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Characteristics of Academic Anesthesiologist's Elected to an Institutional Academy of Master Educators

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Characteristics of Academic Anesthesiologist's Elected to an Institutional Academy of Master Educators

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Introduction

Undergraduate medical student and post-graduate resident and fellow education^{1, 2} is a fundamental responsibility of academic faculty anesthesiologists. Their teaching and mentoring skills are recognized as essential attributes for professional success of their trainees³. Consequently, there has been increased emphasis and appreciation of anesthesiologists' aspirations for educational excellence rather than satisfactory teaching competence.

Some academic departments have developed innovative strategies to evaluate and celebrate educational distinction, as have professional anesthesiology organizations such as the Society for Education in Anesthesia (SEA) and the American Society of Anesthesiologists (ASA), most recently with a combined SEA-ASA educator award. Many medical schools and academic institutions have similarly established honorific master teacher or master educator programs with nomination for clinical and research-based faculty.

Our anesthesiology department has had success in achieving faculty inductees to the McGovern Medical School Academy of Master Educators (AME), which was founded in 2009. The AME was established to honor outstanding basic and clinical science educators and to encourage institutional and faculty activities related to the missions of undergraduate and graduate medical education. Criteria for nomination and selection are well described, including active education of future physicians and biomedical scientists, as well as evidence of educational knowledge, skill, professional development, curriculum innovation, and scholarship.

With no published literature that we are aware of to describe anesthesiologist success in such academies, our goal was to evaluate and describe the characteristics of our departmental inductees

into the AME. This could serve as a useful template to encourage and support colleagues within the department, school and across other institutions who may be considering such an application. If identifiable, key components of successful clinical educators in a clinically active department would be described.

Methods

The McGovern AME defines academic contributions in 5 broad portfolios (<https://med.uth.edu/oep/academy-of-master-educators-2/membership/>):

- Teaching and Assessment (all formats, including professional development)
- Mentoring and Advising (roles, outcomes)
- Evidence of Enduring Materials
- Educational Leadership
- Educational Scholarship

Recognizing that full-time clinical anesthesiologists may have individual strengths but lack exemplary performance in all categories, this observational assessment was undertaken with the agreement and consent of all anesthesiology faculty AME inductees who remain in the department. Data was entered by each faculty member reflecting their characteristics and achievements at the time of AME induction and aggregate data is presented in a de-identified manner. Descriptive statistics were used to aggregate responses. Given voluntary participation and use of aggregated deidentified data, the institution IRB approved exempt status with waiver of consent and HIPAA. Inductees are recognized on the publically accessible AME website, so membership is not protected information (<https://med.uth.edu/oep/academy-of-master-educators-2/members/>). The observational cohort and description met all elements of the STROBE checklist.

Results

Over 10 years, 99 medical school faculty have been inducted into the AME after the initial 9 founding members. Thirteen (13.1 % of all inductees) anesthesiology faculty have achieved membership, of which 10 remain as active faculty members and serve as the cohort for this report (10.1% of total inductees). This proportion of anesthesiology faculty inductees exceeds anticipated departmental representation compared to total medical school faculty size (6.2 % [98/1,584], 2020 data). All anesthesiology inductees were successful at the first attempt. This compares favorably to mean success rate for all nominees through the two-step peer review process (60%, personal communication, GCR, June 21).

Of the 10 anesthesiology inductees, 5 are each male and female, mean duration of faculty employment at the time of induction was 7.7 ± 4.2 years, 4 were at assistant professor rank, 5 at associate professor and 1 professor. Four recent inductees were at ≤ 5 years of faculty service at the time of induction.

1. Teaching and assessment.

All 10 are active in didactic (mean 11.2 ± 11.7 lectures/year) and bedside teaching for medical students, residents and fellows. Five are active in department objective structured clinical examinations (OSCE) in preparation for the American Board of Anesthesiology (ABA) applied examination. Three members regularly provide undergraduate medical student didactic and problem-based learning teaching sessions, 1 is a didactic teaching leader in an anesthesiology assistant (AA) training program and 1 leads a trauma emergency medical technician (EMT) training program. Three members currently serve as examiners for the American Board of Anesthesiology (ABA) applied examination and 8 regularly provide practice oral examinations either individually or for groups of fellows, including virtual sessions for graduates and fellows who have re-located since graduation.

For continuing medical peer education, 5 members regularly participate in visiting lectureships, workshops, training sessions, and presentations at national meetings. One member co-leads the institution's local ABA certified Maintenance of Certification (MOCA) program for anesthesiologists.

2. Teaching Awards

All members have received recognition, including the competitive medical school dean's teaching excellence award for which only 15% of the faculty body is eligible (mean 6.9 ± 4 awards/ faculty). Eight have received the annual teaching recognition award from the graduating senior resident class, which is named in honor of one of the cohort. Nine have received a subspecialty teaching award at that graduation ceremony. One received an additional medical school teaching award, 1 received state teaching recognition within the parent institution's academy of health science educators and 1 received the Texas Medical Association's academic excellence award in a program which ceased in 2016.

3. Mentorship

All 10 members actively participate in mentorship, exceeding anticipated faculty involvement, as program and associate program directors. With a large medical school (240 students/year), opportunities for mentoring abound and 6 serve as master advisors for 4th year students who are following anesthesiology as a career. The large residency program (27 residents/year) also affords numerous mentoring roles which is not reflected in formal accounting here. For specific mentoring roles that exceed the aforementioned, number of faculty participating and mean # students/year are listed through the entire learner spectrum:

- Pre-medical students – 4 faculty (3/year)
- Medical students (clinical, research) – 8 faculty (7.25/year)
- Residents – 8 faculty (4.25/year)
- Fellows – 6 faculty (5.5/year)

- AA students, student nurse anesthetists, EMTs – 1 faculty each (4/year)
- Professional trainees/visitors – 2 faculty (10.5/year)
- Faculty colleagues – 5 faculty (numerous since mentorship is intermittent as requested)

Although mentoring success was difficult to quantify, the large number of mentees, repeated requests for inductee mentors, successful mentee medical school, residency, fellowship and job placements, and success of meeting presentations and manuscript publications with mentees suggests that enthusiastic mentorship is a key characteristic of the group.

4. Educational leadership

All inductees have substantial evidence of educational service and leadership. Within the department, all served on resident or fellow educational committees (2.9 ± 1.4 / faculty), 6 had or currently serve as resident assistant program director, 1 as resident program director, 4 as fellowship assistant program, educational or program director, 6 had or currently serve as educational director for subspecialty rotations, 2 served as medical student clerkship director and 1 had completed service as vice-chair of education.

Seven members served on medical school committees (curriculum, student evaluation, professionalism, ethics, and wellness) related to education. Four serve on state professional society educational committees with the Texas Society of Anesthesiologists. National presence is reflected with ABA examiner and MOCA simulation course service as described above, 3 serve on ASA educational related committees and 1 in another national anesthesia society educational committee.

5. Enduring material

Seven members have established and/or implemented enduring or innovative curricular strategies related to education. This includes expanded simulation training and scenarios for medical students, AA

students and residents. Five were essential in development of a focused didactic program for each resident class, targeted to the different stages of the ABA examination system. Six were integral in standardized oral and OSCE preparation events for senior residents and fellows, and as mentioned, the majority participate in informal oral examination practice and preparation.

Seven developed subspecialty educational tools, curricula or examinations to formalize education during those clinical rotations. Three developed written and video materials for non-physician colleagues related to education of AA students, EMTs, anesthesia technicians and floor nurses who take care of patients on the acute pain medicine service. One wrote 2 anesthesiology board examination review books.

6. Scholarship

For educational scholarship, all members had a robust portfolio of educational items as well as inclusion of learners/mentees on meeting/abstract presentation and peer-reviewed manuscripts. Both categories serve as markers of successful educational effort, mentoring and incorporation of learners in presentations and publications. Abstract and meeting presentations at the time of induction were 13 ± 9.5 /faculty member (median 9.5) and peer-reviewed manuscripts were 6.5 ± 5.1 /faculty member (median 5.0). As anticipated, several inductees are co-authors on educationally relevant submissions reflecting the collective group effort and commitment to education and teaching.

Discussion

Undergraduate and graduate medical education is a key mission of academic departments, particularly in clinical specialties such as anesthesiology where much of the teaching is bedside in the operating room, clinic or intensive care unit^{1,2}. Development of successful clinician-educators is imperative with the implementation of required milestone and core competency-based education and

the associated objective and certification markers of success for both learners and the department. Some academic departments provide opportunities for faculty to assess and improve their teaching skills with expert presentations, interactive events and effective feedback^{4,5}. However, this may not fully capture the breadth of the theory and application of educational methodology³. In the absence of formal training, it is likely that academic faculty who are committed to education have developed these skills based on innate abilities and personality traits, training and immersion, which support continued educational or success.

In this observational study, we describe educational characteristics of 10 current faculty members who achieved induction into the medical school AME over the 11 years since inception. Notable characteristics of the inductees include:

- Time served and faculty rank are not limitations, as documentation and recognition of effective teaching and innovation is possible at assistant professor rank and within 5 years of service
- Substantial activity in department, medical school and affiliated health science didactic programs. Activity in state and national society educational roles and workshop/meeting events is evident
- Repeated teaching awards and recognition are a universal finding in this cohort
- Active mentoring within a range of learners is an essential component, exceeding usual faculty roles, e.g., as program directors, and supports commitment of the inductees to education
- Active leadership within the educational structure of the department at medical student, resident or fellow level and in the medical school, is a constant feature
- Peer-education at local, state and national meetings is frequent
- Documentation of scholarship, for either educational-specific topics and/or successful inclusion of learners as co-authors in abstract and manuscript preparation is a distinctive characteristic

These findings may be of value to colleagues in clinically dominant academic departments and schools who are contemplating or investigating teaching and educational achievements at the institutional or system level. Based on these findings and our experience, recommendations to anesthesiology educators aspiring for wider recognition include:

1. Maintain an updated educational portfolio, including didactic and informal teaching, awards, presentations and educational training events
2. Volunteer for service on medical school educational committees of interest or relevance
3. Seek opportunities to enhance teaching, evaluation and mentoring skills, e.g., partnering with medical/allied health school educational programs, for example in workshops, educational technology training and access to health educator fellowship or physician educator certificate programs. For a clinical anesthesiologist, creating time for these will require flexibility, commitment and support from the department
4. Follow and participate in local, regional or state institution academy events, including journal club discussions, workshops, peer review training and local and statewide conferences
5. Seek educational training opportunities at state and national meetings which may be within the state component society, the ASA or educational specific societies such as SEA
6. Seek educational roles within the department (e.g., assisting with lecture series, OSCE's, medical student clerkship, anesthesia student associations) which will be a foundation for future leadership opportunities
7. Enhance educational scholarship with mentoring and inclusion of learners on scientific data or case presentations. Consider use of survey tools, before/after evaluations of innovative or curricular changes that you initiate and description of such activities. These may be submitted at local/regional academy events or specialty/national society events which will have a dedicated educational component

Conclusion

Formal recognition of the educational success of academic anesthesiologists is possible within a medical school academy of master educators. We describe common characteristics and achievements of a cohort of academy inductees in a large academic department. This may be of value and serve as a resource for others considering such an application.

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