JEPM, Vol 9, No. II, July-Dec 2007

Anesthesia Residents Have a Negative Opinion on Proposed ACGME Changes to the Curriculum: A Pilot Study

Michael C. Wajda[*], M.D., Mitchell Y. Lee, M.D., Daniel O'Neill, M.D., Maki Morimoto, M.D., Lisa Tepfenhardt, M.D., Jung Kim, M.D.[†]

[*]Residency Director
[†]Clinical Director

Corresponding Author:

Michael C. Wajda, MD
NYU Medical Center
NYU School of Medicine & NYU Hospitals Center
550 First Avenue, Room IRM 605
New York, NY 10016
Office: (212) 263-5072
Fax: (212) 263-0664
Email: wajdam01@popmail.med.nyu.edu

Abstract

Anesthesia Residents Have a Negative Opinion on Proposed ACGME Changes to the Curriculum

Michael Wajda, M.D., Mitchell Lee, M.D., Daniel O'Neill, M.D., Maki Morimoto, M.D., Lisa Tepfenhardt, M.D., Jung Kim, M.D.

Background: The ACGME has proposed changes to the curriculum for anesthesia residents. These changes include increasing critical care from 2 to 4 months, pain from 1 to 3 months, and obstetrics, pediatric, neuroanesthesia, and cardio thoracic anesthesia from 1 to 2 months. In addition, they have included a preoperative clinic for 1 month.

Methods: With IRB approval, a survey of the anesthesia residents at New York University was distributed. The residents questioned ranged from the CA-1 to the Ca-3 class. The survey questioned the residents on their current curriculum and the proposed changes.

Results: 22 Residents completed the questionnaire. Seventy-seven percent of the residents polled felt they had enough experience in critical care with the current requirements and 82% did not want the increase to 4 months ($p=0.007$). Seventy-three percent of the residents responded that their pain management exposure was sufficient and 82% did not want it increased ($p=0.011$). Overwhelmingly, 82% of those polled felt an entire month of preoperative clinic was not necessary. Seventy-three percent of those residents polled would not be comfortable on subspecialty rotations as early as August of their CA-1 year. 82% felt that too much of their training would be spent outside of the operating room, and the majority (59%) thought more residents would be on each rotation. Moreover, 55% think that the proposed changes will adversely affect residents in training.

Discussion: The results of this survey demonstrate that most residents at New York University do not think the current curriculum should change. The majority opinion is that it will negative impact their education.

Introduction

The ACGME had proposed changes to the anesthesia resident's curriculum that were approved and will go into effect July of 2008. The changes in the curriculum include a 2-month rotation rather than a 1-month rotation in each of the following: obstetrical anesthesia, pediatric anesthesia, neuroanesthesia, and cardio thoracic anesthesia. The critical care requirement has increased to 4 months with 2 months allowed during their PGY-1 year. The pain rotation requirement has increased from 1 month to 3 months with requirements in acute pain, chronic pain and a regional experience in pain medicine. There is also an added new requirement for a 1-month rotation in preoperative medicine.

Given the current ACGME focus on self reflection and self evaluation, a validated survey tool to obtain reliable resident opinion about their education and training would be useful to program directors in structuring individualized learning plans. This pilot study was designed to survey anesthesia residents' opinions on proposed changes to established training curricula as a first step in developing a validated survey tool.

Methods

With IRB approval, a survey was given to the anesthesia residents at New York University School of Medicine. The survey was not mandatory and was de-identified to protect the privacy of all residents. The CA-1, CA-2 and CA-3 classes (total =56) all received the survey, and 22 responses were received (response rate = 39 %). Questions about the current curriculum as well as the revised curriculum were asked. The changes in the duration of the critical care experience, as well as the pain management were addressed. The question of a whole month solely devoted to preoperative medicine and evaluation was also in the survey. The residents' feelings about starting their subspecialty rotations at an earlier time in their anesthesia career as well as the increased number of residents on each rotation were also probed. The length of time spent out of the

operating room over the three years of anesthesia training was addressed in the survey, questioning the resident's opinion on this matter and if it would detract from their training. In addition, the residents were questioned about their future experience with laryngeal mask insertion, conscious sedation, CA-3 elective time, regional anesthesia and basic general anesthesia when the new requirements are enacted. The scale for the residents was, 1-definitely not, 2-probably not, 3-maybe, 4-probably yes, and 5-definitely yes. Responses 1 and 2 were considered negative and responses 4 and 5 were considered positive.

Results

22 of the 56 anesthesia residents (response rate = 39%) at NYU School of Medicine completed the survey. With the current ACGME requirements 17/22 (77%) of the residents polled felt their critical care and intensive care unit training was adequate. Currently their requirement for critical care is two months. When asked if they would like the requirement to increase to 4 months, 18/22 (82%) residents overwhelmingly responded negatively ($p=0.007$). Similar trends can be seen in regards to pain management. 16/22 (73%) residents felt that the current requirement for pain management, which is a one-month rotation, was sufficient. The time allotted during their third year for electives would give a resident who is interested in pain management ample time to have additional training in pain. In addition, 18/22 (82%) of the residents did not want the required length of pain management increased to 3 months ($p=0.011$). Moreover, when questioned about a month solely devoted to preoperative evaluation, an overwhelming 18/22 (82%) of the anesthesia residents did not feel this was necessary. Subspecialty rotations must be started earlier in the residents' training since limited residents can be assigned to each rotation at a given time. If each anesthesia resident class consists of 20 residents and 1 - 2 residents can be assigned to a rotation of 8 weeks at any given time, approximately 80 - 100 weeks would be required to complete all the required subspecialty rotations for one anesthesia class. In order to schedule a large class of anesthesia residents for subspecialty rotations before the CA-3 year, some residents may be assigned to subspecialty rotations

as early as August of their CA-1 month. At NYU, CA-3 year residents are allowed for 6 months of elective and 6 months of advanced clinical rotations. Additionally, CA-3 residents assume the role of the call team leader and must complete all the required rotations. 16/22 (73%) of the residents polled did not feel comfortable starting their subspecialty rotations as early as August of their CA-1 year. 13/22 (59%) of those questioned thought the changes would increase the number of residents on each rotation and 12/22 (55%) thought the curriculum change would adversely impact on a residents training. When taking into account the 3 months of vacation a resident is allowed over 3 years, a total of 11 months of the 36 total months would be spent outside of the operating room. 18/22 (82%) of the residents felt that this was too much time outside of the operating room and would detract from their training. With less time being spent in the operating room, 16/22 (73%) felt that they would not get enough experience in monitored anesthesia care, 12/22 (55%) thought they would not get enough regional anesthesia training and 12/22 (55%) felt they would not receive enough basic general anesthesia. 18/22 (82%) of the residents polled feared losing elective time in their final year of training.

Figure 1.

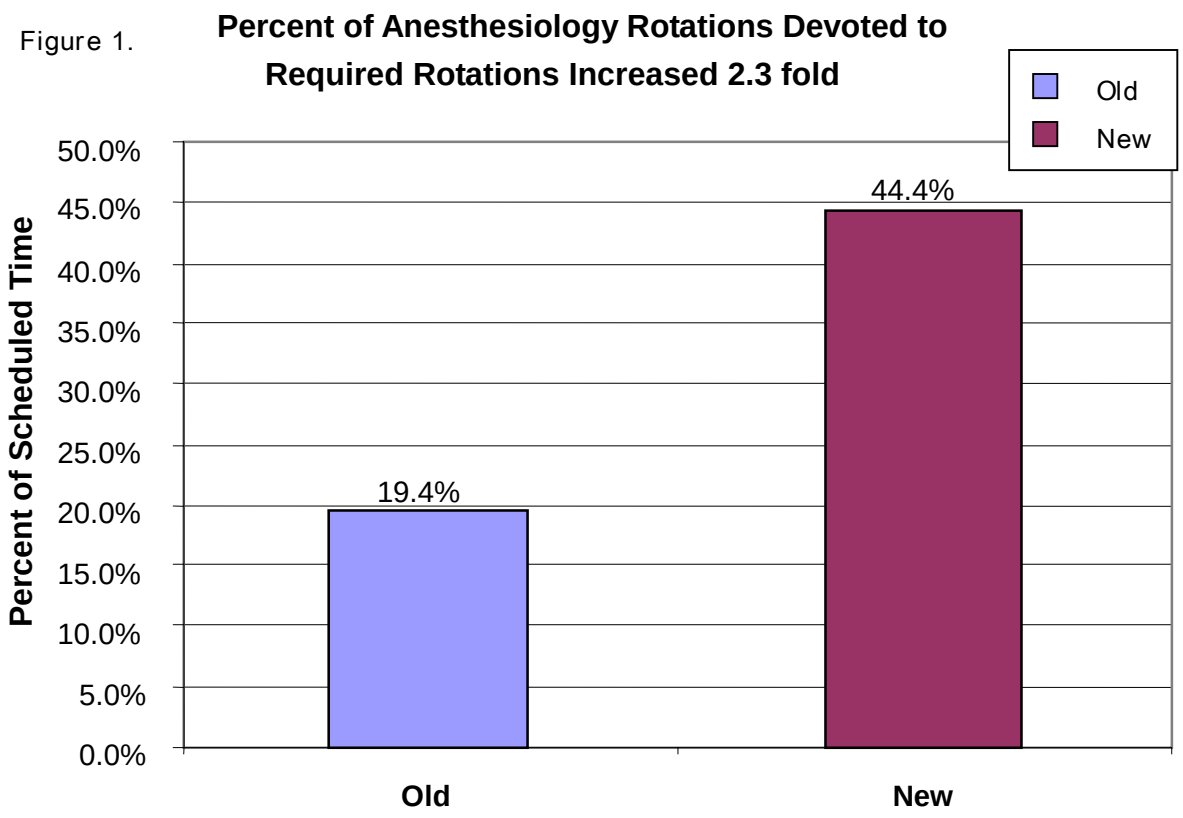


Figure 2.

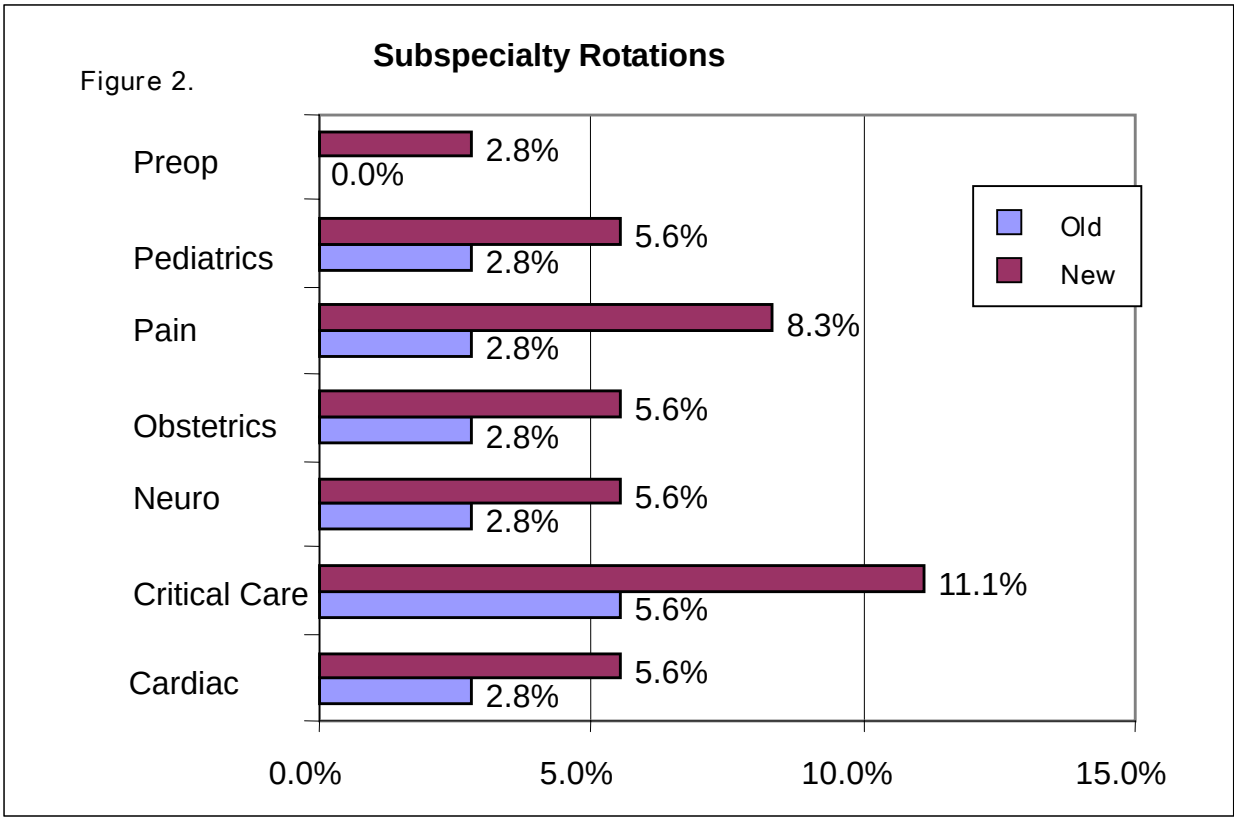


Figure 3.

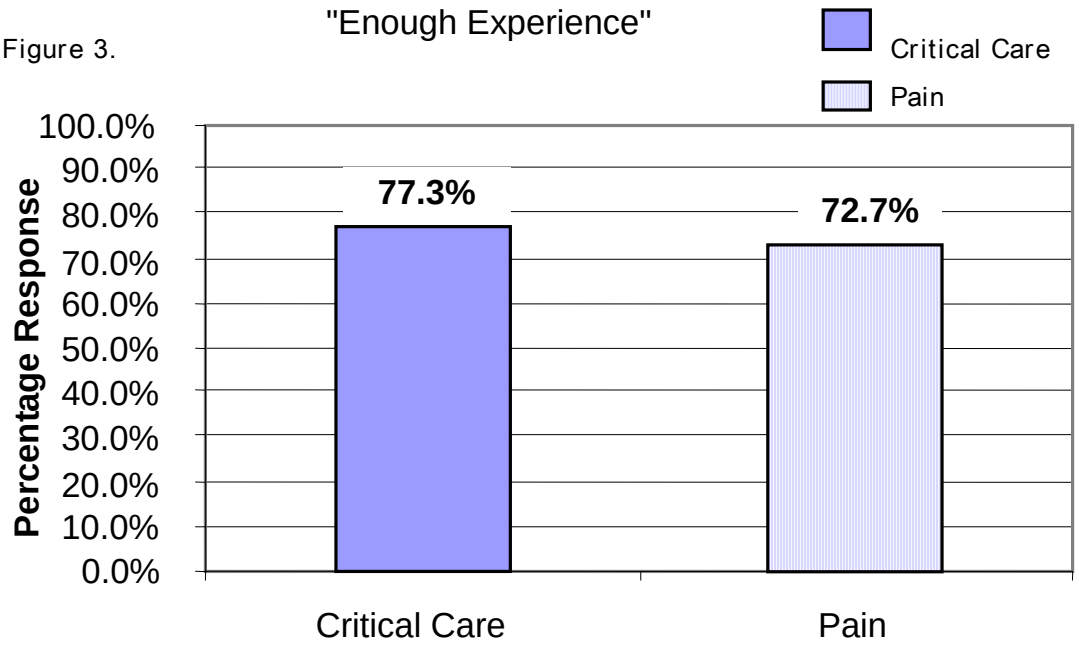
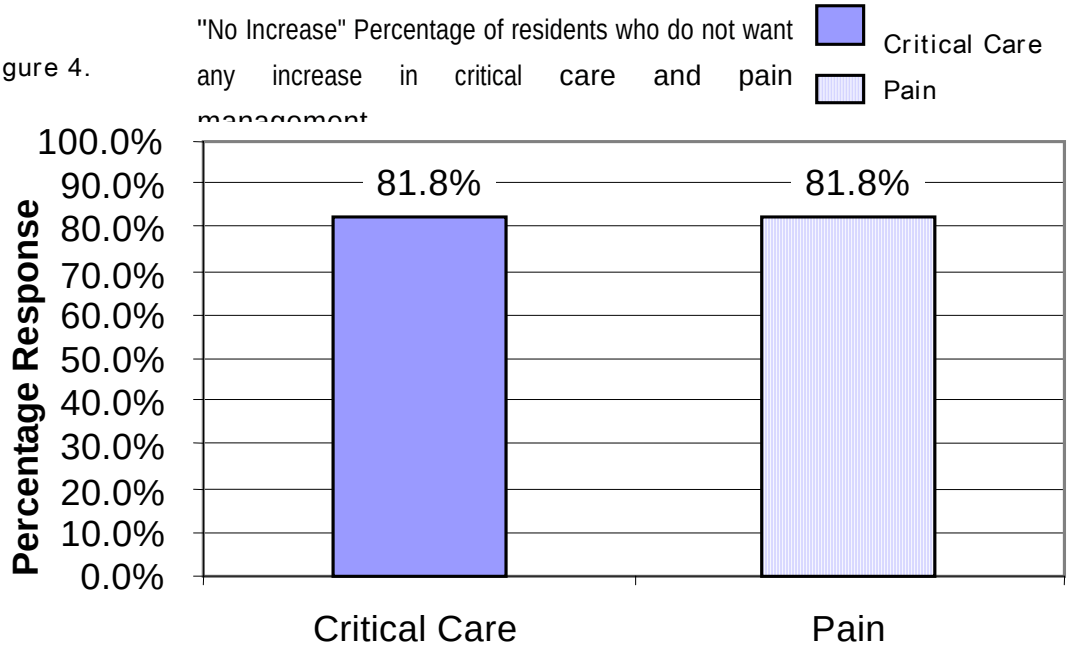


Figure 4.



Discussion

The ACGME has approved changes to the anesthesiology residents' curriculum, which will increase the length of each subspecialty rotation as well as the critical care and pain management rotations. The results of our study showed that many current residents-in-training at New York University hold negative opinions of these changes. Preoperative medicine will be formally introduced as a clinical rotation. The implications of the approved curriculum are many and drastic changes may be necessary to adapt to the new curriculum. As seen on Figure 1, the total required rotation time will occupy 2.3 times the previously required time. The planned increase in required rotation time means more rigid schedules for the anesthesiology residents. Figure 2 depicts increased time required in each subspecialty rotation. Since the total required subspecialty time would be significantly increased, there will be less time for basic general anesthesia and monitored anesthesia care. The changes to the critical care and pain management rotations place the residents in the peri-operative setting, instead of the "traditional" intraoperative setting.

Since the critical care rotation and pain management rotation take place in the peri-operative setting, these rotations will be discussed as a group. The duration of critical care rotation has increased from two months to four months. The pain management rotation will change from one-month long rotation to the new requirement, which will now consist of one month of acute pain, one month of chronic pain and one month of regional analgesia. While some residents hold special interests in critical care and pain management, others would rather focus their training in intraoperative management. Despite recent effort by ASA and ABA to broaden the role of the anesthesiologist in the medical community, the medical students and anesthesiology residents appear to lag in acclimating to these changes. As the survey results show, more than seventy percent of the current anesthesiology residents felt that current length of critical care and pain management rotations is adequate. Figure 3 and Figure 4 show the percentage of residents who felt that current requirement for critical care and pain

management is enough (Figure 3) and the percentage of residents who do not want any increase in the these rotations (Figure 4). Ultimately, 82 percent of residents who participated in this study reported more interest in intra-operative care than peri-operative care.

The new curriculum also requires increased time spent in each subspecialty rotation. Since most anesthesiology residents at New York University and other large residency programs are currently performing more than the required number of cases for the subspecialty rotations in obstetrics, pediatrics, neuro-surgical and cardiovascular anesthesia, the new curriculum is not likely to improve compliance with these core requirements. Most of NYU residents perform more advanced and subspecialty cases during their calls or in their advanced clinical rotations, rather than in restricted subspecialty rotations. In order to complete all the requirements before the CA-3 year, NYU residents may need to start their subspecialty rotations as early as second month in CA-1 year once the new requirements go into effect. The total subspecialty requirements consist of fifteen months. If the CA-3 year is reserved for six months of research or elective time and five months for advanced clinical rotations, the new requirements must be completed within the first twenty-four months. If the first month in CA-1 year is used for the introductory rotation and two months are used for vacations, less than five months can be used for general operating room cases. At NYU, CA-2's start the on-call team leader role in May and all team captains as they are titled, must complete all required rotations. This is done so that graduating residents may facilitate the transfer of responsibilities. Based on the calculation, certain CA-1 may need to begin their subspecialty rotations as early as the second month in CA-1 year. Seventy-three percent of responding residents answered that the second month in CA-1 year is too early for any subspecialty rotation. Expecting a second-month CA-1 resident to appreciate the physiologic as well as the anesthetic implications of cardiac or obstetrics patient may be beyond his or her knowledge, abilities, and experiences despite vigilant supervision.

With the changes in the curriculum, fewer residents will be available on a daily basis for the cases done in the operating room. The daily operating room resident staff shortage will negatively affect residents, faculties, institutions and the field of anesthesiology. Seventy-three percent of respondents stated that they would not be trained well in monitored anesthesia care or conscious sedation due to decreased time spent in the operating room performing general operating room cases. Fifty-five percent of respondents felt that training in basic general anesthesia, including the cases involving laryngeal mask airway might be less than optimal with the new changes. Institutions will not be spared from the effect of decreased resident staff in the operating rooms. Besides the cost to comply with explicit rules and regulations for the new curriculum, any institution dependant on resident staff will undergo major financial as well as human resources restructuring. For example, Bellevue Hospital Center is renowned for its dependence on the resident workforce. For the surgical suite with 15 operating rooms and multiple off-site locations, less than 12 attending anesthesiologist are clinically active and only 2-3 CRNA are situated there. The residents manage the rest of the day-to-day activities. In order to comply with the new ACGME requirements, more non-resident staff needs to be hired and dispatched. Eventually, daily surgical cases will need to be covered by certified registered nurse anesthetists (CRNA) and attending anesthesiologists. According to Dr. Guidry's update on ASA Update SAAC/AAPD meeting, CRNA's reported that the cost for training anesthesiologist is 12 times the cost for training a CRNA. This cost analysis platform has been used to push for increased number of new CRNA graduates. Due to decreased number of residents in the operating room, any hospital that has depended on resident staff will be required to hire more CRNA's and allow the attendance of student registered nurse anesthetists (SRNA's). More anesthesiologists may be needed for this transition as well, but there is already a significant shortage in anesthesiologists. Hence, the demand for certified registered nurse anesthetists increases. Noting that the number of CRNA graduates almost doubled from year 2000 to 2006, it may be

safe to predict that there will be an increase in number of CRNA's and a decrease in the number of residents in the operating rooms.

With the new curriculum changes, almost one third of the anesthesia residents' 3 years of clinical anesthesia time will be spent outside the operating room. Our residents reported such cutback on intra-operating room time will decrease comfort level of laryngeal mask airway management and sedation cases. The results of this study, however, show current residents-in-training feel that the evolution of anesthesiologists as peri-operative consultants must begin with solid foundation in intra-operative management.

Limitations of this study are the small number of participants and that this was a single institution study rather than a multi-center study. Only 39% of residents participated in the survey. Such low response rate may lead to the statistical error known as nonresponse bias; the participants who did not answer may agree with the changes or felt the matters unimportant. A single Center study can also bias toward the culture of the specific institution. Although there have been numerous discussions regarding the ACGME curriculum changes and resident-in-training representatives participate in policy changes, a general group of residents-in-training and medical students have not been surveyed.

In summary, we surveyed New York University anesthesiology residents about the ACGME curriculum changes. The majority of the surveyed residents conveyed negative opinions toward the new changes and reported that there is enough time spent in critical care and pain managements currently and any increase can detract from the residents training in general anesthesia.

References

ACGME Impact/Justification Statement Proposed Revision of the Program Requirements for Anesthesiology
www.acgme.org/acWebsite/downloads/rrc_prrev/040impact10/04. pdf

ASA Update SAAC/AAPD Guidry,O. November 5, 2005

Schwinn DA, Balser JR. Anesthesiology Physician Scientists in Academic Medicne: A Wake-up call. Anesthesiology. 2006 Jan; 104(1): 170-8.

Staszak J. Dorotta I. Steckner K. et al. Changing of an anesthesiology clinical base year to create an integrated 48-month curriculum: experience of one program. Journal of Clinical Anesthesia. 2005 May, 7(3): 225-8.