A MODEL OF ANESTHESIA TRAINING PROGRAMME FOR NURSES

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AS one of a number of programmes of Voluntary Health Association of India to reach into areas of health care needs, the nurse anesthesia programme was launched in 1976. There was and is a felt need to have more readily accessible training anestesia services in more remote areas, village areas and slum areas. In the taking of sponsored students only, it was assumed that this need would be met in specific areas of felt need. Nurses have been asked and are still being asked to manage patients under anesthesia or to give full anesthesia under the direction of the surgeon in the absence of any other trained personnel. Many smaller hospitals have a limited number of medical staff and they are also often untrained in anesthesia or have other hospital patient responsibilities.

Consequently if nurses are asked to take on these anesthesia duties it is only correct that they should be able to avail themselves of some systematic training to adequately meet their needs.

In the year 1976 the existing training facilities, so far as I know, for nurses giving anesthesia included either three month or six months or one year practical programmes, depending upon varying viewpoints of what was then considered to be adequate training in anesthesia for nurses.

The present course plan was designed in 1976 after consultation with a number of persons including as broad as possible a representation of interested parties. These persons included medical superintendents, surgeons, nurses who had training in anesthesia, nurses and doctors who were training nurses in anesthesia, nurses without training in anesthesia who were called upon to give anesthesia, hospital administrators, and doctors who had specialized in anesthesia of the categories MBBS, DA and MDDA. The following ideas were elicited:

1. A body of theory and basic instruction to understand the basis of the practical side of anesthesia, and related topics.
2. Adequate amount of anesthesia practice in various categories of types of anesthesia equipment as well as types of surgical cases.
3. Plenty of practice in anesthesia so that the finished candidate could function with some feeling of confidence.
4. A system of evaluation of performance as the main basis for successful completion of the first year.
5. A recommendation after actual performance of duties in sponsoring body so that goals of training are accomplished for the sponsoring body also.
6. Sponsored candidates only are taken.
7. Utilization of already trained anesthesia staff for teaching in already constructed institutions in a multicentered coordinated programme.
8. A minimum two year programme was advised by MBBS, DA and MDDA personnel.

Presently prerequisites for the course of study are:

1. True copy of School Leaving Certificate (attested).
2. True copy of Nurses Registration Certificate (attested).
3. Two letters of recommendation from responsible persons not related to the candidate.
4. Only sponsored students will be accepted.
5. English writing and speaking.
6. Student should preferably have some experience as a graduate nurse in operation theatre and or have a Midwifery certificate.

The following plan was then formulated:

3 months introductory theory and sciences with emphasis on application to anesthesia.

12 months supervised practice in an assigned hospital with trained supervisors in anesthesia. Monthly summary sheets with actual cases categorized for assessing progress and experience to be sent to coordinator.

12 months practice in sponsoring body's hospital or another hospital if selected hospital approved for practice.

The student completes a 27 month period before certificate is awarded. However, only 15

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mohths need be spent outside the sponsoring body. The cost of the course of study Is as follows:

Rs. 250.00 per month × 15 months—Rs. 3750.00 as a breakdown of expenses:

Rs. 100.00 per month for food

Rs. 100.00 per month for tuition

Rs. 50.00 per month for minor medical expenses, electricity, room, etc.

Objectives of a study programme for nurses in anesthesia:

1. To prepare the nurse to administer anesthesia basic to the general role of administration of anesthesia:
   a. Anesthetic volatile agents and gases; Halothane, Either, Trilene and nitrous oxide and oxygen.
   b. Anesthesia systems: Drawover, open and semiopen system and continuous flow machines with semi-closed systems with and without carbon dioxide absorption.
   c. To perform endotracheal intubation for adult or child.
   d. To perform and manage regional block techniques.
   e. To utilize properly muscle relaxants, narcotics, tranquilizers, hypnotics and other drugs related to anesthesia as a part of the anesthesia administration. To have a basic understanding of drug actions and reactions and to know when to anticipate their occurence, if possible.

2. To develop good technique in observing and recording of vital signs of the patient under anesthesia. To be able to recognize the patient's progress through the stages of anesthesia, recognize conditions of shock, bronchospasm, laryngospasm, blood loss, partial and complete airway obstruction, carbon dioxide retention, cardiac and respiratory arrest, and to know what is recommended care or the patient in such occurrences. To understand enough about how these processes occur to anticipate problems and conduct a smooth anesthesia.

3. To know what is adequate equipment for an anesthesia department and how to maintain this equipment in good working order.

4. To develop an understanding of the importance of proper preoperative assessment and postoperative anesthetic care of the patient.
   a. To learn to establish a good rapport with the patient is beneficial to the health process.
   b. To develop enough confidence in administration of anesthesia and to perform well enough that the supervisors also have confidence in the nurse.

There are some additional advantages in training nurses in anesthesia and one of those is that the trained graduate may fulfill a multipurpose role. If anesthesia services are not needed every day in the week, other nursing related duties may be carried out. In looking over the certificate holders of the Voluntary Health Association of India's nurse anesthesia course, the following are some of the ways that nurses are being utilized IN ADDITION to anesthesia services in smaller institutions:

1. O.T. supervisor
2. Matron
3. X-Ray and laboratory technician (with recognized certificate)
4. Surgical ward nursing
5. Intensive care and post operative observation units.
6. Public Health nurse in nearby village.

Some of the present certificate holders are employed as nurse anesthesia staff members in the anesthesia department of large institutions with incharge of MBBS DA or MDDA qualification. This is a practice which can enable the institution to provide adequate anesthesia services at lower cost to the patient. In the hospitals where this type of programme has been carried out the cooperative relationship for working as a team may also be listed as a positive attribute.

All nurses trained in anesthesia cannot always work under an MBBS DA qualified doctor. There are simply not enough doctors with this qualification and even in countries with greater financial resources, optimum advantage to the health care system is realized through training of nurses in anesthesia. Nurses are trained under government encouraged or recognize programmes in anesthesia in Iraq, Ethopia, Yemen, Germany, Denmark, Sweden, Norway, USA, Austria, Switzerland and some of African developing countries.

To date 32 candidates have completed the requirements for and have received a certificate of satisfactory completion from the Voluntary Health Association of India. These are the students who have satisfactorily completed the programme in Batches I through V. In Batches VI through X there are presently 30 candidates studying in institutions in north and south India. For the first year of supervised practice, there are currently seven hospitals taking students. As the first year students complete this time and move on to their sponsoring bodies, the next batch of first year students moves up into the institution for supervised instruction.

A record of the amount of anesthesia service rendered by candidates in the course is quite commendable. There are many other factors which could be mentioned in future studies. But in actual number of anesthetics performed, we can count from our records in Batch I through V, each spending two years, a total of 49,350 anesthetics administered. In counting the first year anesthetics of Batch VI, completed in January-February of 1980, we can add another 6,587 cases to this number. This brings to total of 55,937 anesthetic performed by those students in the practice programme to that date. The present number of Certificate holders is 32. One certificate holder is not presently in the field of anesthesia. While no nurse would have reason to give an anesthetic without the presence of a doctor, we can look at the distribution of present certificate holders (31) in relation to in-charge of the department.

Number of certificate holders (VHAI) in an institution where there is an MBBS DA or MDDA incharge 6

Number of certificate holders (VHAI) in an institution where there is surgeon in charge.....25

31

The following is the distribution state-wise of certificate holders (31) presently at works

Kerala	15	Uttar Pradesh	1
Bihar	5	Andhra Pradesh	1
Madhya Pradesh	3	Orissa	1
Tamilnadu	2	Rajasthan	1
Assam	1	Haryana	1

Thirty-two nurses have completed the programme for certificate and thirty nurses are still working in the programme towards certificate. Of these 62 nurses 44 are women and 18 are men. To date all the candidates have been from Christian institutions of the Voluntary Hospital sector. Other hospitals of the Voluntary Sector have been contacted and are welcome to send candidates but to date none have applied. One candidate from West Bengal Government had applied and was accepted but withdrew before the course began for personal reasons.

The following is suggested as a model Job Description for nurses functioning in a hospital with anesthesia administration responsibilities. Kindly note that this Job Discription is being written AFTER THE FACT THAT NURSES ARE PERFORMING THESE DUTIES SATISFACTORY and NOT in anticipation of something that might be:

1. Preoperative visit:
   a. Perform a preanesthetic assessment of the patient and read carefully the medical history and laboratory findings. Identify patient for surgical procedure and be able to establish a personal report with the patient before arrival to operation theatre.
   b. Consult with department in-charge about the type of anesthetic used and technique to be utilized. The preoperative medication should also be scrutinized.
2. Perform the anesthesia procedure as decided upon:
   a. Be able to handle the anesthesia procedure involved in the administration of the anesthetic as previously listed in course objectives.
   b. Maintain adequate anesthesia records. Note vital signs and record every 5 to 10 minutes. Move patient to recovery area only when vital signs are stable.
3. Assist with the maintenance of the anesthesia equipment in the department.
4. Make postoperative visits to the patients until discharge.
   a. Report all complications to department in-charge.
5. Auxilliary services related to anesthesia.
   a. Assist in care of patient in intensive care unit; esp., relating to respiration and after vital signs.
   b. Help in obstetrical dept. with anesthesia and resuscitation of newborn infant.
   c. Cate of unconscious patient's airway other than anesthesia cases.

We should like to note here that a roll call organization has been formed of nurses in India who are interested in anesthesia of giving anesthesia in any manner. This includes persons other than those entering the present training programme. It also includes some national nurses trained anesthesia in USA who are supervising students presently in the course of study discussed in this article.

The name of our roll call organization is AINA which is an acronym for Association of Indian Nurses in Anesthesia.

A bimonthly mimographed bulletin is sent to all AINA subscribers. This contains articles written by and for nurses in anesthesia. It is now in its fifth year and a number of persons have been consistent five-year subscribers. Also among the

subscribers are hospital medical superintendents and administrators who would like to know more more about anesthesia. Anyone interested in further information about this may write to:

Voluntary Health Association of India,
C-14, Community Centre
SDA
New Delhi-110 016.

Conclusion:

The programme would expand if standards of training could be approved by Government of India. Since the programme has been shown to be a success, we can hope that this play may be made more available to be used in a way that will bring optimum advantage to the health care system which is having to cope with ever more financial problems and a population explosion which is daily placing more persons below the poverty line.

Addendum:

Sr. Jean Thazhathel SCCM joined the VHAI staff as coordinator of the present course in August 1979. Sr. Joan had her anesthesia course in USA and passed the examination required for certification. She has had 6 years of clinical anesthesia experience at St. Thomas Hospital, Chattipuzha, Kerala, previous to joining VHAI staff.

November 1976: Batch II, Catherine Both Hospital, Nagercoil, Sr. Mary Patricia giving induction for Anesthesia while Sr. Ethel and Students nurse Satna stand by.
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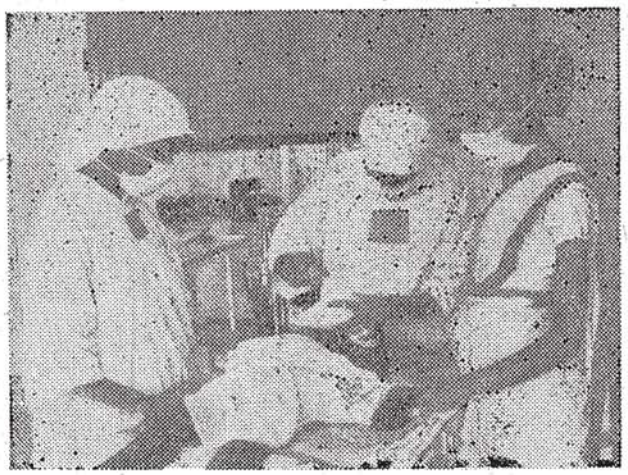

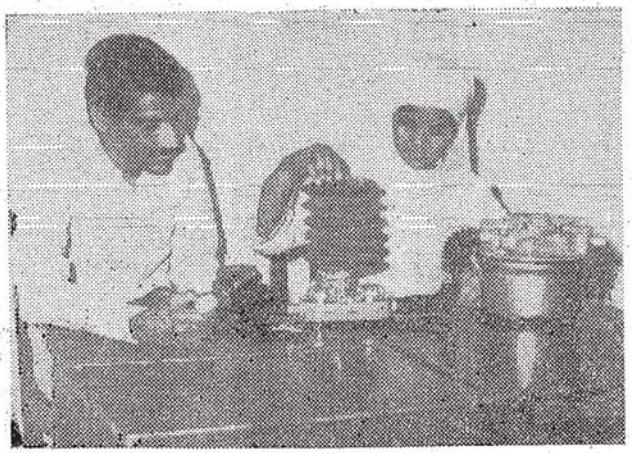

March 1977: Batch III, Frances Newton Hospital Ferozepore Mr. Vinayaker Moses of Christian Hospital, Ratlam and Sr. Susanna of Holy Cross Hospital, Kotiyam Studying the working of EMO Vaporizer.

November 1979: VIII Mrs. Helen Suresh of Methadist Hospital, Bidar, Karnataka, Putting together an Anesthesia system during her practical examination.

NURSING PUZZLE

We would like to inform our Student Readers that Nursing Puzzle will be published in alternate issues and the Answers to the clues and details of entries will also be given at the same time. Sorry to disappoint you for not bringing out the Puzzle in this issue.

—Editor