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Career Mentoring Surgical Trainees in a Competitive Marketplace

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Abstract

Resident trainees in Canadian Otolaryngology–Head & Neck Surgery (OHNS) programs have cited job prospects as the biggest stressor they face. Increased numbers of residency training positions combined with decreased employment opportunities have worsened competition for surgical positions. The purpose of this inquiry was to explore gaps in resident career planning and examine how leadership can prepare graduating residents to optimize employability. This mixed-methods prospective study was completed in two phases. A combination of online surveys and two focus group sessions were used to gather information from academic and clinical staff surgeons, resident trainees, and administrative leadership. Eleven of the potential 12 resident participants responded to the initial survey, seven of the 13 staff surgeons, and one administrative leader. Each of the resident and staff focus groups had five participants. This comprehensive inquiry led to the development of a conceptual framework describing domains of concern important to OHNS residents. Themes included lack of career mentoring, complex systemic limitations, inadequacy of exposure to community-based surgical practice, and a potentially stifling organizational culture. OHNS residents face significant stress regarding potential employability following residency. Solutions to address concerns must be collaborative in nature and begin with the existing leadership structure.

Residents in Canadian Otolaryngology – Head and Neck Surgery (OHNS) training programs have cited job prospects as the single biggest stressor they face (Brandt, Scott, Doyle, & Ballagh, 2014). Despite increasing demands by the growing and aging Canadian population (Department of Economic and Social Affairs, 2015), the delayed retirement of senior surgeons and hiring freezes have created increasingly competitive employment markets (Patchen Dellinger, Pellegrini, & Gallagher, 2017; Silver, Hamilton, Biswas, & Warrick, 2016). Increased numbers of residency training positions combined with decreased opportunities for employment have worsened competition for available academic surgical positions in North America (Fréchette et al., 2013; Iglehart, 2013). Compounded with the uncertainty and potential employability consequences related to the COVID-19 pandemic, trainees find themselves under precarious circumstances (Satiani & Davis, 2020). While debate exists on action needed on a national level, the lack of local formal career mentoring to guide residents in planning their futures may hinder their competitiveness.

Absence of clear employment planning creates stress for OHNS residents planning their lives following graduation. Moreover, the perception, and often reality, of scarce employment disincentivizes medical students in pursuing surgical training (Austin & Wanzel, 2015). The significance further relates to success of the residency program committee (RPC) in its aim to prepare residents to be competitive for employability. The core goals of the RPC are oversight of surgical training, evaluation of trainees, and guiding the transition to independent surgical practice. As part of this, a lack of adequate employment strategies negatively impacts resident morale, which can lead to further attrition of medical students and decreased appeal of the surgical specialty (Austin & Wanzel, 2015).

Mentorship, both formal and informal, has been a mainstay feature of surgical training since the advent of medicine as an apprenticeship (Patel et al., 2011). Increasingly, as academic surgical

education has evolved into formal team-based educational programs, that intimate relationship, which would have included mentorship on matters of career and other life coaching, has largely been replaced by didactic training, neglecting issues extraneous to surgical practice (Patel et al., 2011; Teman, Jung, & Minter, 2019).

Contemporary academic surgery has seen increasing service and time requirements coupled with a lack of resources, rendering mentorship a lower priority for surgical educators (Teman et al., 2019). Over time, the efficacy of informal mentoring has deteriorated because of the increased clinical, research and administrative demands faced by the modern surgeon and the modernization of the medical career framework (Patel et al., 2011). Sinclair et al., surveyed 565 academic medical trainees in the United Kingdom and found formal mentorship lacking, 51.3% had no surgical mentor, but 89.7% expressed a desire to have one, and 94.9% prioritized career planning as the primary motivator for seeking mentorship (Sinclair, Fitzgerald, Hornby, & Shalhoub, 2015). In OHNS, formal mentorship programs may serve to alleviate debilitating stress and burnout amongst resident physicians (Zhang, Isaac, Wright, Alrajhi, & Seikaly, 2017). Despite this, the role of formal and informal mentorship and its utility in guiding residents in a competitive employment market is not clear. As the surgical employment market is a complex entity influenced by many external factors, it is necessary that residency programs equip their trainees with the tools to be successful.

The goal of this inquiry was to explore and better understand ideas as they pertain to employment concerns facing graduating residents in OHNS. Moreover, the research question addressed was: How can leadership in the Division of OHNS optimize graduating resident employability in a competitive marketplace?

Methods

As the inquiry was specifically contextual, with the data being subjective and inductive, a mixed-methods approach was employed. A systematic approach of investigation was utilized to find effective and inclusive solutions for this organizational leadership project (Norton, 2018). This involved stakeholders actively participating in organizational change through research targeting employment of graduating residents in OHNS. The study was conducted from January to June 2018. Ethics approval was obtained from the Health Research Review Board at the University of Alberta (Pro00064354) as well as the Research Ethics Board at Royal Roads University.

Study Design & Participants

The overarching methodology was a multi-method prospective approach, with separate data collection tools utilized for each participant group. Data were collected in two phases: survey and focus groups. The survey data informed the focus group questions. The inquiry team was involved throughout the data collection process in reviewing themes and anonymized data to better ensure ownership of the recommendations generated through the inquiry. The inquiry team included an external research coordinator and authors DC and AH. The research coordinator had no affiliation with the University and vetted survey questions for sources of bias. Moreover, the external coordinator facilitated the focus groups – with the authors removed from the process in order to avoid introduction of undue bias.

Stakeholder participants were divided into three groups: (a) the resident group, who were invited to participate in an online survey as well as a peer focus group; (b) the staff surgeon group participating in residency teaching, who were invited to participate in the survey as well as a focus group; and (c) the administrative leadership group from Alberta Health Services (AHS) and the University of Alberta's Faculty of Medicine, who were invited to participate in the survey.

Phase 1 – Initial Survey

Potential study participants in each of the three groups were contacted via email by the research team. After informed consent was obtained, an online survey comprised of ten questions was sent to consenting participants (Appendix). This was hosted by FluidSurveys©. Questions were vetted by the study team and were

inherently wide-ranging by design. The external research coordinator reviewed all survey questions. Responses were anonymized, with the only identifying feature being what study group the participant belonged to.

Phase 2 – Focus Groups

Following the survey, the research team contacted potential participants by email to invite them to a focus group. Two focus groups were held: one for OHNS residents and the second for OHNS staff surgeons. All invited participants who accepted and confirmed participation received a copy of the questions three days in advance (Table 1). The focus group sessions were digitally recorded on a password-protected recording device, anonymized, and electronically transcribed by a member of the study team. The research coordinator reviewed the transcripts to ensure accuracy.

Data Analysis

Quantitative data (i.e., ratings, multiple choice, and demographic data) were analyzed through descriptive statistics inherent to the survey software (NVivo 11.0, QSR International Pty Ltd, 2018). Qualitative data from the surveys were coded for theme development into major themes using the methodology as described by Bogdan and Knopp (2003), whereby the typed data are ordered, initially coded, and the focus coded by the inquiry group (Bogdan & Knopp, 2003). The inquiry team conducted qualitative data analysis as a group, whereby the printed qualitative data were coded and themed separately by members of the inquiry team, and then a group discussion by the team generated key themes. These were then used to generate questions for the focus groups.

Focus group data were used to triangulate preliminary conclusions derived from the survey data. Trustworthiness and authenticity were addressed, with this study design employing triangulation and member checking. Member checks were incorporated into the format of the focus groups at the end, which ensured that the participants and their ideas were being represented accurately. Transcribed raw data from the focus groups were coded for theme development as was done with the survey data and regrouped into overarching themes. Each of the de-identified transcripts were analyzed by a grounded theory approach. Line-by-line coding was employed. Using the software (NVivo 11.0, QSR International Pty Ltd, 2018), each member of the research team went through the manuscripts, assigning pertinent codes to excerpts. Codes were then examined across all transcripts, and relationships within the data were identified. A group discussion amongst the study team aided

Table 1

Focus Group Questions

Focus group questions
1. How important do you feel the issue of employability is to OHNS residents?
2. How important do you feel is the issue of employability to OHNS residency training program?
3. Whose responsibility is it to guide graduating residents to find the fellowship and employment opportunities?
4. Is the status quo adequate?
5. What changes could be made to improve the preparation and employability for the OHNS residents?
6. What could happen if changes aren't made to address these issue?

Note: This set of questions was employed in both sessions – involving the resident cohort and the staff surgeon cohort.

in classifying themes within a conceptual framework.

Results

Eleven of the potential 12 resident participants responded to the initial survey, seven of the 13 staff surgeons, as well as one administrative leader, for a total of 19 responses. The 120-minute resident focus group had five participants. The 110-minute staff surgeon focus group also had five participants. This comprehensive inquiry led to the development of a conceptual framework describing domains of concern that are important to graduating OHNS residents facing issues of employment (Figure 1). Order of importance of each domain was established by evaluating the number of participants that identified a particular theme as a concern and the total number of times the theme was mentioned amongst all participants. A total of four themes arose from the inquiry.

1. Career mentorship programming is a missing link in the ability for residents to find employment upon completion of residency training.

In both phases of data collection, participants from the resident group and staff surgeon group identified the lack of a formal career mentorship program as a contributor to stress inherent to the inquiry topic of concern regarding employment upon completion of residency training. This was a recurrent theme despite not being explicitly asked about in the survey or focus group. When asked about the validity of the assertion that employability is the single biggest stressor that residents face, 18 of 19 survey respondents felt that this was either somewhat or extremely valid. This was echoed within the focus group. When asked to identify the source of stress regarding employment, one resident felt that the "lack of a system or supports to help residents find jobs" was a significant contributor to the problem. Eight of the 19 of survey respondents, expressed the opinion that formal career mentoring should commence as early as post-graduate years (PGY) 1 and 2, while the remaining 11 respondents, preferred PGY 3 year as the appropriate time to commence formal career mentoring.

2. Systemic components external to the Division of OHNS affect the ability for residents to be job ready and for positions to be available.

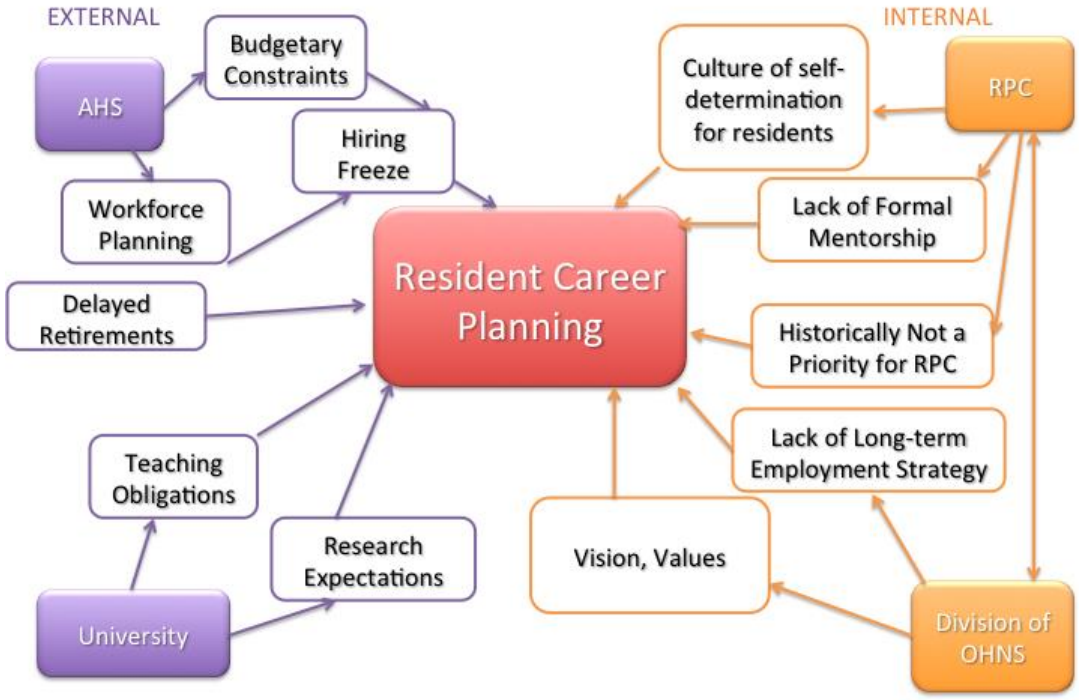
Participants identified many perceived levels of administration as responsible for the current climate for employment, which included government, ministries of health, the Royal College of Physicians and Surgeons of Canada, and residency training programs across the country. In addition to what resident participants felt to be "an overproduction" of Otolaryngology graduates in Canada, specific systemic factors included "older surgeons not retiring," impediments in American Board eligibility creating barriers to working in the US and the "limited existing resources within the Canadian system." Participants in the focus groups also expressed frustration with the absence of a centralized provincial source to identify job opportunities and the lack of transparency with hiring practices, both in the organization as well as across the country. This, combined with an expressed belief that "nepotism and favouritism" play a significant role in "job positions being filled even before they are advertised" made all participants feel as if the "deck was stacked against" them. One staff surgeon participant noted if residents cannot expect "transparency and honesty with hiring practices in [their] own program, how can they expect more from positions elsewhere".

3. Inadequate exposure to community and non-academic opportunities worsens the perception of lack of employment opportunities.

A recurring concern in both participant groups was that throughout their medical and surgical training, residents are by and large exposed exclusively to large urban academic centres and are instructed by clinical teachers and staff surgeons in large urban academic centres. The perceived fixation on employment opportunities in academic centres by graduates was discussed in the staff surgeon focus group as a shortcoming of the current training process: "The Royal College is asking us to train community Otolaryngologists but instead what we do is expose

Figure 1

Domains of Concern Displayed as a Systems Analysis Diagram of Internal and External Factors Affecting Resident Career Planning. [AHS = Alberta Health Services, RPC = Residency Program Committee, OHNS = Otolaryngology – Head and Neck Surgery].



them to subspecialty training in an academic centre." Respondents in the survey also noted an absence of "networking with community hospitals that have no academic affiliation" as a contributor to the perception that opportunities are scarce. One staff participant in the focus groups noted, "We don't expose [the residents] to enough community practice and the jobs that they will likely end up doing".

4. Organizational culture may hinder success of any change strategy.

While much agreement was seen between resident participants and staff surgeons in the first three findings, when broaching the topic of whose responsibility it is to solve this issue, there appeared to be a disparity of opinion expressed by resident participants and staff. Participants in the staff focus group acknowledge that the concern regarding employability is "the most striking thing in [the residents'] minds". However, one participant felt that "it is our responsibility to guide residents through the job or fellowship preparation process, but not to get them the jobs". Another participant phrased it similarly (Table 2a).

Of the staff respondents to the survey, three felt that the responsibility for identifying and obtaining employment was equally shared between the resident and the program, whereas four expressed that the responsibility was mostly or exclusively that of the resident trainee.

Staff surgeon participants expressed ownership for inadequately managing from the outset the "unreasonable expectations" on the part of the residents: "We failed the residents because we haven't made it clear to them that you may have to go somewhere else to find a job—not necessarily the place you want to go". Participants in this group felt that the source of this employment perception problem stems from

the residents "being able to meet their own expectations for employment—living in the city they want to live in and having the type of practice they want—as opposed to actual stress of general unemployment". Another staff surgeon participant expressed an explanation of the apparent disconnect between the resident and staff perceptions (Table 2b). These sentiments appear to be in opposition with those expressed by the resident focus group participants (Table 2c). Participants feel that the stress of career planning "affects their learning and this issue is poorly addressed by the training program as it gets more and more as [they] get more senior". Some even proposed as a solution whereby "current staff need to be willing to share resources with incoming staff". Delayed retirements of surgical staff were also identified as a cause of employment stresses for residents. Resident participants recommended a variety of solutions, including suggested age of retirement for operating surgeons, creating incentivization for retirement, and creation of a senior surgeon program to facilitate transition to retirement.

Discussion

The employment market for Otolaryngology – Head and Neck surgeons in Canada is a complex entity influenced by many internal and external factors. Within our study, both OHNS residents and staff surgeons echoed that employability is undoubtedly the biggest stressor residents face – the opinion of whether that is valid or not was divergent between the groups. The four major themes that arose from this study may help inform advocacy and contribute to the creation of programs that aim to address these concerns moving forward.

While mentorship often exists in surgical departments for residents to achieve success during residency training, a program focussed exclusively on planning, job identification, and career guidance would address the perception by residents that the current situation leaves residents with "lack of a system or supports to help [them] find jobs" – as stated by a resident focus group participant. Such a program of formal career guidance and mentorship should include professional and career goals, research interests, develop-

Table 2

Quotes from the Focus Groups.

Staff Physician A	"Getting a job right now in Canada is a combination of the right training at the right time in the right set of circumstances. . . . It usually comes down to a little bit of luck, a little bit of hard work, and a little bit of people advocating for you. Those three things come together, then you sort of can get a job. One thing I think is that some [residents] don't realize that they might not be able to get a job in the place that they want to work."
Staff Physician B	"I can't think of a single unemployed Otolaryngologist in the country. So if you want my perception of it, it's that yes, this is an issue. It's something to be concerned about. We need to plan on future employability for our residents, but I think the residents perceive it as a much bigger issue than maybe—and I think they perceive it as maybe a different issue than what staff do because I agree that there's—I think if you ask. "Will I be able to get a job in the place that I want to live and have my family?", that's a much different question than the question of: "Will I be able to get a job?" I think everyone who graduates out of these programs will get positions in Canada. The question is: "Are they going to get the position they want in the spot that they want?", and that is certainly more difficult now than it was when I came up."
Resident C	"Between research and managing [the staff's] clinical practice and working in their ORs, we have no time to devote to finding employment. Therefore, the staff owe it to us to prepare us and help us find job opportunities—not necessarily getting us set up with a job, but at least finding us the opportunity to compete for one."

ment as physician, teacher and/or investigator, and work–home balance (Rustgi & Hecht, 2011). This would serve as an exemplar of a residency program's commitment of shared ownership over the career planning for its residents. In addition, such a program would ameliorate the specialty's ability to attract the best students. A commitment to ongoing faculty development of mentors and mentorship-specific skills would be beneficial for the future of the program.

Most resident respondents recommended that discussions about career planning and post-residency life should start early in training during PGY 1 or 2. A career mentor could discuss career strategies, identify suitable fellowship opportunities if applicable, and identify patient needs in communities with resources for recruitment of academic or community-based surgeons. Such a structured system would allow for inclusion of appropriate subspecialty faculty, depending upon the career interests of the trainee, as well as monitoring and assessing the career guidance and mentorship with existing administrative infrastructure.

One area that was consistently identified as a significant contributor to the perceived lack of available full-time positions for surgical graduates is the possibility of too many training positions given the patient needs and rate or retirement of senior surgeons across the country. The supply of new trainees is disproportionate to the demands of communities. This sentiment has been echoed within other small-sized surgical programs including vascular surgery (Cooper et al., 2015), cardiac surgery (Mewhort et al., 2017), and plastic surgery (Morzycki et al., 2018). Whilst the determination of the number of trainees accepted into a specialty is a complex issue, each respective surgical department may identify over-training and advocate for their current residents. Moreover, given the recent policy change enabling Canadian graduates to be Board-eligible under the American Board of Otolaryngology (ABO), another pool of potential job opportunities has arisen.

While positions in major urban, academic programs are limited and highly competitive, respondents amongst staff feel that opportunities in community-based surgical practice in smaller urban centres are inadequately identified and optimized by graduating surgical trainees. As exposure to this nature of practice and locale is limited, one recommended solution proposed by respondents in the survey and staff focus groups was inclusion of a mandatory community-based rotation in General Otolaryngology. As the intent would be to introduce the idea of a community-based practice while residents are still formulating options for their career pathways, it is suggested that the exposure take place earlier in training, such as PGY-1 or PGY-2. While Easterbrook et al., found that Canadian graduates with rural background were more likely to choose practice in rural communities (Easterbrook et al., 1999), Dunbabin and Levitt noted that amongst Australian medical trainees, rural exposure during training was also a strong indicator of a trainee's willingness to work in smaller and more remote settings (Dunbabin & Levitt, 2003). This would suggest value in providing formal exposure for graduates to rural surgical practice where employment opportunities may be more readily available. Including community-based or rural rotations also provides trainees with exposure to a previously inaccessible group of surgeons who can provide invaluable career advice and mentorship.

There are limitations inherent to the study that merit discussion. This project was conducted in the Division of OHNS at the University of Alberta. This is a unique entity exercising in a very specialized academic environment supporting the non-profit government-run health care environment of Alberta Health Services. The system is further characterized by decreasing access to resources, government funding, and highly skilled personnel. Generalization to other divisions and departments may not be feasible due to this as well as the small sample size of participants. In addition, given the inherent sensitivity of the subject matter, surgical trainees may not have felt comfortable expressing their genuine concerns. As trainees who participated in this study were still enrolled within the residency program, they may have found it challenging to raise concerns that they felt were unjust, due to fear of retribution. Although this was

addressed by re-affirming anonymization and ensuring privacy, this limitation still exists.

Conclusion

OHNS residents face significant stress regarding potential employability following residency. Lack of career mentorship, limited understanding of what community-based opportunities are available, and organizational culture may act as impediments to securing employment. These internal factors combined with various external factors may contribute to the worsening perception of an already competitive job market. Future work to directly evaluate each of these components would be instructive in generating evidence-based solutions that begin with the existing leadership structure.

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