

The Canadian Urology Fair: a model for minimizing the financial and academic costs of the residency selection process

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Introduction: In 1994, the Canadian urology residency training programs designed the “Canadian Urology Fair” — a single-site (Toronto, Ont.), 1-day fair to conduct the personal interview portion of the residency selection process. The objective of the current study was to evaluate the success of the Urology Fair in achieving its original goals of decreasing the financial burden and minimizing time away from medical training for applicants and faculty. **Methods:** Both candidates and Canadian urology training programs were surveyed regarding the financial and academic costs (days absent) of attending the 2001 Urology Fair. Data from the 2001 Canadian Resident Matching Service (CaRMS) was used to compare the financial and academic costs of attending personal interviews incurred by candidates declaring urology as their first-choice discipline to candidates interviewing with other surgical specialties throughout Canada. **Results:** Financial costs incurred by candidates to attend the Urology Fair (mean Can\$367) were significantly lower than candidates' estimated costs of attending on-site interviews at the individual programs (mean Can\$2065). The financial costs of attending personal interviews by CaRMS applicants declaring urology as their first-choice discipline (mean Can\$2002) were significantly lower than the costs incurred by applicants interviewing with other surgical disciplines (mean Can\$2744). Financial costs to urology programs attending the fair (mean Can\$1931) were not significantly greater than the programs' estimated costs of conducting on-site interviews at their respective program locations (mean Can\$1825). Days absent from medical school to attend interviews were significantly lower among CaRMS applicants declaring urology as their first-choice discipline (3 d) compared with applicants who interviewed with other surgical specialties (9.1 d). **Conclusion:** The Canadian Urology Fair represents an innovative and efficient method for residency programs to conduct the personal interview portion of the residency selection process and should serve as a model for making the interview process less expensive and time-consuming for both candidates and faculty.

Introduction : En 1994, les programmes canadiens de résidence en urologie ont décidé de procéder au volet entrevues personnelles du mécanisme de sélection des résidents à la «Foire urologique» — événement d'une journée qui se déroule à un seul endroit (à Toronto, en Ontario). Cette étude visait à évaluer dans quelle mesure la Foire urologique réussit à atteindre ses buts premiers, soit alléger le fardeau financier et minimiser le temps que les candidats et les enseignants passent loin de la formation médicale. **Méthodes :** On a réalisé, auprès des candidats et des programmes canadiens de formation en urologie, un sondage au sujet des coûts financiers et scolaires (jours d'absence) de la participation à la Foire urologique de 2001. On a utilisé des données du Service canadien de jumelage des résidents (SCJR) de 2001 pour comparer les coûts financiers et scolaires de la participation aux entrevues personnelles engagés par les candidats qui ont choisi l'urologie comme discipline de premier choix à ceux des candidats qui ont participé à des entrevues pour d'autres spécialités de chirurgie au Canada. **Résultats :** Les coûts financiers engagés par les candidats pour participer à la Foire urologique (en moyenne 367 \$ CAN) étaient beaucoup moins élevés que les coûts estimatifs qu'ont engagés des candidats pour participer à des entrevues sur place auprès de chaque programme (en moyenne 2065 \$ CAN). Les coûts fi-

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nanciers engagés par les candidats au SCJR ayant choisi l'urologie comme discipline de premier choix pour participer à des entrevues personnelles (en moyenne 2002 \$ CAN) étaient beaucoup moins élevés que ceux qu'ont engagés les candidats ayant participé à des entrevues pour d'autres disciplines de chirurgie (en moyenne 2744 \$ CAN). Les coûts financiers pour les programmes d'urologie qui ont participé à la Foire (en moyenne 1931 \$ CAN) n'étaient pas beaucoup plus élevés que les coûts estimatifs des programmes qui ont organisé des entrevues sur place à leur établissement respectif (en moyenne 1825 \$ CAN). Le nombre de jours d'absence de la faculté de médecine pour participer à des entrevues était beaucoup moins élevé chez les candidats du SCJR qui ont choisi l'urologie comme discipline de premier choix (3 j) comparativement à ceux qui se sont prêtés à une entrevue pour d'autres spécialités de chirurgie (9,1 j). **Conclusion :** La Foire urologique représente une façon innovatrice et efficace pour les programmes de résidence d'organiser le volet entrevues personnelles du mécanisme de sélection des résidents et devrait servir de modèle pour rendre le mécanisme d'entrevue moins coûteux en argent et en temps à la fois pour les candidats et pour les enseignants.

The ideal method of selecting postgraduate trainees for medical and surgical residency programs has not been established.¹⁻⁵ Traditionally, resident selection is based on a candidate's academic achievement as evidenced by medical school transcripts and awards, Dean's and other letters of reference supporting the candidate's application, performance evaluations during clerkships or elective rotations, and personal interviews with members of the resident selection committee.^{2,4,6-8} Residency programs with a mandate to educate academic physicians may also evaluate the candidate's research experience and publication record.^{7,8}

Currently, both applicants and members of residency selection committees view the personal interview as an essential part of the selection process.⁷⁻¹¹ Selection committees consider the personal interview as an opportunity to meet the applicant and evaluate the candidate's humanistic qualities, and at the same time to showcase the strengths of the training program.^{7,8} Despite the perceived value of the personal interview, attending interviews can be expensive and time-consuming for all parties.^{12,13} Historically, personal interviews are conducted at the discretion of the residency program and are held at each institution's "home-site,"¹³ which can be expensive for applicants who may be required to travel to multiple sites across the country if a number of residency programs express an interest in the candidate. Consideration must also be given to the educational opportunity costs in-

curring as a consequence of repeatedly removing the applicant from the core medical educational curriculum to attend personal interviews.¹⁴

In 1994, 8 of the 9 English-language Canadian urology residency training programs designed what is now known as the "Canadian Urology Fair," with the primary goal of easing the financial burden on applicants and minimizing time away from medical training. The administrative and logistical details of the Urology Fair have been described previously.¹ In brief, the fair represents an innovative, efficient method for Canadian urology residency programs to conduct the personal interview portion of the residency selection process. Each year in early January, all 9 English-language Canadian urology residency programs meet in Toronto for a 1-day fair to conduct personal interviews with interested candidates. Toronto was chosen as the host city because of its central location and accessibility. To maintain a nonpartisan environment, an off-campus, non-university-affiliated venue is chosen. In the early morning candidates are welcomed and oriented to the structure of the day. Each program then initiates a series of 20-minute interviews with potential candidates held in private meeting areas. Throughout the day, each program is afforded the opportunity to make a presentation to all of the candidates outlining the philosophy, structure, teaching and resident responsibilities specific to their training program and to answer questions. Most program directors extend an open invitation to all interested candi-

dates to visit and meet other faculty and residents. At the end of all interviews, selection committee members from each program remain to privately summarize and discuss the potential ranking of the candidates. Since its inception, the coordination and administrative responsibilities for the fair have been rotated yearly between the University of Toronto and the University of Western Ontario (London, Ont.). A fee of Can\$100 is paid by each candidate to help offset the local costs of the fair and to increase their commitment to attend. The individual residency programs, the Canadian Urological Association and educational grants from private industry share additional costs.

The primary objective of this study was to evaluate the success of the Canadian Urology Fair in achieving its original goals of decreasing the financial burden and minimizing lost medical training time for applicants.

Methods

Two independent survey instruments were developed to acquire information from candidates and Canadian urology training programs regarding the financial and academic costs of attending the 2001 Urology Fair in Toronto (Jan. 13, 2001). Candidates were surveyed about their city and province of origin, total financial costs (in Canadian dollars) of attending the Urology Fair, estimated financial costs of attending on-site interviews at the individual programs, total time away from medical school to attend the Urology Fair, overall

impressions regarding the single-site, 1-day interview process and location of the Urology Fair. Program selection committees were surveyed with respect to program affiliation, number of interview team members (faculty and residents) attending the Urology Fair, total financial costs of attending, estimated financial costs of conducting on-site interviews at the individual programs, overall impressions regarding the single-site, 1-day interview process, location of the Urology Fair and feasibility of applying a similar interview format to other medical and surgical specialties. Surveys were distributed to the all candidates and program interview teams participating in the fair. All candidate surveys were anonymous. Program surveys were identifiable through program director affiliation.

The Canadian Resident Matching Service (CaRMS) is a national, non-profit, fee-for-service corporation that works in close cooperation with the English-language medical schools, residency programs and medical students to facilitate the matching of applicants into accredited postgraduate medical training programs throughout Canada.¹² Each year since its inception (1993), CaRMS has surveyed its applicants regarding their impressions of the residency selection process. Data generated from the 2001 CaRMS Post-Match Survey (response rate 65%)¹² were used to compare the financial and academic costs of attending personal interviews incurred by candidates declaring urology as their first-choice discipline to candidates interviewing with other surgical specialties throughout Canada (general surgery, cardiac surgery, ophthalmology, orthopedic surgery, otolaryngology, plastic surgery, neurosurgery, and obstetrics and gynecology).

Statistical analysis was performed using the SPSS statistical package, 10.0 version. Paired *t*-tests were used to compare the actual costs incurred by candidates and programs with estimated costs of attending (candidates) or conducting (programs) on-site in-

terviews at the individual programs. Unpaired *t*-tests were used to compare mean financial and academic costs (2001 CaRMS Post-Match Survey data) of attending personal interviews incurred by candidates declaring urology as their first-choice discipline to the costs incurred by candidates interviewing in other surgical specialties throughout Canada. Analysis of variance was used to compare the mean financial costs incurred by candidates to attend the Urology Fair according to province of origin. The χ^2 test was used to compare categorical response variables in both the candidate and program surveys.

Results

The candidate survey

Of the 28 candidates who attended the 2001 Canadian Urology Fair, 27 returned completed candidate surveys at the conclusion of the fair (96% response rate). The distribution of candidates (by province of origin) who attended the interview fair is shown in Table 1. Candidates spent an average of 1.7 nights (range 0–5 nights) in Toronto. The total mean financial cost (travel, accommodation and food) incurred by candidates to attend the fair was \$367 (range from \$100–\$1150). Candidates required to travel greater distances to attend the Urology Fair incurred higher total mean financial costs ($p < 0.001$, Table 1). Candidates' estimates of the total mean financial costs of attending on-site interviews at the individual urology programs (mean \$2065, range from \$0–\$4000) were significantly greater ($p < 0.001$) than the actual costs incurred by candidates attending the Urology Fair.

Ninety-six percent of the candidates favoured the 1-day interview format (χ^2 , $p < 0.001$). When candidates were questioned about the impact of "not being able to physically visit each program" on residency program selection, the group was split, with 56% of candidates report-

ing no adverse effects compared with 44% who identified some negative implications on program selection (χ^2 , $p = 0.56$). Among the candidates reporting no adverse effect on residency program selection, 73% had arranged clinical electives at programs of interest, and hence felt that on-site interviews at each institution were unnecessary. The remainder of the candidates (27%) believed for the most part that the educational quality of the residency training programs was fairly "uniform," and that they would be content at any of the Canadian urology programs. Among the candidates identifying negative implications on residency program decision-making, 75% indicated that by not interviewing at the individual programs they were unable to fully appreciate the unique attributes of each training program and city. Ninety-six percent of the candidates believed that other medical and surgical specialties should attempt to implement a similar single-site, 1-day interview format ($p < 0.001$). The candidates' opinions were divided (44% in favour and 56% not in favour) when asked whether the Urology Fair should be rotated to different host cities (χ^2 , $p = 0.56$).

Among CaRMS applicants to other surgical subspecialties (excluding urology), the total mean financial cost (travel, accommodation, food and administrative) incurred to attend personal interviews was \$2744 (range from \$2322–\$3086). This

Table 1

Distribution of Candidates and Average Cost to Attend the Urology Fair by Origin of Application

Origin	Applicants, %	Cost, Can\$
British Columbia	11	733
Saskatchewan	7	875
Manitoba	4	900
Ontario	40	82
Quebec	15	198
Nova Scotia	15	456
Newfoundland	4	500
Outside Canada	4	1050

was significantly greater ($p = 0.02$) than the total mean financial cost incurred to attend personal interviews by a CaRMS applicant declaring urology as the first-choice discipline (\$2002). Differences between the actual costs incurred by candidates who attended the Urology Fair (mean \$367) and the costs of attending personal interviews by candidates declaring urology as their first-choice discipline (CaRMS data) can be attributed to the fact that applicants ranking urology first may still have attended on-site interviews with “back-up” medical and surgical specialties. Among CaRMS applicants to all surgical disciplines (excluding urology), the mean number of days absent from medical school to attend personal interviews was 9.1 days (range from 6.4–14.5 d). This was significantly greater ($p = 0.04$) than the mean number of days absent from medical school by a CaRMS applicant declaring urology as the first-choice discipline (3.0 d).

Recognizing the limitations of adopting a “fair-like” interview format in larger medical and surgical specialties, we conducted a separate analysis of the 2001 CaRMS Post-Match Survey data to include only surgical residency programs of similar size to urology (i.e., programs with acceptance quotas of < 20 residents/yr: urology, cardiac surgery, plastic surgery, neurosurgery, ophthalmology and otolaryngology). Among CaRMS applicants to surgical subspecialties (excluding urology) with acceptance quotas of less than 20 residents per year, the mean total financial cost incurred by applicants to attend personal interviews was \$2761 (range from \$2529–\$3086). This was significantly greater ($p = 0.04$) than the mean financial cost actually incurred to attend personal interviews by CaRMS applicants declaring urology as their first-choice discipline (\$2002).

The program survey

All 9 of the participating English-

language urology programs returned completed surveys at the conclusion of the 2001 Urology Fair (100% response rate). Program interview teams on average consisted of 2.2 clinical faculty (range from 1–3 faculty) and 1.2 residents (range from 1–2 residents). Interview teams spent an average of 1.4 nights (range from 0–2 nights) in Toronto to attend the fair. The mean total financial cost (travel, accommodation, food, lost productivity) incurred by participating programs was \$1931 (range from \$80–\$3600). The mean of the program selection committees’ estimates of the total financial costs (lost faculty productivity [clinics, operating room time, research], food, administrative) of conducting on-site interviews at individual program sites over the course of several days was \$1825 (range from \$0–\$4300). Differences between the actual costs incurred by programs attending the Urology Fair and the programs’ estimated costs of conducting on-site interviews at individual locations were not statistically significant ($p = 0.93$).

All of the program interview teams favoured the single-site, 1-day personal interview format ($\chi^2, p < 0.001$). When the programs were questioned about the impact of candidates “not being able to physically visit each program” on decision-making and ranking of candidates, 67% of the programs reported no negative implications on resident selection ($\chi^2, p = 0.32$). Among the programs reporting no adverse consequences on resident selection, there was a unanimous feeling that the most serious candidates have arranged elective opportunities at their respective institutions, and therefore the Urology Day format is not detrimental to the programs’ overall ranking of candidates. Among the 33% of programs that identified negative implications on residency program decision-making, all agreed that a candidate’s willingness to visit the institution is a reflection of the degree of interest in the training pro-

gram. The majority (89%) of programs stated that they believed other medical and surgical specialties would benefit from a similar single-site, 1-day interview format ($\chi^2, p = 0.02$). There was unanimous agreement among the urology programs that the Urology Fair should not be rotated to different host cities outside Toronto ($\chi^2, p < 0.001$).

Discussion

The current analysis suggests that the Urology Fair has been successful in achieving its original goal of decreasing the financial burden on applicants. The average cost incurred by candidates who attended the fair (\$367) was significantly lower than the candidates’ estimated cost of attending on-site interviews at the individual program locations (\$2065). This amounts to a savings of approximately \$1700 per candidate. Analysis of the data from the 2001 CaRMS Post-Match Survey supports these findings. The average financial cost of attending personal interviews by applicants declaring urology as their first-choice discipline (\$2002) was significantly lower than the average costs incurred by applicants interviewing with other surgical disciplines (\$2744). From the programs’ perspective, the financial cost incurred to attend the Urology Fair (\$1931) was not significantly greater than the programs’ estimated cost of conducting on-site interviews at their respective individual program sites over the several days (\$1825).

The goal of minimizing the time away from medical training to attend personal interviews was also achieved by the Urology Fair. The average number of days absent from medical school to attend personal interviews was significantly lower among applicants declaring urology as their first-choice discipline than those interviewing with other surgical specialties.

Both the candidates (96%) and urology programs (100%) expressed an overwhelming preference in favour

of a single site, 1-day interview format over that of on-site interviews at the individual program locations. Program selection committees unanimously agreed that the 1-day interview format (as opposed to conducting 15–20 individual 15-minute interviews, spread over the course of a month) results in less disruption to their busy schedules. These views were held even though many programs and applicants thought that holding all interviews at a single-site threatens a candidate's ability to visit the program and appreciate the program's infrastructure, meet with other faculty and residents not in attendance at the fair, and experience the unique cultural attributes of the local community. This apparent contradiction is likely explained by the fact that prior to the Urology Fair, the majority of serious candidates have already arranged clinical electives at programs of interest, and therefore felt that repeated on-site visits to each institution were unnecessary. There was also collective agreement among all programs that the Urology Fair should not discourage interested candidates from arranging personal visits to programs outside of the fair.

The current investigation does not account for the financial costs of clinical electives and personal visits to programs outside of the Urology Fair. Although "offsite" clinical electives add the candidates' costs, they do not act as a substitute for the personal interview as most surgical programs still require an interview at a later date. According to the 2001 CaRMS Post-Match Survey,¹² 83% of candidates declaring urology as their first-choice discipline performed at least 1 clinical offsite elective. Among these candidates, 57% matched to programs where they performed an offsite elective. Collectively, this suggests that candidates are applying and matching to offsite urology programs, necessitating the need for travel to attend personal interviews outside their university.

Both the candidates and programs

appreciated that for some larger and more popular surgical disciplines, required to interview a large number of applicants (i.e., general surgery and orthopedic surgery), implementing a single-site, single-day interview format poses logistical challenges. Nevertheless, both parties agreed that other medical and surgical residency programs would benefit from implementing a similar format.

Reflecting the importance of Toronto's central location and accessibility with respect to travel and accommodation, all of the urology programs and a majority of the candidates (56%) were of the opinion that the Urology Fair should not be rotated to different host cities.

Candidates and residency program selection committees in urology appear to have benefited from the Urology Fair. For candidates, a centralized, 1-day fair with national representation has significantly decreased the financial burden on applicants and minimized the time spent away from medical training. The Urology Fair offers candidates an efficient opportunity to gain insight into the various training programs by engaging in formal and informal discussions with faculty and residents representing each university training program. For the programs, the open lines of communication fostered by such initiatives have served to strengthen the relationship among the members of the Canadian academic urologic community. The Urology Fair operates under an atmosphere of openness and collegiality among residency programs, working under the collective mission of attracting the best surgical residents while maintaining a healthy competitive spirit.

Conclusions

The Urology Fair represents an innovative and efficient method for Canadian urology residency programs to conduct the personal interview portion of the residency selection process. The Urology Fair

should serve as a model to similarly sized residency programs for making the interview process less expensive and less time-consuming for both candidates and faculty.

Competing interests: None declared.

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