



Review Article

Improve Anesthesiology Education and the Specialty by sharing the Personal Statements of Residency Applicants

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Abstract

Most applicants for United States anesthesiology residency training programs include a personal statement in their application. In these statements, residents describe their interests, strengths, and plans. Program faculty and specialty leaders do not generally have access to these statements and no public repository of personal statements or description of their current contents exists. After studying the personal statements of anesthesiology applicants accepted for an interview at our residency training program and characterizing their contents, we recommend wider availability of these statements. Nearly all applicants reported events that guided their philosophies and plans. Most describe how their unique backgrounds and skills should qualify them for successful practice. If resident personal statements were available to all program faculty, they could better understand the diverse backgrounds of residents, find suitable mentors, leverage their unique skills, help them with life stresses, and improve recruitment. When asked, residents willingly shared their statements. If resident personal statements were published anonymously, they could educate the public about the specialty.

Keywords: Personal statement; Anesthesiology attraction; Anesthesiology training; Anesthesiologist skill; Anesthesiologist background; Training goal; Residency application

Introduction

Most applicants for anesthesiology training in the United States submit through the Electronic Residency Application Service a Personal Statement (PS) of approximately 400 words that describes why anesthesiology interests them, their strengths, and their practice plans. Although Program Directors (PDs) and admission committee members evaluate these PSs when deciding

which applicants to invite for an interview, program faculty and anesthesiology leaders know little about what they contain because no publicly available repository of PSs exists.

A review of publications covering residency application PSs reveals considerable guidance on how applicants should craft their statements [1-4], but limited information about what submitted ones contain or how faculty can use them [5-8]. Based on our educational experience and a detailed review of recent resident personal statements, we propose that broadly sharing personal statements could improve resident training and that residents will support this.

In 2022 our anesthesiology residency program admissions committee selected 115 applicants for interviews. We studied the PSs of these applicants to see what they contained, how they differed from those of prior years, and how understanding these personal statements could improve resident training. We used the principles of qualitative research and thematic analysis to review them and offer some recommendations for improving the application process and resident training [9] All residents contacted agreed to share their PSs. The West Virginia Institutional Review Board exempted this qualitative review from research protocols because no patients were involved, no applicants publicly identified, and PSs only quoted with permission. We have substituted a capital letter for names in quoted PSs to preserve anonymity. Two of the authors (RJ, DS) of this commentary are former residency PDs who have observed PS trends over two decades, and one (TV) is a chief resident. A primary reference for identifying new PS themes was our review in 2011 [8].

What personal statements reveal

Overall, personal statements reveal excellent writing skills, interests beyond science, heroic views of anesthesiologists, broad perceptions of anesthesia practice, new attractions to the specialty, and motivating philosophies and goals. Some common and new PS themes are described and illustrated below.

Life stories: Applicants generally offer short vignettes of pertinent, non-scientific life experiences. Two examples of compelling life vignettes that drive personal philosophies and plans:

(I was the) Crew Leader for my Boy Scout troop's Philmont Expedition....As we began our ascent to the peak late afternoon, a dense fog rolled in and water cascaded from the sky. Sheer perseverance got us to the summit. As we went down the mountain, the temperature dipped into the mid 30's. By the time we got back to camp, half the crew was showing symptoms of hypothermia. Unfortunately, my tentmate had not properly secured his sleeping bag and it was half-soaked through, so I provided first aid, gave him my sleeping bag liner, and shivered through the night. As we continued the next morning, I contemplated that success isn't dictated by chance, but by action and the determination to succeed.

The sniper's bullet slammed into the ground, inches from my head...in the mountains of Afghanistan. My squad leader screamed at me to get my team behind cover, and I realized that we were under attack again...My team operated synergistically until our adversaries were defeated... I still stay in touch with some of those soldiers. Unfortunately, many of them are no longer living. A few were lost in subsequent battles or wars, but others lost their lives to PTSD-related alcohol abuse or suicide. This bothered me... I volunteered in hospice care and at a suicide hotline. I learned how to be a better listener and how to be there for others in their times of stress.

Some applicants use their life stories to describe difficulties overcome, such as parents divorcing, family poverty, or arriving alone in the United States. These non-scientific vignettes generally constitute a third of the PS and can help PDs and faculty understand resident stresses.

Anesthesia-like skills: Most applicants describe how their backgrounds, activities, and interests will help them succeed in anesthesiology. These 2022 applicants commonly cited as strengths their participation in sports and gourmet cooking.

My experiences with anesthesiology parallel my past experiences while playing tennis. Success on the court demanded hard work, resilience, and attention to detail while working with my hands – a process that I thoroughly enjoyed. Anesthesiology provides a similar opportunity to work with my hands in a high-intensity, fast-paced learning environment that requires attention to detail (and) problem-solving.

I found anesthesiology to be like the process of cooking. Besides the concept "mise en place", another similarity is that one must always be thinking ahead in case something goes wrong. Many things can go wrong in the kitchen, but dishes can usually be salvaged if you know what to do. Knowing acidity can cut sweetness can be helpful if too much sugar is added...I found this mindset particularly helpful when intubating a patient with a difficult airway. I visualized the epiglottis but could not see the arytenoids or vocal cords...I switched the Macintosh blade to a Miller blade.

Applicants cited many other personal interests that they feel mimic or support the skills needed in anesthesiology. These are broader than the two most cited in 2011 - flying and research participation [8]. They include such diverse activities as lifeguarding, backpacking, crocheting, watchmaking, equestrianism, statistical analysis, restaurant management, engineering, and architectural design. Three examples:

The more I learn about anesthesiology, the more it reminds me of watchmaking...a hobby of mine for years. What makes the two professions so similar is the detailed understanding of mechanisms—in one case physiologic, and in the other mechanical. While the human body is admittedly more complex, manual dexterity is integral to proficiency in both fields. Assembling a watch with screws the size of sesame seeds requires the deft hands also needed for successful central line placement or fiberoptic intubation.

I am interested in anesthesia, but what predominately draws me to the field is how it parallels one of my main passions, statistics. Much like how I tackle cleaning a data set, I enjoy the careful and thoughtful planning of an anesthetic...A parallel I have seen between anesthesia and data analysis is that both require a degree of adaptability.

Anesthesia ... is an organic application of concepts that I learned in engineering, utilizing devices such as infusion pumps and gas analyzers which operate based on basic principles of engineering. ... As an engineer I also have extensive knowledge of kinetics, which relates to anesthesia in the elimination and distribution of drugs during an infusion.

Attraction to anesthesia: Previously most applicants described their primary attractions to anesthesiology as a personal or family anesthetic, applying physiologic and pharmacologic principles learned during their first two years of medical school, or enjoyment of performing procedures, such as endotracheal intubations. Applicants still mention these, but two new attractions are popular now – leading a multidisciplinary care team and relieving the pain of a laboring parturient. Approximately half of the applicants mentioned teamwork in their statements. Many applicants describe how a labor anesthetic they witnessed, often during an obstetric rotation, attracted them to anesthesiology. Four illustrative examples:

He bolused the epidural, reassured A that her pain will improve, and comforted her worried husband, all in a matter of seconds... Later, A was smiling, pain-free, and holding her healthy newborn son. These crucial moments made all the difference for A and her family and showed me the art behind the practice of an anesthesiologist.

I embrace and appreciate the value of teamwork....I have learned to appreciate the dynamic between leadership and followership, understand the importance of organizational structure and strategy, and most importantly, learned how to deal with crises in ways that are adaptive and sustainable.

I aspire to train in anesthesiology as it is a field that requires great procedural skill but also compassion and teamwork. A compelling aspect of the field is the opportunity to provide care to patients of all ages with a wide range of complex cases.

My training here in the US also reinforced the importance of a multidisciplinary team approach, patient safety and quality assessment in the operating room.

Positive descriptions of anesthesiologists: We note an evolution from applicants describing anesthesiologists as knowledgeable proceduralists to life-saving heroes.

“This is Ms. S; she is here for a pericardial window with Dr. C”, the circulating nurse announced. My attending leaned towards me and whispered, “Our plan is going to be general anesthesia, but given her hemodynamic instability, it’s best we insert an arterial line so we can monitor her blood pressure beat-by-beat.” ... “Don’t worry, Ms. S, we’re going to take good care of you!” My attending began pushing ketamine, stimulating Ms. S’s cardiac function...I was in awe watching my attending; she was truly Ms. S’s lifeline. I

had been considering a career in anesthesia. Still, this experience solidified my decision as I confirmed anesthesiology perfectly embodies everything I have wanted in my career as a physician.

During my surgical rotation...a patient (arrived) with a ruptured AAA...The patient survived the operation but in transit her status became tenuous. By the time she got to her ICU room her abdomen was distended, and her blood pressure and heart rate were falling. The anesthesiologist from the case remained at the bedside while the patient’s family came to her room. It was the anesthesiologist who initiated the conversation with them that the patient was not doing well after surgery and would probably not survive...His compassion and candor gave the patient’s family the space to allow her to pass with dignity. It was this day I learned anesthesia is not only treating and managing the critically ill patient, but also the ability to have difficult conversations with kindness and respect for the listener. This exemplifies how I want to practice medicine.

Goals: Many applicants hope to use their anesthesiology skills to help patients recover from illnesses, improve global healthcare, and serve communities. Many described their involvement with research and a desire for academic practice because they like discovery and learning. Many applicants are interested in anesthesia sub-specialties. Another common goal was learning how to lead a care team. Many mentioned promoting workforce diversity and inclusion. Some touted their uniqueness as strengths, and some international graduates their experience outside the United States. These comments were uncommon in previous years. Four examples:

I hope to match into a program that will encourage kindness, professionalism, and a team-centered approach to patient care between co-residents, nurse anesthetists and surgeons.

I hope to work as a trusted guide to patients, surgeons, and every perioperative team member....I strive to be a physician who vitalizes the team environment.

I will contribute a solid work ethic, a keen eye for detail, and a team-based approach in residency. I plan to promote a healthy, inclusive work environment while giving special attention to my colleagues’ well-being... I also intend to continue my efforts to increase access to healthcare for underserved populations, whether they are abroad or in rural areas.

I now seek an anesthesiology residency where I will be trained to provide safe anesthesia and perioperative medicine. I want to help healthcare teams develop evidence-based treatment plans while providing accessible medical care for all patients.

We used the information and themes contained in our reviewed PSs to propose improvements to the application process, resident education, and entry into practice. See (Table 1) for a summary of recommendations.

Recognize the many non-scientific interests of applicants and match applicants with similarly interested faculty and senior residents.
Address the life difficulties that applicants describe in their personal statements, e.g. family poverty or divorce, to improve their well-being.
Study the similarities applicants perceive between their personal activities and successful anesthesia practice for ways to enhance their education, care delivery, and resilience.
Find opportunities for residents to share their interests and skills with colleagues.
Find opportunities for residents to lead care teams, participate in research, and learn a sub-specialty.
Teach residents leadership and team management.
Include reports of extraordinary anesthesia care in program recruitment information.
Recognize the compassion and humanity of entering residents and find ways to support their altruism and public service throughout training and into practice.
Ask applicants if their personal statements can be shared after the match.

Table 1: Recommendations to improve resident recruitment and training.

Use applicant personal statements to improve resident education and understanding

Making PSs more widely available after applicants are accepted into a training program should help all involved with resident education. We recommend asking applicants if they agree to make their statements available after the match to program faculty and published anonymously in a public repository. In our limited experience, applicants will approve both. Also, to evaluate PSs better, we recommend asking applicants what help they had in writing their statements, e.g. editing help from mentors, writing help from contractors, or composing with artificial intelligence. Broader use of these services and techniques could improve anesthesiologist communications.

Most applicants have rotated through surgical suites or shadowed anesthesiologists. During these exposures to anesthesia care, applicants are awed by the complexity of the specialty, the importance of details, the teamwork involved, and the need for contingency plans. These experiences inform their perceptions of needed anesthesia skills and are insightful to read. The American Society of Anesthesiologists advises applicants, “To be successful in anesthesiology... you must excel academically, (be) detailed-oriented, skillful at procedures, calm in stressful situations, and warm and caring to ease patient’s anxiety” [10]. Applicants commonly relate how their characteristics coincide with these requirements. Non-technical skills of anesthesiologists are known to improve anesthetic performance [11]. Faculty can learn the diverse skills of their residents from their PSs and use them to improve their performance. This could involve matching applicants with similarly interested faculty or residents sharing their non-anesthesia activities. Organizing a session at a national

meeting where residents and junior faculty share their perceptions of similarities between anesthesiology care and a non-technical skill might prove enlightening.

Many applicants want to lead care teams, participate in research, and learn a sub-specialty. PDs can enhance recruitment and resident satisfaction by including these activities in their program descriptions and rotations. This might include opportunities to coordinate a complex surgical schedule or direct a care team that includes physicians, nurses, pharmacists, technicians, and aides. Training programs can enhance their attraction for medical students by scheduling them in a labor suite because many students find obstetric anesthesia meaningful. Faculty anesthesiologists should remember that medical students are observing them even when on surgical and obstetric services, and to include students in care discussions, when possible.

To attract applicants PDs can add reports of extraordinary anesthetics to their program descriptions. Students like these reports. PDs can also forward interesting PSs to anesthesiology society leaders, who seek stories to share publicly. Applicants and residents may have the best observations to educate the public about anesthesiology. Finally, we recommend that faculty recognize the compassion and humanity of entering residents and find ways to support their altruism throughout their training.

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