical Education in Canada, and IMG SELECTION: Independent Review of Access to Postgraduate Programs by International Medical Graduates in Ontario, have drawn attention to the process by which residency and fellowship programs assess, and select from among, applicants to their programs.

Universities are expected to demonstrate social responsibility and accountability in fulfilling a mandate to provide a balanced graduate pool of physicians. The applicant pool has expanded and become more diverse with applicants from around the world, with differing experiences. Fundamental issues of equity, reliability, validity, and feasibility are the focus of recent literature reviews and original research. Finally, emphasis on competency-based assessment and the blurring of transitions from undergraduate to postgraduate programs have implications for how selection committees go about their work.

The Strategic Plans of both the Faculty of Medicine and the Postgraduate Medical Education Office are founded on our ability to select individuals who will enable the Faculty to produce knowledgeable and compassionate medical practitioners, research scientists, and medical scholars, as well as to develop the future leaders in medicine in Canada.

The PGME Office struck the Best Practices in Application and Selection (BPAS) Working Group, to carry out a comprehensive literature review and environmental scan to inform the ongoing evolution of selection processes in PGME.

3. LITERATURE REVIEW

The process by which medical schools select students and postgraduate trainees in Canada has come to the forefront, in large part, due to a growing concern of medical schools' responsibility to **train the right mix of physicians to serve a diverse population.** Several studies and reviews have highlighted the need to evaluate current admission processes in Canada with the goal to **ensuring diversity and equity** and to **improve objectivity and transparency.** As part of the FMEC-UG project, Bandiera et al. conducted an extensive environmental scan on admission processes to medical schools in Canada[i]. The purpose of this review is to search for new literature on medical school and residency candidate selection, especially as it relates to the social responsibility of medical schools. Although the focus of this search is the selection to postgraduate medical education, Canadian undergraduate medical schools account for the majority of postgraduate applicants so we included undergraduate medical education in the review. We conducted a search on Medline and PubMed for articles in English published January 1, 2010 or later.

The search terms were: Medical school, postgraduate medical education, admission, selection, social responsibility, accountability, and diversity.

1. **Consensus that a broader representative physician population is desirable**

As discussed in Bandiera et al., the literature describes a number of reasons to support an increase in the diversity of successful medical students and residents, especially those who have been traditionally under-represented:

- Minorities are more likely to work in underserviced areas and pursue primary care specialties
- Patients tend to prefer physicians of similar backgrounds to their own
- Greater respect for difference and better team performance in schools and workforce
- Greater breadth of perspectives in medical research

In Canada, **economically disadvantaged, Native and rural groups** are under-represented in medical schools**.** The challenge lies in deciding how best to increase diversity.

2. **Canadian Medical Schools have already begun to make changes to admission processes**

With the goal of diversifying the medical student population, some medical schools in Canada have made recent changes to their admissions processes[ii]. Specialized programs and revisions to admission selections have been two ways to address this issue:

- Specialized programs: mentorship programs (UBC), non-traditional entry pathways (McGill)

- Revisions to admission selections: not using Medical College Admission Test (MCAT) (McGill, NOSM), not using autobiographical essays (Saskatchewan), replacing panel-style with Multiple Mini Interviews (MMI), using a computer-based test (CASPer) designed to assess interpersonal skills and decision-making (McMaster)

3. **Themes in the current literature**

The medical admissions literature over the past two years can be summarized in three overarching themes: improving the overall selection process, improving the selection process specifically to increase traditionally under-represented groups or candidates with a preference for general practice, and programs to increase traditionally under-represented groups.

i. **Improving the overall selection process**

The literature within this area includes descriptions of current trends or selection processes, cognitive vs. non-cognitive selection methods, and skill-based testing.

- **Description of current trends or selection processes**

   The United Kingdom implemented a national recruitment process into general practice training, which has been demonstrated to have high reliability and predictive validity[iii]. Plint and Patterson's article describes the success factors in designing a national process, which can be used to develop specialty training residency selection. Features of this process are:
   - Conducting a thorough analysis of the role, including relevant knowledge, skills, abilities and attitudes – used to conduct a job description

- Designing selection instruments and methods to evaluate candidate's capabilities against these attributes
- Using a validation process to asses the extent to which selection methods provide valid predictors of progress in training or job performance

In the UK, the process involved the creation of a national recruitment office, a common timetable for recruitment, standardized applications and a competency model for selection. The machine markable test (MMT) is used for shortlisting candidates, which assesses applicants' cognitive (clinical problem solving) and non-cognitive (empathy, integrity, resilience) criteria.
In their article, Nallasamy et al. conclude that ophthalmology residency selection is relatively subjective and relies heavily on cognitive factors[iv]. Survey respondents deemed interview performance, clinical course grades, letters of recommendations, and board scores the most important in resident selection.

- **Cognitive vs. non-cognitive selection methods**

The recent literature on cognitive testing tends to be based on the evaluation of validity and reliability[v]. Also, several studies test the predictability of medical licensing examinations in relation to licensure examinations or residency performance[v, vi, vii]. The MCAT itself has recently undergone comprehensive review with the goal of producing more well-rounded physicians. The new version, which is set to launch in 2015, is expected to have greater predictive validity[ix, x].

The bulk of the literature on non-cognitive measures discusses interview tools. Discussions around interviews for both medical and postgraduate medical admission centre on reliability of structured or unstructured interviews. Blouin concludes that the structured interview tool used for admission to an emergency residency program at Queen's University provides good, but suboptimal interrater reliability[xi]. Axelson et al. found the unstructured format to be more reliable than structured interviews for preadmission interviews and combining the two formats yielded a more reliable score[xii]. Christaskis et al. looked at the role of the interview in the admissions process for an ophthalmology program at the University of Toronto[xiii]. They found the interview did not usually change the candidate rank order but occasionally accounted for a large change that allowed for corrections to application scores.

Max et al. evaluate personal statements submitted for application to an anesthesiology residency program[xiv]. They found the statements had become general and lacked originality which defeats their purpose of distinguishing between applicants. Hanson et al. applied the Multiple Independent Sampling (MIS) methodology to undergraduate admission file reviews and found this method may reduce the halo effect, impressions of one component influencing the evaluation of other components[xv].

- **Skill-based Testing**

Carlson et al. studied a screening tool for otolaryngology residency applicants' surgical skills that may be useful in identifying outliers to help in applicant ranking[xvi].

ii. Improving the selection process specifically to increase traditionally under-represented groups or candidates with a preference for general practice

Studies have looked at candidate selection specifically with the aim to increase representation from traditionally under-represented groups such as racial minorities or those with rural backgrounds. Raghavan et al. describe a priority matrix developed by the University of Manitoba in an effort to increase admission to candidates likely to practice in rural settings [xvii]. Based on the literature, they established attributes that reflect potential for rural practice such as rural connections, history of rural employment or community service. This methodology resulted in a 22% increase in admission offers to applicants with rural attributes. A study is underway to track graduate outcomes. Thomas et al. looked at contributors to black men's success in admission to and graduation from medical school [xviii]. Such factors include: educational experiences (e.g., honours course work), exposure to medicine, family/social support, personal attributes (e.g., faith, social responsibility). Puddey et al. found the addition of structured interviews to the selection process and special entry quotas had an impact on demographics [xix].

A responsibility of medical schools is to ensure they are training physicians who can provide the right mix of specialty and general practitioners. They need to ensure they are admitting candidates who will pursue general practice, which has been less popular than specialty practice. Scott et al. found the characteristics at undergraduate entry that are associated with the choice of family medicine residency include: being older, in a long-term relationship, absence of parents/close friends practicing medicine, volunteer experience in developing countries [xx]. Wayne et al. found that interest in primary care, female gender, and low United States Medical Licensing Exam (USMLE) Step 1 scores are significantly associated with selecting a primary care residency [xxi].

iii. Programs to increase traditionally under-represented groups

Several programs have been implemented with the goal of increasing traditionally under-represented groups in medical school and in turn, the diversity of practicing physicians.

Two new types of programs were developed in the United Kingdom to diversify the student population: a graduate entry course designed to offer students who didn't enter medicine directly, and a foundation program which restricted access to only students with traditionally under-represented demographic characteristics [xxii]. These have not led to significant changes in the socioeconomic profile of UK medical students. Most successful programs to increase student diversification seem to be based on explicit affirmative action. Garrud did find that the graduate entry programs succeeded in increasing older applicants to medicine and representation of white and black groups as opposed to Asian groups [xxiii].

Postbaccalaureate premedical (PBP) programs were implemented in the United States to increase the likelihood of medical school admission to students from under-represented groups [xxiv]. A look at 15-year outcomes of such a program in south Texas found a significant increase of admission and retention of Latinos to medical school with many practicing in underserviced areas. McGougle et al. also demonstrated an increased likelihood of graduates of a PBP program in Ohio providing care to economically disadvantaged patients [xxv]. A large-scale study

of graduates from PBP programs found participants were not only more demographically diverse than non-participants, but they were also more likely to practice in underserviced areas [xxvi].

4. **International Medical Graduates (IMGs)**

One way to help diversify the physician population in Canada is through IMGs. As noted in Thomson and Cohl's report, in 2010, 23% of physicians with an independent license to practice medicine in Ontario were International Medical Graduates (IMGs) [xxvii]. This report provides a number of recommendations in relation to increasing the objectivity, transparency, and fairness of selection processes for IMGs including:

- Initial filtering

- File reviews and interviews

- Ranking

- Demonstration of clinical skills

5. **Medical schools' messaging to potential candidates**

A qualitative study by Razack et al. reviewed the websites of Canada's medical schools to understand how the schools communicate to potential applicants about excellence, equity, and diversity [xxviii]. They found that messages of academic excellence such as research and innovation were far more prominent than messages about service to society. Most schools included images to represent a diverse student population and some included diversity in their mission statement. The notion of equity was more difficult to identify. When it was apparent, it was often presented in terms of access to medical education for indigenous peoples or those from rural backgrounds.

4. REVIEW OF EXISTING SELECTION PRACTICES AT U OF T

A review of the 2013 Accreditation Pre-Survey Questionnaires (PSQ) was undertaken of 52 Royal College of Physicians and Surgeons of Canada (RCPSC) programs, to understand the current selection practices at the University of Toronto. Specifically, responses to Standard B1 # 5 Resident Selection were analyzed, which asks, "Describe how residents are selected into the program."

The majority of responses described selection methods e.g., interview, file reviews, but others also outlined the criteria used to select residents, specific circumstances surrounding IMG selection and the makeup of selection committees. Highlights of findings are listed below:

- Almost all programs (n=50) review an applicant's file as the first step in admissions

- All programs use interviews to select candidates. Almost all programs (n=50) use interviews after reviewing an applicant's file

- The majority of interviews are conducted with more than one interviewer present
- 35 programs described their selection tools in more detail (beyond Interview/ file review)
    - After interviews, the reliance on reference letters is most popular,
    - Over half the programs (n=28) mention the use of 3 or more selection tools
- 14 programs use standardized forms for file reviews and 29 for interviews
- The final methods used to rank candidates are:
    - Interview and file review (n=34)
    - Interview only (n=13)
    - General, no specific information (n=4)
    - One program accepts all applicants
- Academic record, research, CanMEDS- related skills (e.g., communications, teamwork, leadership skills), and interest in specialty were the most frequently mentioned criteria used

This review was limited to the details disclosed in the PSQ. The question pertaining to Standard B1#5 is a general one, therefore the focus and detail of responses, varied by program. Since resident selection is only one small section of the extensive questionnaire, it is quite likely that responses do not reflect the extent of programs' selection processes. However, this review does provide a general glimpse into current practices.

5. STATEMENT OF BPAS WORKING GROUP MANDATE

The BPAS reported to the Postgraduate Medical Education Advisory Committee (PGMEAC). The goal of the BPAS working group was to identify and review the sources of evidence of exemplary practices in resident selection in order to develop recommendations and an implementation strategy of best practices for PGME at the University of Toronto.

6. DESCRIPTION OF WORKING GROUP ACTIVITIES

A. GUEST SPEAKERS

A Summary of International Medical Graduates Physician Human Resources Policy for Ontario
Brad Sinclair, Registrar, College of Dental Hygienists of Ontario

Residency Quotas
Caroline Abrahams, Director, Policy and Analysis, PGME

Current Selection Practices at U of T, A Review of 52 Program PSQs

Best Practices in Applications & Selection Final Report

Mariela Ruetalo, Research Officer, PGME

Undergraduate Medical Education Admissions
Mark Hanson, Associate Dean, Admissions and Student Awards, UGME

Physician Assistant Program Admissions
Maureen Gottesman, Director, Physician Assistant Program, DFCM

Summary of BOE Paper: *Remediation of Residents in Difficulty: A Retrospective 10-Year Review of the Experience of a Postgraduate Board of Examiners*
Glen Bandiera, Associate Dean – Admissions & Evaluations, PGME

B. DOCUMENTS REVIEWED

Bandiera, G., Maniate, J., Gangon, R., Hanson, M. D., Woods, N., & Hodges, B. Access to medical education and admission processes. Unpublished manuscript.

Applicant Selection Literature Review

Summary of Thomson Recommendations

7. DISCUSSION OF ISSUES ARISING

A number of prominent issues arose during the BPAS working group's six meetings. These issues are identified below and highlighted as important considerations in the development of both principles and best practices.

- **Residency admissions preparation**

Preparing medical students for application to residency programs is a significant component of counseling activity within the UGME Student Affairs office. Students are provided opportunities to engage in practice interviews, attend panel discussions regarding career options and specialty choice, as well as one on one career counseling. Key concerns are which programs to apply to, how many to apply to, and how to prepare the application package with a view to finding the best fit with a residency program. At the same time, there continue to be concerns and frustrations by learners, program directors and counselors about mismatches between trainees and specialty programs, such as a desire for generalist versus specialty training or a mismatch between career goals and the labour market. Representatives from UGME noted that it's often not clear how various residency programs rank candidates. Undergraduate and postgraduate programs need to collaborate to optimize the transition between undergraduate and postgraduate training.

- **The diversity of residency programs**

The 76 residency programs at the University of Toronto range in size, expectations, popularity and other characteristics that could impact their selection process. The working group discussed the tension between making specific, actionable recommendations while remaining flexible to accommodate the variations in programs and optimize their chances for finding the right candidates to succeed in the program. Beyond the accreditation requirement that a Residency Program Committee be involved in applicant selection, and the broad guidelines and requirements developed by the Council of Ontario Faculties of Medicine, CaRMS and the CPSO there are a wide range of practices among University of Toronto residency programs.

- **Resident Diversity**

The literature suggests that a diverse physician population that is representative of the population it serves is beneficial to patient care. The working group acknowledged the importance of a diverse resident pool. Although postgraduate programs are somewhat constrained by the availability of candidates, it is important to consider diversity of the applicant pool.

- **International Medical Graduates (IMGs)**

The ratio of applications to available position for IMGs is high. In the 2013-14 CaRMS R-1 match, there were almost 6,000 applications for 70 available positions at the University of Toronto. The working group identified the fact that there are special circumstances surrounding International Medical Graduates and their implications for admissions and selection. These issues are well documented in the report "Independent Review of Access to Postgraduate Programs by International Medical Graduates in Ontario" by George Thomson and Karen Cohl

- **Social Accountability**

Despite the emphasis on Social Accountability, both as the primary recommendation of the FMEC-PG report and embedded in the Strategic Plans of the Faculty of Medicine and the PGME Office, the working group acknowledged that the expectations for social accountability may not always be aligned with the needs of the programs.

- **Full disclosure during residency selection**

Members of the working group identified that residency selection decisions can be difficult to make based on the competency-based Undergraduate Medical Education reports provided instead of full disclosure of an applicant's academic history. It was acknowledged that important indicators of future performance in residency are not uniformly required, and often discouraged for inclusion in the application package from medical students.

8. RECOMMENDATIONS

A. PRINCIPLES

1. Selection criteria and processes should be reflective of the program's clearly articulated goals.

2. Selection criteria and processes should reflect a balance of emphasis on all CanMEDS competencies.

3. Selection criteria used for initial filtering, file review, interviews and ranking should be as objective as possible.

4. Selection criteria and processes should be fair and transparent for all applicant streams.

5. Selection criteria and processes should promote diversity of the resident body (e.g. race, gender, sexual orientation, religion, family status,) be free of inappropriate bias, and respect the obligation to provide for reasonable accommodation needs, where appropriate.

6. Programs should choose candidates who best meet the above criteria, and are most able to complete the specific residency curriculum and enter independent practice.

7. Multiple independent objective assessments result in the most reliable and consistent applicant rankings.

8. Undergraduate and postgraduate programs must be engaged in collaborative planning and innovation to optimize the transition between PG and UG.

9. Postgraduate programs must be well informed of educational needs of individual candidates to allow effective and efficient educational programming.

10. Recognizing that past behaviour and achievements are the best predictors of future performance, efforts should be made to include all relevant information about applicants' past performance in application files. (full disclosure)

11. Applicants should be well informed about specialties of interest to them, including heath human resources considerations.

12. Programs must consider and value applicants with broad clinical experiences and not expect or overemphasize numerous electives in one discipline or at a local site.

13. Diversity of residents across PGME programs must be pursued and measured.

B. BEST PRACTICES

Transparency

1. Programs must define the goals of their selection processes and explicitly relate these to overall program goals.

2. Programs should define explicitly in which parts of the application/interview process relevant attributes will be assessed.

3. Programs should explicitly and publicly state the processes and metrics they use to filter and rank candidates, including on program and CaRMS websites.

4. Programs should maintain records that will clearly demonstrate adherence to process (for example, for audit purposes).

Fairness

5. Application scores should be based solely on information contained in the application and interview assessment/ratings only on information gathered during the interview.

6. Programs must abide by the Guidelines for management of Conflict of Interest in Admissions decisions. *

Selection Criteria

7. Programs must establish a comprehensive set of program-specific criteria that will allow thorough assessment of all candidates.

8. Selection criteria must include elements specific to each specialty that are validated to predict success in that field (for example, hand-eye coordination for procedural disciplines).

Process

9. Criteria, instruments, interviews and assessment/ranking systems must be standardized across applicants and assessors within each program.

10. Assessments should be based on demonstrable skills or previous behaviours, both of which are known to be predictive of future behaviours.

11. Applicant assessment should be based on multiple independent samples and not on the opinion of a single assessor.

12. Programs should regularly assess the outcomes of their process to determine if program goals and BPAS principles (e.g. Diversity) are being met

Assessors

13. Selection teams must be comprised of individuals with a breadth of perspectives that reflect program goals.

14. Assessors must be trained in all aspects of the process, including the program goals, selection process, assessment criteria, and assessment/ranking systems.

Assessment Instruments

15. Programs must strive to incorporate objective assessment strategies proven to assess relevant criteria.

Knowledge Translation

16. Best practices should be shared among different specialties and programs.

17. Innovations in Application and Selection should be done in a scholarly manner that will allow eventual peer-reviewed dissemination.

Ranking

18. Ranking must be done using pre-defined and transparent processes and driven solely by information that is available in the application file and acquired during the interview process.

19. Programs should rank candidates in the appropriate order based on assessment and not based on whom committee members think will rank the program highly.

20. Programs should establish clear criteria for determining 'do not rank' status.

*Faculty members who have leadership roles in undergraduate medical education should not participate in admissions deliberations. If this is not possible, then they must disclose their conflict of interest and the nature of their involvement in undergraduate education to the Vice Dean, Undergraduate Medical Education, Vice or Associate Dean, Postgraduate Medical Education, AND to the admissions committee. They must refrain from providing any information they acquire by virtue of their undergraduate leadership roles, and focus only on that information they acquire as clinical teachers and supervisors of individual learners, or as members of the admissions committee. Admissions committee members, program directors and/or training committees must identify inappropriate information when it is disclosed and ensure it is NOT used for decision-making purposes.

9. IMPLEMENTATION STEPS AND TIMELINE

The expected implementation plan for these recommendations and associated timeline is as follows:

1. **Prepare draft report for approval by BPAS Working Group: mid May 2013**

2. **Submit to PGMEAC in May for initial discussion: May 24, 2013**

3. **Provide overview of preliminary recommendations to June All PDs: June 14, 2013**
   a. Solicit input over summer

4. **Revise recommendations: Late Summer 2013**

5. **Prepare admissions and selection tools: Summer/Fall 2013**
   a. Adapt from UG/other
   b. Prepare checklist
   c. Repository of tools

6. **Organize recommendations: September 2013**
   a. Stratify by degree of imperative: 'must', ' should' and 'preferable'
   b. Further stratify into program, PGME, external locus of control

7. **Bring to September PGMEAC for approval: September 20, 2013**

8. **Distribute principles and best practices widely: October - February**
   a. Request implementation for 2014 CaRMS PGY1 cycle +/- SS matches

9. **Bring to PG:COFM for discussion: December/January**

10. **Survey programs in Feb/Mar 2014 regarding implementation update**

11. **Report to PGMEAC on initial impact and for further advice re implementation: April 2014**

10. APPENDICES

A. BIBLIOGRAPHY

i. Bandiera, G., Maniate, J., Gangon, R., Hanson, M. D., Woods, N., & Hodges, B. Access to medical education and admission processes. Unpublished manuscript.

ii. Chami, G. (2010). The changing dynamic of medical school admissions. Canadian Medical Association Journal, 182(17), 1833-1834. doi: 10.1503/cmaj.109-3679

iii. Plint, S., & Patterson, F. (2010). Identifying critical success factors for designing selection processes into postgraduate specialty training: The case of UK general practice. Postgraduate Medical Journal, 86(1016), 323-327. doi: 10.1136/pgmj.2009.084657

iv. Nallasamy, S., Uhler, T., Nallasamy, N., Tapino, P. J., & Volpe, N. J. (2010). Ophthalmology resident selection: Current trends in selection criteria and improving the process. Ophthalmology, 117(5), 1041-1047. doi: 10.1016/j.ophtha.2009.07.034

v. Koczwara, A., Patterson, F., Zibarras, L., Kerrin, M., Irish, B., & Wilkinson, M. (2012). Evaluating cognitive ability, knowledge tests and situational judgement tests for postgraduate selection. Medical Education, 46(4), 399-408. doi: 10.1111/j.1365-2923.2011.04195.x

vi. Thundiyil, J. G., Modica, R. F., Silvestri, S., & Papa, L. (2010). Do United States medical licensing examination (USMLE) scores predict in-training test performance for emergency medicine residents? The Journal of Emergency Medicine, 38(1), 65-69. doi: 10.1016/j.jemermed.2008.04.010

vii. Spurlock, D. R., Holden, C., & Hartranft, T. (2010). Using united states medical licensing examination® (USMLE) examination results to predict later in-training examination performance among general surgery residents. Journal of Surgical Education, 67(6), 452-456. doi: 10.1016/j.jsurg.2010.06.010

viii. Zahn, C. M., Saguil, A., Artino, A. R., Dong, T., Ming, G., Servey, J. T., Durning, S. J. (2012). Correlation of national board of medical examiners scores with United States medical licensing examination step 1 and step 2 scores. Academic Medicine, 87(10), 1.

ix. Monette, M., & Hemond, C. (2012). MCAT revisions finalized. Canadian Medical Association Journal, 184(9), E473-E474. doi: 10.1503/cmaj.109-4198

x. Collier, R. (2011). New medical college admissions test in the works. Canadian Medical Association Journal, 183(12), E801-E802. doi: 10.1503/cmaj.109-3903

xi. Blouin, D. (2010). Reliability of a structured interview for admission to an emergency medicine residency program. Teaching and Learning in Medicine, 22(4), 246-250. doi: 10.1080/10401334.2010.511979

xii. Axelson, R., Kreiter, C., Ferguson, K., Solow, C., & Huebner, K. (2010). Medical school preadmission interviews: Are structured interviews more reliable than unstructured interviews? Teaching and Learning in Medicine, 22(4), 241-245. doi: 10.1080/10401334.2010.511978

xiii. Christakis, P. G., Christakis, T. J., Dziura, J., & Christakis, J. T. (2010). Role of the interview in admissions at the university of Toronto ophthalmology program. Canadian Journal of Ophthalmology/Journal Canadien d'Ophtalmologie, 45(5), 527-530. doi: 10.3129/i10-041

[xiv.] Max, B. A., Gelfand, B., Brooks, M. R., Beckerly, R., & Segal, S. (2010). Have personal statements become impersonal? an evaluation of personal statements in anesthesiology residency applications. Journal of Clinical Anesthesia, 22(5), 346-351. doi: 10.1016/j.jclinane.2009.10.007

[xv.] Hanson, M. D., Kulasegaram, K. M., Coombs, D. L., & Herold, J. (2012). Admissions file review: Applying the multiple independent sampling (MIS) methodology. Academic Medicine, 87(10), 1.

[xvi.] Carlson, M. L., Archibald, D. J., Abraham, J. S., & Moore, E. J. (2010). Under the microscope: Assessing surgical aptitude of otolaryngology residency applicants. The Laryngoscope, 120, 1109.

[xvii.] Raghavan, M., Martin, B. D., Roberts, D., Aoki, F., MacKalski, B. A., & Sandham, J. D. (2011). Increasing the enrolment of rural applicants to the faculty of medicine and addressing diversity by using a priority matrix approach to assign values to rural attributes. Rural and Remote Health, 11(2), 1646.

[xviii.] Thomas, B. T., Manusov, E. G., & Wang, A. (2011). Contributors of black men's success in admission to and graduation from medical school. Academic Medicine, 86(7), 892.

[xix.] Puddey, I., Mercer, A., Carr, S., & Louden, W. (2011). Potential influence of selection criteria on the demographic composition of students in an Australian medical school. BMC Medical Education, 11(1), 97.

[xx.] Scott, I., Gowans, M., Wright, B., Brenneis, F., Banner, S., & Boone, J. (2011). Determinants of choosing a career in family medicine. Canadian Medical Association Journal, 183(1), E1.

[xxi.] Wayne, S., Timm, C., Serna, L., Solan, B., & Kalishman, S. (2010). Medical students' attitudes toward underserved populations: Changing associations with choice of primary care versus non-primary care residency. Journal of Health Care for the Poor & Underserved, 21(2), 438-447.

[xxii.] Mathers, J., Stitch, A., Marsh, J. L., & Parry, J. (2011). Widening access to medical education for under-represented socieconomic groups: Population based cross sectional analysis of UK data, 2002-6. British Medical Journal, 341

[xxiii.] Garrud, P. (2011). Who applies and who gets admitted to UK graduate entry medicine? - an analysis of UK admission statistics. BMC Medical Education, 11(1), 71.

[xxiv.] Grumbach, K. (2011). Commentary: Adopting postbaccalaureate premedical programs to enhance physician workforce diversity.. Academic Medicine, 86(2), 154.

[xxv.] McDougle, L., Way, D. P., & Rucker, Y. L. (2010). Survey of care for the underserved: A control group study of practicing physicians who were graduates of the Ohio state university college of medicine premedical postbaccalaureate training program. Academic Medicine, 85(1), 36.

[xxvi.] Andriole DA, J. D. (2010). PRematriculation variables associated with suboptimal outcomes for the 1994-1999 cohort of us medical school matriculants. JAMA: The Journal of the American Medical Association, 304(11), 1212-1219. doi: 10.1001/jama.2010.1321

[xxvii.] Thomson, G., & Cohl, K. (2011). IMG SELECTION: Independent review of access to postgraduate programs by international medical graduates in Ontario.. Ontario: . (Submitted to the Ontario Ministry of Health and Long-Term Care and the Council of Ontario Universities)

[xxviii.] Razack S., Maguire M., Hodges B., & Steinert Y. (2012). What might we be saying to potential applicants to medical school? Discourses of excellence, equity, and diversity on the web sites of canada's 17 medical schools.. Academic Medicine, 87(10)

B. TERMS OF REFERENCE

Best Practices in Applications and Selection (BPAS) Working Group

Terms of Reference

BACKGROUND:

A number of recent initiatives such as the [Future of Medical Education in Canada (UG and PG)](#) as well as the [Thomson Report](#) have drawn attention to the process by which residency and fellowship programs assess, and select from among, applicants to their programs.

Universities are expected to demonstrate social responsibility and accountability in fulfilling a mandate to provide a balanced graduate pool of physicians. The applicant pool has expanded and become more diverse with applicants from around the world, with differing experiences. Fundamental issues of equity, reliability, validity, and feasibility are the focus of recent literature reviews and original research. Finally, emphasis on competency-based assessment and the blurring of transitions from undergraduate to postgraduate programs have implications for how selection committees go about their work.

The Best Practices in Applications and Selection (BPAS) Working Group was created to carry out a comprehensive literature review and environmental scan to inform the ongoing evolution of selection processes in PGME. The BPAS reports to the Postgraduate Medical Education Advisory Committee (PGMEAC).

PURPOSE:

The working group will:
1. Receive and review a literature scan on human resources selection in the health professions.
2. Identify and review exemplary practices in selection relevant to PGME.
3. Develop a set of principles that should guide the development of best practices and inform individual program activities.
4. Develop a set of best practices for selection processes, selection criteria and instruments.
5. Establish (minimum) criteria for assessing applicants.
6. Identify links and/or potential overlaps with UGME and with independent practice.
7. Recommend a PGME implementation strategy.

MEMBERSHIP:

PGME:
Glen Bandiera, Associate Dean (Admissions & Evaluations)
Caroline Abrahams, Director, Policy and Analysis
Susan Edwards, Director of Resident Wellness, PGME

Other:

Associate Dean, Admissions and Student Awards, UGME
Associate Dean, Equity and Professionalism
Program directors or delegates (diversity of specialties/size/personal characteristics)
Associate Dean, Student Affairs, UGME
Residents (up to 3 per meeting)
External Consultants: (examples: CPSO, HFO, CEHPEA, etc.)
Students (2)

Staff Support:
Office of Policy and Analysis (Logistics and Operations and Literature Review)

MEETING FREQUENCY:

Approximately four 1 ½ -hour meetings from Fall 2012 – Spring 2013

C. BPAS MEMBERSHIP LIST

Chair – **Glen Bandiera**, Associate Dean – Admissions & Evaluations, PGME

Caroline Abrahams, Director, Policy and Analysis, PGME

Amanda Cipolla, PGY, Obstetrics & Gynaecology

Naheed Dosani, PGY, Family Medicine

Susan Edwards, Director of Resident Wellness, PGME

Joel Fish, Plastic Surgeon, HSC

Jeannette Goguen, Director, Postgraduate Programs in Medicine

Maureen Gottesman, Director, Physician Assistant Program, DFCM

Mark Hanson, Associate Dean, Admissions and Student Awards, UGME

Karl Iglar, Director, Family Medicine Residency Program

Roaa Jamjoom, Clinical Fellow, Paediatric Emergency Medicine

Aaron Lo, PGY, Vascular Surgery

David McKnight, Associate Dean, Equity and Professionalism

Leslie Nickell, Associate Dean, Office of Health Professions Students Affairs, UGME

Mariela Ruetalo, Research Officer, PGME

Kevin Shore, PGY, Internal Medicine

Brad Sinclair, Registrar, College of Dental Hygienists of Ontario

Derek Tsang, PGY, Radiation Oncology

Zoe Unger, PGY, Anesthesiology

D. BPAS MEETING DATES

September 28, 2012

November 27, 2012

January 31, 2013

February 19, 2013

March 7, 2013

April 16, 2013