A survey of nurse anesthesia educational programs/schools: 1977

AANA EDUCATION COMMITTEE
Chicago, Illinois

This 1977 survey was conducted to obtain selected data about accredited nurse anesthesia programs. It is believed that such data—if it is representative of a valid sampling of these programs/schools—can provide a description of these programs and can assist in the detection of trends which may be beneficial information to the AANA Education Committee, the Council on Accreditation of Nurse Anesthesia Educational Programs, the Council on Certification of Nurse Anesthetists, and others involved in or having an interest in the education of nurse anesthetists.

In any survey, the results are dependent upon how well the questionnaire was constructed and the response that it receives. This 1977 questionnaire received a 78.6% response (143 replies from 182 questionnaires sent) which is considered excellent for any survey. While it was obvious that the majority of the questions were understood and adequately answered by the respondents, it is felt that perhaps the next such survey should be designed to make the responses less time consuming for those persons completing the survey.

The AANA Education Committee, which was responsible for conducting the survey, is appreciative of the efforts and energies expended by all involved in this endeavor. The following is a synopsis the survey’s findings.

Demographic data pertaining to nurse anesthesia educational programs

Length of program. The vast majority of the programs (88.8%) are in a 24-month time-frame. The remainder (11.2%) reported lengths of 18-21 months.

Number of students. In half of the schools reporting, the number of students ranged from 4-12. The average, or mean, was 12.9, while the median, that is, where the mid-program falls (50% above and 50% below), was 8. The range for the number of students was from 1-54.

Student attrition rate. The attrition rate of students from nurse anesthesia educational programs did not appear overly high. The major causes for failure to graduate were voluntary resignations for personal reasons and poor academic and clinical performance.

Exchange/immigration visitor permits. Sixteen programs/schools reported having such permits and providing foreign nurses with an opportunity to participate in nurse anesthesia education.

Stipend. Of the programs responding, 87.4% reported that they provide stipends for students. The range of stipends was from $100 to $1075 per month. Fifty percent of the schools reported stipends falling between $200-325 per month.
Tuition/registration fees. Of the schools reporting, 57.9% reported that they charge either a registration fee or tuition or both. These fees ranged from $35 to $3500 with the highest figures being reported by those programs associated with a college or university. The median for these fees was $375. As is common with state university systems, those programs affiliated with state supported colleges or universities showed a differential between charges for in-state and out-of-state residents. In addition to the fees reported for registration and/or tuition, students are required in 77.9% of the programs to purchase their own text books.

College credits/degrees offered. Thirty-six programs reported that college credits were earned by the students for classes and anesthesia related courses. Twenty-two programs stated that a degree is offered in conjunction with their programs. Some programs affiliated with a college or university, where a degree is offered, do not require their students to be enrolled for the degree. Sixteen programs stated that they offer a Bachelor of Science in Nurse Anesthesia, while two offer a Masters in Anesthesia Education. Four programs had varying titles for their degrees.

Student vacations. All schools reported that students were afforded vacations during the course of the program with the vast majority ranging from 2-4 weeks.

Student time commitment to the nurse anesthesia educational program

These questions were answered on the basis of the current classes enrolled and, in some instances, would vary somewhat over time, depending upon the program design.

Class hour commitment. The range of class hours per week was from 1-25, with both the median and mode falling between 6-10 hours per week. (The mode represents the highest frequency reported.)

Clinical practice commitment. The range of hours per week that nurse anesthesia students are involved in clinical practice was from 0-50, with the majority reporting between 21-35 hours. In addition to this commitment, the mode for call time was from 16-24 hours per week.

Pre- and post-anesthesia rounds. Only 86% of the programs responding to this questionnaire completed this question. The vast majority reported student involvement in these activities within the range of 1-10 hours per week. Student involvement in pre- and post-anesthesia rounds is required for accreditation.

Regional anesthesia

Questions on the teaching of regional anesthesia were developed to elicit to what degree regional anesthesia is taught in nurse anesthesia educational programs. The answers to these questions varied not only between schools but between types of blocks taught. The question was asked in such a manner whereby three responses were offered, that is, indicate the level of competency (adequate competency, orientation to use, or no exposure) students acquire in your program relative to the management and/or actual administration of regional anesthesia. It was obvious that a few programs offer a wide variety of regional anesthesia experience; however, to date the most frequently taught regional procedures (actual administration) appear to be subarachnoid and Bier blocks.

The data in Figure 1 depicts the findings of this survey for the four most common blocks reported. An assessment of the data would indicate that from 50-65% of the nurse anesthesia educational programs reporting are teaching the actual administration of selected blocks either to bring students to full competency upon graduation with relation to specific blocks in this area of practice or to provide graduates with the basis for further development of competency, depending upon their future practice requirements.
Of the schools reporting, approximately 46% reported that CRNA faculty members administer regional anesthesia.

Faculty information

It was apparent that there was some confusion with reference to the questions pertaining to the faculty of nurse anesthesia educational programs. Some of this appeared to result from individual program definitions of what constitutes a faculty member, while some of the problem was definitely related to the structure of the question itself. However, interesting data became available from the survey with regard to faculty.

CRNA's and anesthesiologists. From the data collected, the median program has 9 CRNA's and 5 anesthesiologists participating as faculty, while the average program has 13.8 CRNA's and 4.9 anesthesiologists on the faculty. While two schools reported no anesthesiologists participating as faculty members, the others ranged from 1-45 anesthesiologists. Three schools reported only one CRNA acting as a faculty member, while the range reported was from 1-153 CRNA's.

Apparently, due to the structure of the question, only 107 programs reported the number of CRNA's participating as faculty members, while 130 reported the number of anesthesiologists. However, the response to the question tends to corroborate findings in a program survey conducted in 1974 that at least twice the number of CRNA's are involved in the education of nurse anesthesia students as are anesthesiologists.

Other types of faculty members. Seventy-three programs reported having basic science instructors participating in their programs. Surgeons were reported involved as faculty members in 33 programs. Fifty-seven programs reported other types of persons teaching on their faculty. These included educators, dentists, pharmacologists, registered nurses, respiratory therapists, clinical psychologists, and other physicians, particularly specialists involved in hematolgy, pulmonary medicine, and cardiology.

CRNA faculty member involvement in higher education. Of the schools responding, 80% reported that CRNA members of their faculty were currently enrolled in college or university courses. The average number of CRNA's actively involved in pursuing higher education was 3.9 per school reporting such involvement. In addition, the interest of faculty members in attending ICARE Workshops (Instruction and Testing and Evaluation) continues to remain high.

CRNA faculty salaries. The monthly salary of the CRNA educational director ranged from $1060 to $2250. The median, as well as the mode, was between $1500-$2000 per month. The monthly salary of CRNA clinical supervisors ranged from a low of $700 to a
high of $2335. The median and the mode fell within the $1000-$1500 per month range with the tendency for the figures to run closer to the $1500 figure.

**Textbooks**

It was readily apparent that opinions varied widely on the 15 most useful books in each school/program library, including their textbooks. The most commonly cited books by subject matter are listed here:

- **Pathophysiology.** Kadis and Katz, *Anesthesia and Uncommon Diseases*.
- **Chemistry and physics.** Adriani, *The Chemistry and Physics of Anesthesia*; MacIntosh, Mushin and Epstein, *Physics for the Anesthetist*.
- **Legal aspects.** Dornette, *Legal Aspects of Anesthesia Practice*.
- **Anesthesia equipment.** Dorsch, *Understanding Anesthesia Equipment*.

**Addendum to the survey**

Since this survey was conducted, a brief addendum was sent out to elicit the interest pertaining to the need for financial support for nurse anesthesia students and educational programs. From the information received, it would appear that there is a definite need for additional financial assistance for students, though few schools actually cited a need for assistance in the actual conduct of their programs. Acting on this information, the Education Committee and the AANA Board of Directors has presented testimony in Washington, D.C., requesting inclusion of nurse anesthesia students in future federal programs. Since current legislation is only in its initial stages, it is too early to predict what success this endeavor will have.

There is some concern being expressed about the role of hospitals in financially supporting health care education, particularly with current emphasis on hospital cost containment. It is conceivable that hospital-based nurse anesthesia educational programs will have increasing difficulty in acquiring needed funds for future operation. The AANA Educational Committee must be kept informed of programs which are finding increased difficulty in acquiring adequate fiscal support for their operations. Such information will be vital in determining the future needs for federal or state aid to such programs.

**Summary**

A report of the 1977 Survey of Nurse Anesthesia Educational Programs/Schools has been provided. As with any survey, along with getting answers to questions asked, other questions arise from these very answers which need to be included on future surveys.

The value of any survey lies in its ability to provide factual data needed to support future decisions and actions.
with reference to nurse anesthesia education and practice, or whatever subject matter is involved in the survey. Continued cooperation of the requested participants, in this instance, nurse anesthesia educational programs and schools, in providing complete, accurate information is essential to the continued success of future projects.

AUTHORS

At the time this survey was conducted, the following individuals served on the AANA Education Committee: John F. Garde, CRNA, chairman, Detroit, Michigan; Michael J. Booth, CRNA, Langhorne, Pennsylvania; Louise S. Grove, CRNA, Mehlville, Missouri; Betty B. Nolen, CRNA, Memphis, Tennessee; and Sr. Mary Arthur Schramm, CRNA, Yankton, South Dakota.