



Perspective

The changing face of allergy/immunology fellowship programs

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Introduction

Fellowship training in allergy/immunology (A/I) has evolved through the decades. Up until a few years ago, the application process was much simpler, with just a submission of a completed application form and letter of interest and that all-important interview. Since then, the requirements and documentation necessary to start and successfully complete an A/I fellowship have stockpiled. Are these changes really molding fellows to be better clinicians, researchers, and clinician-educators, or is this just a more laborious way of documenting their training because the medical environment has been increasingly susceptible to litigious investigation, and because of demands made by the public, the Institute of Medicine, and the federal government? The changes have been made across the board for the different specialties and subspecialties in medicine, and it has been particularly challenging to keep up with accreditation.

In the last 5 to 10 years, some of the changes have included the application process, the level of supervision and necessary documentation needed for evaluation of the fellows, and advances in technology and the process of adult learning.

The Application Process

In the past, each program had its own application process. There was no standard or set time for applications or interviews. Applicants to A/I fellowship programs were able to focus on their own interests, whether they were clinical care, research, the program's reputation, and/or location. After the interview, an offer would be made, and the applicant would have a few days to decide. In certain circumstances, the applicant would be waiting to hear from other programs. The training programs also may have had to go "down their list" if an applicant was waiting to hear from another program or if an applicant accepted a position and then called back to ask to rescind the acceptance to accept another offer. From either perspective, it was not an ideal situation.

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That individualized system for fellowship program selection for the most part is nonexistent today. In 2006, A/I fellowship program directors (PDs) started discussions on whether to join the National Residency Matching Program (NRMP), which they thought might alleviate some of the disadvantages of the old system. According to the NRMP website, the reason to participate in the matching program is that it allows "applicants and programs to consider all their options and to select their most desired position(s) or individual(s) in a safe, confidential setting." Furthermore, the "NRMP establishes a uniform schedule for applicants and institutions to make a selection without pressure."¹ In light of these resources and advantages, after much discussion, PDs ultimately decided to participate in the NRMP. However, the disadvantage is that neither the program nor the candidate is assured that they will match with their first choice, or at worst end up with a match that is not satisfactory to either the applicant or the program. These risks were believed to be preferred to the problems that occurred in the old system.

December 2007 was the first time that internal medicine and pediatric residents or graduated physicians applied through the Electronic Residency Application System to fellowship programs in the United States and Canada for positions that started in July 2009. From last year's match, we know that the applicants apply to a mean of 20 programs for US medical graduates and 32 programs for international medical graduates. The programs receive a mean of 40 applications from US medical graduates and 24 applications from international medical graduates.⁵ On average, the training program's have 1 to 2 positions per year.

Since the initial match, A/I programs have now gone through the NRMP cycle 5 times. This past year, the start date for the application process also changed. Applications are now downloaded on July 1 for positions starting 12 months later, compared with previously matching the applicants 18 months before the fellowship start. Having a later match date allowed A/I to be more synchronized with the internal medicine subspecialty match and gave residents more time to decide whether an A/I fellowship is right for them. The pediatric subspecialty match also is contemplating this change.

The A/I Curriculum

In the past, whether a fellow was successful in completing his or her training depended on the PD's assessment of the fellow's ability

to function as an independent allergist. Because the training faculty, and ultimately the PD, is the one to assess whether the fellow has progressed appropriately, the responsibility of whether the fellow had the actual ability to practice competently was the PD's judgment call. Evaluations and assessments were performed, maybe using a system in place at the academic center and certainly not always in a standard fashion.

To try and make the fellowship experience more standardized, metrics for the quality of education and competency were added as another requirement for fellows. In 1999, the Accreditation Council for Graduate Medical Education (ACGME) endorsed the 6 core competencies, which have become an integral part of the training and assessment of our residents and fellows: medical knowledge, patient care, interpersonal and communication skills, professionalism, practice-based learning and improvement, and systems-based practice. Program directors and faculty evaluate the fellows on whether they have attained a specific level of competency in these areas and whether appropriate progression occurs through their training. On graduation the fellow must be able to show competency in these areas and independently provide care, or as the guidelines state: "demonstrate sufficient competence to practice allergy and immunology independently without direct supervision."² As a result, faculty physicians working in academic institutions have all become familiar with these competencies because they have become incorporated at the medical school level; in fact, all allergists are now aware of them because they have been incorporated into the American Board of Allergy and Immunology maintenance of certification program.

Before the ACGME instituted the electronic case log system via WebADS (ACGME's web-based accreditation data system) in 2000, there was no uniform method for documenting patient diagnoses and conditions or procedures performed during fellowship. All this prior documentation depended entirely on the fellows and the PDs themselves. Documenting cases takes time, and the fellows may not take the time to document the case information or numbers accurately because of other priorities. The PDs still needed to constantly remind the fellows to input their patient information into WebADS in a timely manner. The PD could see whether the fellow's case logs were within the national norms, but there was no specific number that would signify whether the fellow was able to practice independently. There were no minimum numbers of specific cases or procedures, but the important part was whether the training faculty and PD believed that the fellow had handled an appropriate number of cases or procedures to be deemed competent. This system could still lead to large disparities in the training fellows received.

An attempt has now been made to try and make these experiences more standardized. In the most recent proposed changes to the ACGME program requirements (scheduled to start in July 2014), the ACGME and our A/I Residency Review Committee are planning to incorporate updated specific program requirements for A/I that would involve a minimum number of diagnoses and procedures that are important for a practicing allergist/immunologist. There is a concern that if there is a minimum number that certain rare conditions or procedures may not be adequately handled by a fellow and would thus limit fellows from successfully graduating. However, our A/I Residency Review Committee is aware of this and plans to use the lower 10th percentile nationally from the prior case logs to set these minimums. In addition, there is talk of allowing other innovative ways of learning about these rare conditions to count toward evidence of competency.

Accreditation

Probably all allergists remember the dreaded site visit, which was the key component to the accreditation process in the old

system. In preparation for the site visit a program information form was filed, which documented the curriculum, the faculty, and compliance of the program with ACGME program requirements. If there were any questions on the program or if serious citations were given, the cycle length of the approval could be less than the coveted 5 years. Between site visits, the program would be responsible for all appropriate documentation. This approach meant that most programs had a flurry of activity around the time of the reaccreditation process but then were not necessarily adherent to requirements in the outlying years of the accreditation cycle, other than the midcycle internal review performed through the institution's graduate medical education officials.

To attempt to reduce the burden associated with the site visits and to provide a more consistent oversight of the quality of the fellowship programs, a new accreditation process, the Next Accreditation System (NAS), will be implemented for A/I fellowship programs in July 2014. The NAS allows for less frequent site visits (optimal accreditation would carry a cycle of 10 years). This reduced frequency of site visits should reduce some of the burden on the PDs; however, the tradeoff is that documentation of the fellows' progress (ie, diagnoses and case logs), the program's curriculum, and board pass rates, among other items, will be reported annually to ACGME. If after review of these items, the ACGME identifies a concern, there will be an earlier site visit. The expectation is that much greater oversight responsibility will fall on the graduate medical education committee of the institution. Thus, it is hoped that the NAS will achieve both aims—reduce the burden on PDs and ensure consistent quality in the fellowship training programs.³

Further, the evaluation of fellows will be changing, and the 9-point scale (which seems to breed grade inflation) will be retired and replaced by the Milestones Project. The Milestones Project uses narrative terms with 5 levels to describe the fellow's progress within the context of the general competencies. For example, level 1 is a new learner, whereas level 5 is a master/expert. The fellow's progress will be assessed by core faculty who have spent a minimum amount of time (15 hours per week averaged for 1 year) with the fellow and can accurately assess the fellow's progress. In addition, the Milestones Project will need to involve faculty development, so the faculty are comfortable in accurate assessment of the fellows and can use this new language, and likely will require more documentation. The primary specialties, such as internal medicine and pediatrics, started using the Milestones Project on July 1, 2013.⁴

Changes in Learning

The process of adult learning must also be taken into consideration when creating a fellowship curriculum. In the 1970s, Malcolm Knowles, a theorist and practitioner of adult learning, helped identify the 6 principles of adult learning: adults are internally motivated and self-directed, they bring life experiences and knowledge to learning experiences, and they are goal oriented, relevancy oriented, practical, and like to be respected.⁶ These principles are important, in particular, because resources and technology have changed through the years. The PD Reading List has been an important part of the fellowship program's curriculum and consists of articles (landmark, review, and cutting edge) that PDs themselves would review and update in a 3-year cycle. In the last few years, technology has advanced to include the website UpToDate, how to videos on the Internet, webinars, the Conferences Online for Allergy series (hosted by the A/I program at Children's Hospital in Kansas City and sponsored by American College of Allergy, Asthma, and Immunology), eBooks, and other forms of real-time learning. As such, the PD Reading List has not been as well used as it had in the past. In fact after much discussion, the Core Curriculum Education and Residency Review Committee

voted to change the reading list from its current format. Although the new format is still in the process of being decided, it is important to realize that today fellows and other house staff much prefer to use resources such as UpToDate to answer questions in real time, supplementing their learning later by reading the primary articles.

Conclusion

As we have tried to document, the A/I training programs are constantly evolving to meet the needs of each generation of allergist fellows. The continued motion has been to try and develop a consistent high-quality education system that ensures that newly graduated fellows are ready to start their independent allergy careers. The changes have incorporated the use of the NRMP for the application process, the use of the general competencies to better document evaluation of the fellows and their abilities, and new technology and electronic resources that can be used to address adult learning processes. Although many of these changes have increased the amount of documentation needed for fellowship training and the amount of administrative time needed by the PDs in an era of health care driven by clinical productivity, they also have made the process more consistent across all programs. In addition, the hope of a 10-year accreditation cycle should help reduce the burden placed on PDs. These changes all have helped to prepare our fellowship programs for the 21st century—a time

when fellows no longer want to learn from didactic sessions only but want more interactive learning environments.

In conclusion, fellowship programs today are much different from when they first started. The changes and requirements that have been incorporated through the years have focused on better documentation of competency, better tools and technology, and the same ultimate goal of training an expert in A/I. Clearly, the A/I fellowships are responsive to the changing educational environment, but the question remains—are these changes really leading to better trained and prepared allergists? Only time will tell.

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