

# Regional and Acute Pain Anesthesiology Post COVID-19 Assessment and Recommendations for Fellowship Web Based Platforms

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**Abstract:** In today's applicant landscape, the SARS-COV-2 pandemic has drastically altered the traditional model of in-person interviews shifting it to an online format often conducted by web-based applications. Fellowship programs and naturally fellowship program directors face a new challenge of standardizing information to be distributed to prospective fellowship applicants through American Society of Regional Anesthesia and Pain Medicine (ASRA) common application. Here we describe a set of 11 criteria recommended by other similar studies selected for evaluation of online program training platforms, where only 13.3% of the acute and regional pain fellowship program online platforms met 75% of the criteria with limited presence in areas of research, rotation schedules, list of fellows, alumni, and life in the area. Additional considerations pertaining to the types of procedures performed, evaluation, mentorship, academic involvement, and teaching should be undertaken by the programs.

**Keywords:** regional anesthesia, acute pain anesthesiology, graduate medical education, SARS-COV-2

## Introduction

Modern preoperative procedures often seek consultation from regional and acute pain management anesthesia teams. The regional procedures are a part of multimodal pain control and are often done with the assistance of an ultrasound. Anesthesiologists have an opportunity to sub-specialize or "super specialize" in a one-year fellowship that focuses on regional and acute pain management. To date, there are 90 fellowship programs available in the United States guided by the American Society of Regional Anesthesia and Pain Medicine (ASRA) common application.

In today's application process, the SARS-COV-2 pandemic has drastically altered the traditional model of in-person interviews shifting it to an online format often conducted by web-based applications. The World Wide Web is often an important first point of contact for prospective applicants to learn about the fellowship. Our objective of this paper is to investigate and assess the information provided on the program websites by the American Society of Regional Anesthesia and Pain Medicine common application websites in addition to up-to-date individual program websites.

Based on the available information, the prospective residents must make judgments and selections as to why they would consider the program to be a good fit for their point of training. To date, only one study highlighted the importance of assessing the program information via the World Wide Web for regional and acute pain management but did not discuss additional considerations that should be listed by the programs.<sup>1</sup> Multiple studies have noted the importance of accurate resources via online access to provide anesthesia applicants and fellowship applicants.<sup>1-4</sup> However, no re-assessments or recommendations have been made for the post SARS-COV-2 era when online platforms served as one of the few sources of information distribution. Our team utilized ASRA specific websites listings and found some outdated links. The team also utilized online search engines which lead to the most up-to-date program websites. We hope that the

post SARS-COV-2 evaluation and additional considerations help fellowship program directors to evaluate their program medium better as it pertains to the disbursement of information to prospective applicants.

## Methods

Investigators accessed the websites of 90 regional and acute pain fellowship websites provided by the American Society of Regional Anesthesia and Pain Medicine (ASRA) Fellowship directory database. A set of 11 criteria from prior assessments were selected for evaluation as listed in Table 1. Several incomplete pieces of information in ASRA were then further investigated via a direct fellowship institutional website. Due to limitations set forth by the SARS-COV-2 pandemic in terms of travel, we incorporated a “Life In The Area” criterion, as viewpoints and information about the location could be valuable for fellows who cannot visit the site themselves.

## Results

The American Society of Regional Anesthesia and Pain Medicine (ASRA) was used to access websites for the 90 programs in the United States and Canada by two separate investigators. The results are listed in Table 1. The number of criteria contained on these websites ranged from 0 to 11, for a mean number of 7.72 criteria listed. Twelve of the 90 programs (13.3%) contained 75% or more of the aforementioned information commonly available through the criteria. For the programs that have met such milestones, we suggest additional considerations for the online platforms to include numbers and types of regional procedures performed, types of evaluation and mentorship, and academic involvement and teaching (Table 2).

## Discussion

Regional and acute pain fellowship remains a competitive option for anesthesia trainees with a reported 148 ACGME positions available through the American Society of Regional Anesthesia and Pain Medicine (ASRA).<sup>5</sup> There remains a need to address the standard number of categorical resources available through program websites to the prospective applicants for virtual interviews. To date, such studies have been published in journals primarily covering surgical specialties.<sup>3,6</sup> “Anesthesiology fellowship website” and “Anesthesia Fellowship Websites” keyword searches on

**Table 1** Reports and Evaluation of the Number of Websites That Contained the Information Pertaining to Each Criterion

| Criteria                      | Number of Programs (n=90) |
|-------------------------------|---------------------------|
| Program Description           | 100%                      |
| Applicant Process Description | 100%                      |
| Program Director Contact      | 100%                      |
| Coordinator Contact           | 100%                      |
| Current Fellows               | 35.5%                     |
| Research                      | 56.7%                     |
| Rotation Schedule             | 25.5%                     |
| Faculty                       | 91.1%                     |
| Alumni                        | 13.3%                     |
| Salary                        | 82.2%                     |
| Life in the Area              | 16.7%                     |

**Table 2** Recommendations to Fellowship Programs About Additional Information to the Program Websites

|   |  |
|---|--|
| <i>Number and type of procedures</i>      | Disclosure of the number and type of cases current fellows participate in would assist prospective fellows in determining their potential exposure to regional and acute pain management. More exposure and procedures can develop transferable skills. Disclosure of a previous fellow's participation in addressing procedures, such as axillary blocks or femoral blocks, would signal to a prospective fellow that they would be exposed to procedures that provide these transferable skills. |
| <i>Types of evaluation and mentorship</i> | Disclosure of how a fellow is assigned to cases would assist in a prospective fellow's evaluation. Descriptions about a program's mentoring system as purely rotational, or a more single mentorship system would assist the fellow in determining if they are getting their desired balance of diversity of exposure and one-on-one time with mentors.  |
| <i>Academic involvement and teaching</i>  | Disclosure about a fellow's academic involvement in the program would be helpful. Regional and acute pain fellows trained within the last decade primarily work at both private and academic practices. Information about how a prospective fellow can both develop their own research and teaching experience would assist the prospective fellow in determining if the program prepares them for a future job in academics.  |

MEDLINE (PubMed) yield a total of 20 studies dating back only to 2020 with the main focus centered around patient education and program curriculum assessments.<sup>7-10</sup>

In our ASRA database assessment, the investigation demonstrated that the average number of criteria was similar to other similar published studies across specialties.<sup>1,3,6,11</sup> As a result, our assessment showed that many acute and regional pain programs have not yet modified their online platform to provide the following information of the 11 identified criteria reported in the literature for SARS-COV-2 pandemic (Table 1). In addition to the current listed criteria, it is well established that regional and acute pain anesthesia heavily relies on the number and types of procedures performed by the fellows, the quality of mentorship the fellow receives, and in turn the type of teaching they provide during their training. In Table 2 we suggest other important considerations for the online platforms containing procedures performed, types of evaluation and mentorship, and academic involvement. Largely, these changes should be added for applicants to evaluate the type of cases such as exposure to different types of anatomical blocks and approaches and naturally scholarly activity. In addition, due to the nature of a smaller number of applicants for fellowships as opposed to a residency applicant pool, and unreliable links available through the ASRA database, we advise that programs maintain up-to-date information, provide categories similar to the aforementioned criteria as a basis for their program description, and consider the addition of factors such as "Life in the Area" via virtual tours or have a page dedicated to understanding the culture and nature of the town or city.

Yet another consideration is that of social media outlets. Outlets such as Instagram, LinkedIn, and Facebook that are used by both fellowship and anesthesia residency programs can be used to distribute additional program information. Social media application features such as "Stories" can showcase core information discussed in this study in its separate tabs including a virtual tour of the campus on one of its thumbnails. In a recent study published in *Journal of Clinical Anesthesiology*, Feinstein et al investigated the medium as it pertains to anesthesia residency programs and specifically, fellowship program assessment including the field of acute pain and regional anesthesia has yet to be investigated.<sup>12</sup>

## Conclusion

Regional Anesthesia and Pain Medicine Fellowship Programs have a limited presence on their web-based platforms through the American Society of Regional Anesthesia and Pain Medicine (ASRA) in areas of research, rotation schedules, list of fellows, alumni, and life in the area. The fellowship programs should also aim to disclose important information including numbers and types of regional procedures performed, types of evaluation and mentorship, and academic involvement and teaching.

## Ethics and Consent Statements

The study did not require an Institutional Review Board (IRB) or ethics committee approval as an exemption because no work was conducted with any patient protected information, medical records, or human samples. The following study is a database review study available for access to the general public.

## Disclosure

The authors declare no competing interests in this work.

## References

1. Nguyen KT, Chen FR, Maracheril R, et al. Assessment of the accessibility and content of both ACGME accredited and nonaccredited regional anesthesiology and acute pain medicine fellowship websites. *JEPM*. 2021;23(2):E663. doi:10.46374/volxxiii\_issue1\_wei
2. Chu LF, Young CA, Zamora AK, et al. Self-reported information needs of anesthesia residency applicants and analysis of applicant-related web sites resources at 131 United States training programs. *Anesth Analg*. 2011;112(2):430–439. PMID: 21081766. doi:10.1213/ANE.0b013e3182027a94
3. Iftekhar N, Zhitny VP, Sombilon EV, Stile F. Evaluating the accessibility and content of plastic surgery training program websites. *Plast Reconstr Surg Glob Open*. 2020;8(9):e3115. PMID: 33133964; PMCID: PMC7544171. doi:10.1097/GOX.0000000000003115
4. Al-Ghofaily L, Feinman JW, Augoustides JG. Fellowship training in adult cardiothoracic anesthesiology: navigating the new educational landscape as a result of the coronavirus crisis. *J Cardiothorac Vasc Anesth*. 2020;34(8):2019–2021. doi:10.1053/j.jvca.2020.04.019
5. Elmofly D. How I do it: introducing procedural simulation into pain fellowship. *ASRA News*. 2021;46(2). doi:10.52211/asra050121.025
6. Vining CC, Eng OS, Hogg ME, et al. Virtual surgical fellowship recruitment during COVID-19 and its implications for resident/fellow recruitment in the future. *Ann Surg Oncol*. 2020;27(Suppl3):911–915. PMID: 32424589; PMCID: PMC7233675. doi:10.1245/s10434-020-08623-2
7. Tabatabai A, Greenwood JC, Lantry JH, et al. Seven-year follow-up of an online critical care curriculum. *ATS Sch*. 2021;2(2):224–235. PMID: 34409417; PMCID: PMC8362725. doi:10.34197/ats-scholar.2020-0114OC
8. Kumar G, Howard SK, Kou A, Kim TE, Butwick AJ, Mariano ER. Availability and readability of online patient education materials regarding regional anesthesia techniques for perioperative pain management. *Pain Med*. 2017;18(10):2027–2032. PMID: 27485090. doi:10.1093/pm/pnw179
9. Kumar G, Jaremko KM, Kou A, Howard SK, Harrison TK, Mariano ER. Quality of patient education materials on safe opioid management in the acute perioperative period: what do patients find online? *Pain Med*. 2020;21(1):171–175. PMID: 30657963. doi:10.1093/pm/pny296
10. Esmaeeli S, Seu M, Akin J, Nejatmahnoodaliloo P, Knezevic NN. Program directors research productivity and other factors of anesthesiology residency programs that relate to program Doximity ranking. *J Educ Perioper Med*. 2021;23(2):E662. PMID: 34104676; PMCID: PMC8168568. doi:10.46374/volxxiii\_issue2\_knezevic
11. Mukhdomi T, Woolley P, Mukhdomi J, et al. An evaluation of the online quality of content of United States accredited pain medicine fellowship training programs. *Anesth Pain Med*. 2021;11(3):e115981. PMID: 34540644; PMCID: PMC8438740. doi:10.5812/aapm.115981
12. Feinstein MM, Mercedes CR, Sison M, et al. anesthesiology: an assessment of social media usage by anesthesiology residency programs. *J Clin Anesth*. 2021;75:110502. PMID: 34600363. doi:10.1016/j.jclinane.2021.110502

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