



International surgery: How to be involved while maintaining a surgical practice



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ABSTRACT

Background: Surgeons can find it challenging to sustain their global involvement while maintaining a clinical practice. This study gathered advice from surgeons with global surgical experience on how to do so successfully.

Methods: Using a qualitative approach with thematic analysis, 14 semi-structured interviews were conducted with surgeons from different specialties involved in varying international projects.

Results: Early involvement is important to set up expectations for one's practice, and makes anticipated costs more manageable. The type of practice does not limit amount of participation, but maintaining a broader skill set can be beneficial. Hiring locums can help defray costs for community surgeons, and good collegial support is important for academic surgeons. Family support is important to maintain involvement.

Conclusions: Surgeons from diverse clinical practices are able to participate in international surgery. Early involvement sets up expectations and allows one to build their practice and lives around their international work instead of the other way around.

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Introduction

With increasing interest in global surgery, academic programs in High Income Countries (HICs) are incorporating this topic into surgical training.^{1–5} Increasing numbers of training programs have created international elective opportunities in Low and Middle Income Countries (LMICs), and as many as 85% of North American surgical trainees hope to continue international efforts after completion of training.^{5–8} This interest, combined with an increasing recognition of lack of surgical access worldwide, has instigated a push to recognize global surgery as a specialty.^{4,9,10} However, there is very little information on how this specialty of global surgery is incorporated into practice, and available programs do not emphasize how to practically incorporate these aspects into a surgical clinical career.^{1,3,11,12}

Surveys of trainees and surgeons cite numerous obstacles to continued involvement in global surgery in practice.^{6,7,13,14} A survey of American pediatric surgeons showed 95% of members were interested in becoming involved in international work, yet only 48% felt they could do so.¹³ Studies of surgeons often cite family obligations and lack of time as the primary obstacles, as well as lack of information on possible projects.^{13,15,16} However, if surgeons in clinical practice are unable to continue involvement in global surgery after their residency, global surgery becomes a purely academic discipline. The few previous studies on surgeon involvement have focused on the obstacles that surgeons have encountered, and extrapolate on how a system can be changed to remove these barriers. There are no recommendations on how to overcome these challenges in the current system, or at least ease the transition to maintain international involvement.^{13,15–17}

Despite obstacles, many surgeons successfully incorporate international work into their regular practice. The goal of this study was to better understand how surgeons have stayed involved and navigated the obstacles in the current system, while maintaining their clinical practice.

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Methods

This study used a qualitative grounded theory approach, conducting semi-structured interviews with Canadian surgeons. Participant selection criteria included English-speaking surgeons involved in international surgery who maintained a Canadian practice (Table 2 Demographics). Potential participants were identified using a snowball sampling technique, with purposeful sampling to ensure a range of subspecialties, career stages, types of practice, gender, and international surgery experiences.

The interview guide (Table 1) was developed and modified in a rolling fashion based on interviews and emergent themes. Interviews were semi-structured, using the guide to direct open-ended questions. Semi-structured interviews are a technique commonly used in qualitative research. Using this technique, researchers develop a framework of themes or questions that they would like to cover. However, unlike fully structured interviews or oral questionnaires, questions do not have asked verbatim, or in a particular order, but serve as a guide to remind the interviewer of topics they would like to discuss. Questions asked in a way to allow for a conversation to flow, and the more open structure both encourages the interviewees to bring up ideas, and allows the interviewer to probe on any concepts that are brought up.¹⁸ Interviews were conducted in person or by telephone between July 2016 and July 2017 by either the primary author or a research assistant, and averaged approximately 45 min. Interviews were conducted in a single session, unless interrupted by medical emergency or technical challenges.

All interviews were audio-recorded, and professionally transcribed. Anonymized transcripts were uploaded to NVivo (QSR International Pty Ltd. Version 11, 2015) for analysis. Transcripts were analyzed for emergent themes concurrently with data collection, and continued until thematic saturation was achieved (14 interviews). Data was then collated for summative analysis and interpretation.

Results and discussion

Surgeons in this study came from a range of practices. Their level of involvement ranged from a single surgical mission annually (1–2 weeks) to 12 weeks per year in one or more trips. There was richness in the range of how each surgeon began their journey, and changed their involvement through their careers. Participation varied and included: classic 1–2 week group surgical missions focused on specific surgical problems (e.g. cleft lip, congenital heart anomalies, hernias, orthopedic injuries); teaching and development of surgical specialty training; large institutional collaborations; and locum tenens work to relieve local surgeons. A range of organizational involvement was seen among the interviewees, including large international bodies such as the International Committee for the Red Cross (ICRC), national non-governmental

organizations (NGOs) such as Operation Smile, small not-for-profit organizations based in HICs, or individual collaborations with local groups or hospitals based in LMICs. Although individual preparation for different projects and how each surgeon became involved in each project throughout their career was discussed in the interviews, this was not the focus of the analysis for this paper. Data analysis for this paper was focused on how each interviewee would advise an interested surgeon to set up his or her practice and lifestyle at home to allow for increased and sustained involvement in international work.

Surgeon recommendations distilled into five themes. In particular: starting early in one's career, trying to maintain a broad skill set, choosing a type and location of clinical practice, having dependable colleagues, and having a supportive family. These themes are elaborated on below.

Early involvement

Starting international work early was one of the strongest recommendations. Surgeons discussed that there is a tendency to wait for milestones such as when children are older, one's practice is more established, debts are paid off, or making global surgery part of a retirement plan.

S12 – “I had convinced myself that I was going to wait until I was in my 50s or 60s. And I'm really glad I didn't. I would tell you - do it right now, as soon as you can. And you know what, even before you think you can, try it.”

None of the interviewed surgeons recommended waiting for any of these milestones, and felt that waiting could make getting involved more difficult, instead of easier.

S8 – “Don't wait until the end of your career to get involved. A lot of people come to me at the end of their career and say, “Gee, I'd really like to do something overseas.” Well, you can but ... but I'm not sure I would wait until the end of your career to become involved”

Reasons for earlier involvement included having a broader skill set, being in better health, more able to learn and be flexible, and able to contribute more overall.

S14 – “I think if you get like ten years into practice, there is an inertia that we all have that it's hard to change your practice”.

However, early involvement did not necessarily mean going abroad immediately after training. It was recommended to have some experience in independent practice, and 2–3 years was generally considered sufficient.

Table 1
Interview guide.

General Background	How did you become involved in global surgery?
Challenges at Home	How did you prepare for your international work? What has prevented you from being more involved? What do you do differently for your international work?
Challenges when Abroad	Are there aspects of your workplace that have allowed you to become involved in global surgery? Were there any complications or challenges you encountered abroad that were specific to surgical or perioperative care? How have the previous complications changed how you approach international surgery?
Wish List	What would allow you to become more involved in global surgery? Are there things that you wish your Hospital/University/Department could do help support your global surgery work?
Advice for other surgeons	What advice would you give a new graduate or colleague who might be interested in becoming involved in global surgery?

Table 2
Participant demographics.

Participant demographics	
Specialty	
Cardiac Surgery	1
General Surgery	3
Orthopedic Surgery	3
Otolaryngology	1
Pediatric Surgery	1
Plastic Surgery	5
Location of Practice for Majority of Career	
British Columbia	4 (3 different cities)
Ontario	9 (3 different cities)
Maritimes	1
Stage of Career	
Early (<10 years in practice)	2
Mid-Career	7
Late-Career (Recently Retired or possibly retiring in next 10 years)	5
Type of Practice	
Academic	8
Community	3
Both (Have worked in both at different stages)	3
Remuneration Plan	
Alternate Funding (Salaried)	3
Self-Employed (Fee-for Service)	9
Both (Have worked in both systems)	2
Type of International Work	
Surgical mission/Service provision only	4 (2 academic/2 community)
Combination of mission/education/research	10

S8 – “if you're going to be involved in a project where you're going to actually be working as a credentialed decision-making person, get experience in your own program and in your own setting, in your own country before you go.”

An alternative to that, which emerged, would be to go abroad with supervision. Going with a surgeon experienced in international work may be useful even after being in practice for a few years, but particularly for those who go abroad very early in practice.

S6 – “Doing it when you're first in practice is fine. I just would recommend that they go with people who've been in practice (abroad)”

Another reason to start early in practice comes from a financial perspective. This may seem counterintuitive, as income and financial security would be expected to increase with time, and is one of the reasons trainees often cite as a major challenge.^{6,7,17} However, committing a certain amount of time to international volunteer work from the beginning leads to a lack of expectation of that income, rather than a loss of salary later on. Income loss can be more difficult to manage due to increase in lifestyle costs commensurate with increased income.

S5 – “As soon as you have a high income from working all the time, it's really hard to back off ... to really have that [time committed to international work] engrained in their routines early on, that they don't necessarily require that high income to sustain their lifestyle.”

Maintain general skills

One benefit highlighted as a benefit to starting earlier in practice is the broader skill set surgeons have earlier in practice. There is a tendency for clinicians to narrow their practice over time,

particularly in urban and academic practices.

S12 – “I think when you're younger too, you have that confidence and skill set of a broad base of things. That you're able to tackle any of those. And as your career goes on, and you become a <subspecialty> surgeon, it's hard to go back and learn those skills again.”

This is in direct opposition to the helpfulness of a broad and flexible skillset when working without subspecialists in low resource settings.

S1 – “One thing I wish I could bring with me is a more generalizable skill set, because here we have a very focused skill set And what's valuable there ... it's a more generalizable experience.”

Those who had a more general practice, particularly those who practiced in community or smaller cities/towns, appreciated the broad skill set they were able to maintain. They considered their practice at home advantageous and beneficial for their work abroad.

S12 – “And then I think my own practice is more of a general practice, so that allows me to be able to offer a variety of services, <specific examples of cases>, that some of the colleagues that I have, they're uncomfortable in doing ... because they haven't done one for a while.”

Surgeons working in academic settings tend to have more subspecialized practices, and some took measures to maintain a more generalized skill set. For example, Surgeon S6 has a subspecialty practice in Canada, and could choose to fully focus on that area. However, she chooses to maintain some general practice along with her subspecialty area by continuing to accept referrals within her general surgical specialty.

S6 – “That’s one of the reasons I like to keep doing general <surgical specialty> That if I was so subspecialized ... I wouldn’t feel as comfortable ... I think maintaining some of those general skills and patient exposures, it definitely helps in terms of being able to provide more than just one little niche area.”

Others maintained their skills on a more periodic basis. Surgeon S10 has a subspecialized practice in an urban centre where he only sees consultations in a subspecialty, but maintains his more general skills by periodically working in a smaller town where more general services from his surgical specialty are required.

S10 – “I do spend some time in <smaller town>. It’s not formal, it’s not systematic but that is probably one of the best places to meet the de-differentiated doctors of Canada.”

Although it did not preclude their involvement, subspecialists who had a narrow scope of practice discussed the challenges of working abroad. Those with narrow subspecialty practices were still able to be involved in international work but had to be involved in projects which focused on their areas of expertise so they could best use their subspecialty skills. These would include missions catering to specific surgical cases, or working with teaching programs where they were involved in teaching specific areas of their surgical specialty.

There were also suggestions for those who had lost particular skills to complete an informal “mini-fellowships” with local subspecialists to refresh these skills. Others described mentorship by more experienced surgeons on earlier missions.

S7: “You can also basically do a sort of a mini preceptorship and try and observe procedures prior to going on any missions. And the other thing is that you can always attend a mission and basically have a colleague mentor on these missions.”

Any skills gained would have to be maintained, either through inclusion in practice at home, or more regular work abroad.

Choosing a practice

Surgeons in this study came from a wide variety of clinical practices, and the type of practice did not seem to influence the degree of involvement. There appears to be a perception that global surgery work is more accessible to academic surgeons than community surgeons. This belief may arise from higher participation rate of academic surgeons in Canada. A national survey of Canadian plastic surgeons with a 43% response rate showed 54% of academic surgeons and 27% of community surgeons involved in international projects.¹⁹ However, this has not necessarily been true in US studies of surgeons which show similar participation rates in both academic and private practice surgeons.^{15,20} This difference could be due to survey response bias, or a difference in Canadian versus American practice patterns which affect international volunteer opportunities.

In this study, eight of the surgeons interviewed had only worked in an academic setting. However, three surgeons had worked only in a community practice, and three had worked in both academic and community practices in different stages of their career. Those who worked in both academic and community practices were involved in international work throughout their careers. The movement to an academic practice was not related to international

surgery involvement, but due to subspecialization after a period of time in community practice. These surgeons completed a fellowship after working in the community, and returned to an academic subspecialty practice. S11 was actively involved in global surgery as a community surgery, and continued this involvement after a fellowship and change to an academic career.

S11 – “I go out of my way to try and tell people not to be scared to become a community surgeon. You can still do overseas stuff. You don’t have to be an academic.”

None of the surgeons interviewed believed this stereotype that international work was better suited for academic surgeons, and some community surgeons believed that an academic career would have inhibited their involvement in international work.

S9 - “I was actually on an academic track and I’m glad I didn’t get into that because it may have kyboshed things.”

Academic and community surgeons were both involved in a wide range of programs, and there were surgeons from each group who were involved in over six weeks of international work a year. As expected, only academic surgeons were involved in more formal university partnerships. However, community surgeons were also involved in educational development and training programs, but through NGOs instead of universities. Surgeons in this study seemed to support the idea that the type of practice does not change if, how, or how much, you can participate in international work. However each career path may have different challenges in participating.

Some surgeons expressed the suspicion that the alternative career path (academic versus community) allowed greater freedom to be more involved. However, interviewing surgeons from both sides revealed different, but not necessarily lesser, challenges from each side.

The main advantage to a community practice appears to be the flexibility of independent practice, while high overhead cost was cited as the most significant obstacle. One way to defray high overhead costs would be to hire a locum surgeon during periods away, especially if trying to increase the international commitment.

S5 – “I went for six weeks at a time and I was able to get locums at that time, because I was in a private office. So I got locums to come in and cover my office for me, so the expenses weren’t too bad when I was away and the patients were looked after. “

Interestingly, none of the surgeons who cited high overhead costs as a barrier to increasing their amount of international work had attempted to defray costs with locum coverage. When specifically asked, most did not think it was worth the effort to find a locum for the period of time they were away (under 2 weeks per year).

Academic surgeons had fewer concerns with overhead costs, but were instead restricted on how much time they could spend away by their hospital and or practice group. Surgeons could often go away for 1–2 weeks per year using vacation time, but would have difficulty being involved in larger projects, or increasing their involvement.

S13 – “If you’re in a group practice in an institution like I am here ... you need the support of your colleagues. And your colleagues need to recognize the importance of global health or global surgery and they need to be onboard with the entire

concept of you leaving the practice And that's not always an easy thing to accomplish."

Having a group that was supportive of the international work was therefore especially important in a group practice setting, and something to consider when choosing an academic or salaried job. Some surgeons described that all members of their group participated in international work and were therefore all were given a few weeks off to participate, in addition to vacation, which allowed for increased participation.

Supportive colleagues

Colleague support was important for all surgeons. Most described colleagues who were willing to trade on-call days and cover patients during their absence. The exceptions were surgeons who had very subspecialized clinical practices. These surgeons were so subspecialized that nobody else in the city had their area of expertise, so colleagues were only able to temporize in their absence. When these surgeons were away, patients requiring their expertise would either have to go to another city to seek treatment, or have delayed treatment upon their return. This limited the surgeons' departure from the city for any reason, not only for international work.

S2 – "I had to delay my departure by two days to kind of sort out stuff that was happening here and then I had to come back ... instead of the five or six days I was supposed to be there, I only stayed for three or four Going away on these trips is just another part of that ... ongoing stress."

Although not expressed in the interviews for this study, it is possible that this could be an issue in solo rural practices without colleagues to cover. In Canada, most, but not all smaller town/city practices have more than one surgeon. But some have single surgeon practices, which must find locum tenens coverage, otherwise patients will have to leave the region for clinical care. Although there are government programs to pay for locum tenens coverage, this can restrict dates and amount of time away. It would therefore be recommended that surgeons interested in international work should choose a practice where there are surgical colleagues who are able to care for your patients while you are away.

Family support

Family support was one of the over-arching factors. Often time away can be viewed as a sacrifice and a burden on the family, but the work is considered valuable enough to be worth the balance. Having young children is often cited as an obstacle to international work. Surgeons in this study without children considered this a time and financial advantage to allow for increased international work. However, most surgeons in this study had young families at some point, and continued their international work during this time.

S13 – "You have to have the support of your family It's not easy to be away for birthdays and parties and weddings ... So that's something that needs to be worked out very early on."

For surgeons with children, family support of the projects become even more important, and starting early in practice can make involvement normalized within the family expectations.

Surgeons noted that support from their spouses and family, either because of their belief in the importance of their work or

their spouse's involvement in international development, was key to long-term involvement. There were a number of surgeons who had spouses who were also involved in international development. Some spouses were in the medical field, and were involved medical projects in similar locations, while others were involved in non-medical development projects. These surgeons were able to travel with their families.

S11 – "having a partner and a family who's into this sort of thing too is clearly ... well, it's been a godsend for me because my wife <name> is into this stuff as well."

However, this involvement was not a necessity, and most surgeons did not describe travelling with their families. Most had families who remained in Canada, but were supportive of their work, and recognized the accommodations they would have to make at home to allow this work to happen.

Conclusions

All interviewed surgeons were engaged and committed to their international work despite numerous challenges. It is easy to focus on these challenges and fail to incorporate global surgery into a surgical practice. The surgeons interviewed in this study have been able to outline some practical solutions they have found for maintaining active involvement.

One of the strongest messages was to start as soon as possible. The idea of "dialing it in" and committing to the contribution early on makes other obstacles seem easier to manage. Starting early allows one to build his or her practice and family expectations around the international work, instead the other way around.

S9 – "You make it a part of your practice and you dial it in. You commit yourself to a certain period of time."

Maintaining a surgical practice that contains a broader skill set increases flexibility when working abroad, but mentorship both at home and abroad can help re-learn necessarily skills. Those in subspecialized practices can also choose more specific projects that use their narrower skill set.

For those in independent practice, hiring locums for coverage can both help care for patients, and defray overhead expenses, allowing for increased international involvement. Those in group or academic practices may want to find a group that is specifically interested or supportive of international work. Finally, having the emotional and time support of family is crucial to maintaining a surgical practice that includes active involvement in international surgical work. Earlier and regular involvement may make the family support easier, and normalize this within the family expectations.

With the exception of practices with no available colleague coverage, surgeons can be involved in international work regardless of the type of practice or specialization. However, surgeons must find projects to match their skill sets and availability. Community surgeons may have greater flexibility in their schedule and a broader skill set, while academic surgeons may have more educational partnerships and niche skills. Increased collaboration can be beneficial to harness skills of all groups, and allow for maximal international effects.

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