Optimal hand surgery fellowship interview format

Lauren E. Dittman, MD, Nicholas F. Munaretto, MD and Peter C. Rhee*, DO, MS

Abstract

**Context:** The ideal format for residency and fellowship interviews has been consistently debated. Secondary to the COVID-19 pandemic, many institutions, including all hand surgery fellowship programs, transitioned interviews to an all-virtual format. In the past year, with ease of travel restrictions, some programs have transitioned back to in-person interviews, while others remain solely virtual. Hand surgery fellowship programs are continually assessing what are the best means for conducting these interviews, with little perspective regarding the applicant’s preferences.

**Objectives:** The purpose of this study was to examine hand surgery fellowship applicants’ perspectives regarding in-person and virtual interviews. It was hypothesized that applicants would value interpersonal relationships between faculty when deciding upon their ideal hand surgery fellowship, which would be easier to appreciate in-person.

**Methods:** All hand fellowship interviewees at a single institution were given a voluntary, electronic survey. The survey consisted of questions examining different aspects of the program’s interview day and supplemental resources. Responses were recorded after the in-person interview for the years 2018–2020. Questions were altered for the virtual 2021 and 2022 interviews. Questions were scored on a Likert scale.

**Results:** For the in-person interview cycles, there were 60/86 respondents (69.8%). For the virtual interview cycles, there were 45/73 respondents (61.6%). During the in-person interview cycles, applicants reported that the current fellows’ perspective talk was the most helpful component. Many applicants commented that they enjoyed meeting their potential co-fellows. The virtual interviewees felt that they had the best understanding of the program’s core values/culture and the worst understanding of faculty personalities and personal/family life. Twenty-nine (64.4%) of virtual applicants would prefer an all in-person interview. Of the 16 respondents who did not advocate for a completely in-person interview, 56.3% preferred the option for an in-person site visit.

**Conclusions:** Hand surgery fellowship applicants desire interpersonal interactions to better understand prospective fellowship programs, which can be difficult to convey with an all-virtual interview. The results of this survey can help guide fellowship programs as they continue to optimize in-person, virtual, and hybrid interview formats and refine recruitment resources.

**Keywords:** application; fellowship; hand surgery; interview

Additional fellowship training has become more popular in recent years, with over 90% of orthopedic surgery residents applying for a position [1]. Traditionally, these interviews have been held in person, often over the course of two days. The first day consists of a welcome reception or dinner, and the second day consists of standardized interviews and campus tours. However, the exact format and content vary widely from program to program. This holds true particularly within the realm of hand surgery, given that fellowship programs not only attract applicants from orthopedic surgery residencies, but also from plastic surgery and general surgery residencies. Additionally, the hand surgery fellowship match is constantly evolving due to an increased interest among trainees and heightened qualifications of applicants pursuing the field [2–9].

The COVID-19 pandemic has added even more complexity to the fellowship application process. All fellowships were forced to hold virtual-only interviews, which led to reconfiguration of many programs’ interview formats. This has created new challenges on how to display the program’s educational offerings, which were already difficult to convey [4–8]. In addition, the on-campus interview process has been shown to markedly influence the applicant’s perception of a program and final ranking decisions [2]. From the program’s perspective, the quality of the interview has been shown to be the most important factor when ranking applicants [1, 10]. This facet is now lost with virtual interviews, and its impact is yet to be determined. Recent studies have suggested that virtual interviews will negatively impact both the program’s and the applicant’s ability...
to adequately assess one another and determine the best fit for fellowship match [11, 12].

Therefore, the purpose of this study is to utilize a single program’s postinterview applicant survey to provide hand surgery fellowship program directors with interview process features and recruitment resources that are deemed influential by hand surgery fellowship applicants for both in-person and virtual interviews. With the end of the COVID-19 public health emergency, this study aims to provide guidance to hand surgery fellowship programs as they determine the best format for applicant interviews.

**Methods**

After Mayo Clinic institutional review board approval was obtained (IRB: 21-001231), all hand surgery fellowship applicants who completed an interview at a single institution’s hand surgery fellowship program from January 2018 to March 2022 were invited to participate in a voluntary, anonymous survey. During the years 2018–2020, interviews were held in person, whereas in 2021 and 2022, all interviews were virtual.

The in-person interview process consisted of a two-day, on-campus visit with interviews on both days, a campus tour, and an evening dinner with faculty and applicants. The pre-interview resources consisted of continuously available program descriptions on the institution’s graduate medical education, American Society for Surgery of the Hand (ASSH), and the American Medical Association (AMA) websites.

The virtual interview process consisted of a virtual overview of the program’s educational curriculum and a 3 h block of interviews. The pre-interview resources consisted of an informational virtual panel discussion and dinner ($15 food delivery service gift card) with the current fellows on the evening before the interview, a “welcome” gift bag mailed to the applicants with recruitment merchandise from the institution’s gift shop (water bottle, stress ball, magnet, pen with the institution’s logo), an individual program liaison with a current hand surgery fellow within the program, and an invitation-only access to an interactive program description webpage. Additionally, the applicants also had open access to the above-stated program descriptions on various websites. Surveys were then distributed electronically via REDCap (Research Electronic Data Capture) within five days after the interview to minimize recall bias. REDCap is an institution-provided, web-based application designed to support data capture for research purposes, while allowing anonymity and secure data storage. A second reminder email was sent one week after the initial email was sent. The survey was unique to each applicant and was only allowed to be completed once.

The survey consisted of six discrete multiple-choice questions examining different aspects of the program’s interview day and setup (Supplementary Material S1). There was also a free-text section where applicants were invited to share their predominant pros and cons to the program’s interview process. Responses were recorded after the in-person interview for the years 2018–2020. Questions were slightly altered for the 2021 and 2022 interviewees given the virtual nature of the interview; therefore, these results are reported separately (Supplementary Material S2). There were 21 of 28 respondents (75.0%) in 2018, 18 of 26 (69.2%) in 2019, and 21 of 32 (65.6%) in 2020, for a total of 60 respondents with in-person interviews. Among those who responded to the survey during the virtual interview sessions, there were 26 of 36 (72.2%) interviewees in 2021 and 19 of 37 (51.3%) interviewees in 2022.

All responses were recorded electronically. Questions with graded response choices were converted to a Likert scale. For example, “Least Helpful” responses were graded as 1 and “Most Helpful” responses were graded as 5. Microsoft Excel software was utilized to calculate descriptive statistics, including mean and standard error, for each question response.

**Results**

**In-person interviews**

Interviews were conducted over a two-day period; 67.8% (n=40) of interviewees liked this format, while the remainder stated that they felt this was too long. The vast majority (86.8%, n=33) of interviewees preferred a Friday-Saturday interview over a Thursday-Friday interview. Over the span of three years, interviews were conducted in a one-on-one format with individual faculty members (6–8 faculty). Three-quarters of respondents felt that this was an appropriate number of interviews.

In order for the applicants to gain a better understanding of the fellowship, the interview day included several different components. Interviewees were asked to score how helpful these activities were, with 1 being “least helpful” and 5 being “most helpful.” Results are shown in Figure 1. They noted that a presentation delivered by the current fellowship class sharing their perspective of the program to be the “most helpful,” and the campus tour and an interview to determine the applicant’s ethics to be “least helpful.”

Overall, at the end of the interview process, 83.3% (n=50) of applicants had an improved impression and understanding of the program. Many applicants commented in free text that they enjoyed “meeting so many people throughout the interview.” Specifically, they appreciated being able to meet every other applicant that they could potentially become co-fellows with, afforded by the fact that this program interviews all applicants in a single two-day interview event per year. Negative feedback included “too much down time” and “too long of a campus tour length.”

**Virtual interviews**

The interviewees were surveyed on how well they felt that they understood different aspects of the hand fellowship program. These results are shown in Figure 2. Interviewees felt that they had the “best” understanding of the program’s “core values and culture” (mean 4.8) as well as the
“resources for surgical training” (mean 4.7). They felt that they had the “worst” understanding of “faculty personalities” (mean 4.2) and potential “personal/family life” (mean 4.2) at the program.

Interviewees were asked how impactful various talks during the virtual interview day and online resources were in learning about the program. Results of the helpfulness of these resources are reported in Figure 3. The Program Director’s overview of the program’s educational curriculum (mean 4.7) was ranked highest in usefulness and the standardized national resources (ASSH and AMA websites) were ranked “lowest,” along with social media impact (Facebook, Instagram, and Twitter) (mean 2.8 and 2.6, respectively).

Similarly, the interviewees were also polled on what aspects of their application and interview that they perceived as the “most important” for allowing them to display who they really are as an applicant/surgeon. These responses are reported in Figure 4. Interview with the program director was found to be the “most useful” (mean 4.6). The current fellows’ interview panel, application personal statement, and faculty panel interviews were rated similarly (mean 4.1, 4.0, and 4.0, respectively).

![Figure 1: Helpfulness of in-person interview components.](image1)

![Figure 2: Applicants' understanding of the program.](image2)
Preinterview happy hour was ranked the least highly for improving the program’s understanding of the applicant (mean 3.1).

There were several additional aspects that were added to help enhance the virtual interview. Applicants rated having access to one of the program’s current hand fellows as a liaison in order to ask specific questions about the program as being the most impactful additional resource (mean 4.2). Physical gifts were noted as being less impactful, including a food delivery service gift card to be utilized during the preinterview virtual happy hour and program-specific interview “welcome bag” with recruitment merchandise (mean 3.4 and 3.6, respectively).

Interviewees’ overall impression of the virtual interview was mixed. Nearly two-thirds (64.4%, n=29) of the interviewees stated that they would prefer a completely in-person visit over either an all-virtual or a hybrid interview, if given the choice. Of the 16 respondents who did not advocate for a completely in-person interview, 56.3% (n=9) selected a virtual interview format with the option for an in-person site visit. Twenty-one out of the 45 applicants (46.7%) who participated in the virtual interviews commented that saving money and/or the convenience of not having to travel were the biggest pros with regards to virtual interviews. Twenty-three of the 45 virtual applicants (51.1%) commented that the biggest
cons of having a virtual interview were not being able to meet anyone in-person and not gaining a true sense of fellow-attending relationships.

Discussion

Hand surgery fellowship interviews have historically been an in-person process. Recently, programs have had to rethink and revise their interview process given the COVID-19 pandemic and the implementation of virtual interviews. Moving forward, ASSH will have to decide how they will conduct their hand surgery fellowship interviews (virtual, in-person, or hybrid) and in which format to optimize successful recruiting and matching of the top applicants for their respective programs. Therefore, it is important to understand what applicants value in terms of understanding the strengths and weaknesses of a fellowship program through the interview process.

As opposed to residency interviews where medical students can more easily take time away from rotations to attend in-person interviews, hand fellowship interview applicants are embedded in senior-level rotations and appreciate less time away from clinical duties. Time off during residency is scarce, and often residents must utilize their allotted vacation time in order to attend fellowship interviews [13]. In addition, their absence from clinical duties can add more responsibilities to their co-residents, which can lead to guilt and a sense of dereliction of duty. One previous study showed that 72% of hand surgery fellowship applicants interviewed in-person at between 6 and 15 programs [14]. As such, based on the current study, applicants overwhelmingly preferred having at least part of the in-person interview take place on a weekend, for example Friday and Saturday, to minimize time away from their training program during standard clinic and operating days.

In addition to requiring less time away from clinical rotations to accommodate travel, virtual interviews result in considerable cost savings for the applicants [15]. Brunworth et al. [14] reported that 68% of hand surgery fellowship applicants spent over $2,000 on in-person interviews. In one study, orthopedic surgery residents applying to fellowship programs in general attend a mean of 11 in-person interviews and spend over $5,000 for travel [16]. For many residents, this is nearly 10% of the yearly stipend spent on interviews. Fellowship programs will also likely benefit from the cost savings associated with virtual interviews by eliminating food and beverage services, transportation, faculty-applicant dinners, and lodging [17, 18]. One recent study found that other subspecialty orthopedic surgery fellowship applicants have saved more than $2,000 with the implementation of virtual interviews [19]. Even more impressive, 73% of sports fellowship applicants reported saving greater than $5,000 with virtual interviews [11]. Similarly, a separate orthopedic surgery fellowship subspecialty reported that 94% of interviewees noted that virtual interviews were more cost-effective [20]. Although the exact financial cost was not directly assessed in our study, nearly 50% of virtual interviewees noted that cost savings was one of the biggest pros to the virtual format.

Unfortunately, there are significant drawbacks to holding virtual interviews both from the applicant and faculty perspectives. Respondents of this survey study felt that they did not have as good of an understanding of fellows’ “personal and family life,” a likely consequence of not being able to physically visit the city and community that they may live in for an entire year. Additionally, they noted less understanding of “faculty personalities” after the virtual interview. Many applicants in the current study mentioned in the free-text response that fellow-staff interactions were an important determinant of deciding on their best fit and that much of this is lost with the virtual interview and lack of informal interactions between the applicant and faculty members. A recent study by Grova et al. [21] directly compared in-person to virtual interviews for complex general surgical oncology fellowship and found that there was a statistically significant difference in applicants’ understanding of a program’s culture with virtual interviews. Specifically, this study found that 100% of in-person interviewees felt that they understood the program’s culture, whereas only 64% of virtual interviewees felt the same (p=0.02) [21]. Similarly, a study by Yong et al. [22] found that only 29% of virtual applicants were satisfied with their understanding of the program’s culture. In parallel, they also found that only 38% of virtual applicants were happy with how they were able to present themselves to the program [22]. However, not all studies have reported similar results. One study that examined arthroplasty fellowship interviewees found that in-person and virtual interviewees rated similarly the amount of information obtained, the ability to have all of their answers about the program answered, and the effectiveness of conveying their personalities in their respective interview format [20]. Program directors also identify applicants’ interactions with faculty, interpersonal skills, overall interview performance and professionalism as the most important factors when ranking applicants, which cannot be effectively evaluated with the virtual interviews [2]. A previous study examining sports fellowship applicants agreed with these findings, with 58% of program directors feeling strongly that virtual interviews negatively impacted their personal connection with the fellowship interviewee [11–20]. When attempting to find
the applicant who is the best fit, this is an important consideration for the both the program and the interviewee.

The majority of virtual interviewees surveyed preferred in-person interviews. This is in agreement with one previous study examining orthopedic surgery residency program directors and applicants. This study found that 79% of program directors and 81% of candidates preferred to fully transition back to in-person interviews, despite the financial savings [12]. Another study examining orthopedic trauma fellowships found that 77% of applicants preferred in-person interviews [22]. One previous study examining pediatric orthopedic fellowship applicants found that only 18% of virtual interviewees wished to transition back to in-person interviews [19]. These differences may be secondary to different information that needs to be conveyed and personality types of prospective fellowship applicants across different subspecialties. Our study emphasizes that applicants value interpersonal relationships more than physical objects, such as institutional recruitment merchandise or gift cards for virtual interview-related meals. To some applicants, having more immersive experience interactions with future colleagues outweighs the associated loss of vacation time and money that comes with having in-person interviews.

However, if a virtual interview process continues to be the norm, fellowship programs can modify their process to help applicants gain the best understanding of their program. For example, applicants responded highly to having a fellow liaison and a current fellow panel virtual interview in addition to one-on-one faculty interviews. This gives applicants a great opportunity to ask more informal questions and allow them to gain a better understanding of the program’s culture and what their future life might look like. In addition, programs may want to consider providing the option for a site visit outside of the interview process, given that the majority of applicants who did not advocate for a fully in-person interview, preferred still having an option to voluntarily see the program in-person. This would allow these applicants to gain a better understanding of personal and family life in the city they are moving to and potentially interact with current fellows and/or staff to gain a better sense of their personalities. Applicants are likely to feel more comfortable and confident with their decisions after gaining a more holistic understanding of the program. Other fellowship programs, both orthopedic and other surgical, are advocating for similar hybrid-type formats in the future [11, 23, 24].

The limitations of this study are inherent to a single program’s interview experience. Therefore, there is a selection bias because the applicants were selected and completed the interview process before answering the survey. In addition, there were only three years of in-person interviewees and two years of virtual interviewees. As such, the results of this survey study may not be indicative to the applicants at other hand surgery fellowship programs. Another limitation is that the study-specific survey questions for in-person vs. virtual interviews were not uniform or standardized given the differences in the format of the interview processes. This limits the ability to make direct comparisons between the in-person and virtual interviewee cohorts. It would be beneficial if future studies created a survey that was applicable to both in-person, virtual, and hybrid interviews formats for direct comparisons.

Conclusions

In conclusion, this survey study illustrates that hand surgery fellowship applicants desire interpersonal interactions to better understand the culture of a prospective fellowship program, which can be difficult to convey with an all-virtual interview process. However, adding a fellow liaison or allowing the opportunity for applicants to attend an in-person site visit may improve the overall success of the virtual interview process. The results of this study shed light onto what applicants value in the interview process and how they critically appraise a fellowship program. This information can guide hand surgery fellowship programs as they continue to optimize the in-person, virtual, and possible hybrid interview format and refine the program’s recruitment resources to enable applicants to better understand the unique strengths of each program.

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References


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