XIV. THE NURSE IN SURGERY

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THE NURSE IN SURGERY

Senior Thesis
Seminar-1941
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Introduction

Do you want to be a surgery nurse? If so there are many requirements to be met. This paper attempts to give a brief resume of such things.

Not long ago the only requirements for a nurse was the ability to follow doctors orders and not to question why it was being done. Education was not a factor in their training.

Modern times have brought many changes. Now the patient receives better care. The greater the knowledge and experience the nurse has, the better able she is to recognize symptoms, carry our necessary treatment, and assist the surgeon in the operating room.
She must be able to understand the strain the doctor is under and therefore be able to overlook some irritability and impatience.

Much has to go on behind the scenes to promote the smooth functioning of the operating room. Each hospital has a slightly different but a basic routine they follow. The routines have usually been developed over a period of years.
This paper is based on routines performed at Multnomah County Hospital, Portland, Oregon.

Chapter I

"Teaching"

To teach means to show how to do, to guide or to train someone. The supervisors in each department are there to assist the student in learning.

It is important to secure desirable students to enter the field of nursing but it is more essential to develop the ideal attitudes and strengthen the desirable characteristics. Therefore it is necessary for the educators to know the attitudes, habits and other personal characteristics that are likely to aid the student and know the various ways to develop these traits. It is futile to try to develop a characteristic or quality directly. A better way is to give the student ample opportunities to develop such desirable qualities as:

1. Is healthy-mentally and physically. Wholesome, emotionally mature, good endurance.
2. Is mentally alert-intelligent, observant, good judgment.
3. Is technically competent-orderly, economical, systematic, preforms procedures efficiently.
4. Is dependable-trustworthy,conscientious,accurate.
5. Inspires confidence-reassuring, sincere,firm.
6. Is resourceful-adaptable-secures cooperation.
7. Is well poised-self-controlled-composed.
8. Is considerate of others-tactful,discreet,kindly, thoughtful.
9. Is agreeable-cheerful,pleasant.
10. Is cooperative-loyal,good team worker.
11. Is cultured-good taste,well groomed,outside interests.
12. Derives personal satisfaction from her work.
13. Has a sense of social & professional responsibility, interested in civic & professional affairs. *

* Cirriculum guide- N.L.N.E. - 1937-pp. 593-601

Some general methods of developing desirable character are suggested by the Cirriculum guide as:

1. The students should learn to appreciate the qualities listed, but allowed to develop their own list.
2. Allowed to express the behavior expressions of the desirable character.
3. Courses of study should try to emphasize and bring out these traits.
4. Students should be allowed to make their own decisions.
5. Students have to learn to judge the situation and know which mode of behavior is best for it.
6. Problems should be faced and discussed.
7. Students are best encouraged by not expecting too much but just enough.
8. They should be able to evaluate their progress.
9. They should be encouraged to seek advice from their superiors.
10. The student should be the one to decide whether she wants to develop that character.*

A method of teaching is a means of furnishing opportunity for the learner to use knowledge, skills and attitudes in such a way that the desirable ones become as integral part of the learners personality. The use of teaching methods guided by principles from a dynamic psychology, rather than static will develop an individual capable of making an effective adjustment to changing life situations. In a dynamic era things are changing and there is a challenging of new things; while in the static era knowledge is being classified only and everything that is known is accepted.

Integration of the individual is believed to result when she faces effectively a sufficient number and variety of life situations. To secure the desired integration within the student, the phase of the school program must be unified in accord with the principles of formal instruction. The success of the program may be measured by the students ability to recognize and define problems in nursing situations, to use her knowledge and skill in finding the solution, to have courage to act on her own thinking and to judge the validity of her own conclusions and face the consequences.

*Curriculum guide-N.L.N.E. 1937-p. 592

Before selecting her methods of teaching, the instructor will study the contents and desired outcomes, the size and maturity of the class & facilities available for use. A variety in methods of teaching stimulates and helps maintain interest. The following methods are helpful:

1. Lecture- By this method the teacher talks to her students without their participation. This type of teaching promotes thinking because of the fact that the student has to organize in her own mind the facts given to her. The lecturer should always leave some tangible evidence in the minds of her listeners for them to think about.
   There are other things that come into consideration here besides the statement of facts being given the student, for instance, the speakers personal appearance and manner and variety of presentation of material. This method of teaching is useful as the lecturer can present material that is not readily available and is to summarize a unit of study.
2. The recitation method- This is the catechism type of teaching where the student gives the material back to the teacher as it was presented, in other words, questions and answers. By this method the student is allowed to think for himself in the way that he can put his own interpretation on the material and can correlate his material.
3. The laboratory method- In this type of teaching the student is allowed to investigate and work out his problems. A lecture and typewritten material should preceed the laboratory period. A short ten minute test with each class period is often advisable.
4. The demonstration- This method of teaching is used when the teacher demonstrates with her lecture, laboratory or clinic period and then the student returns the demonstration. It is more time consuming and unless everyone can participate it fails its purpose of teaching. It is valuable though because students learn best by doing.
5. The case method* The student or supervisor selects one particular patient and the student studies this case thoroughly and takes full care of this patient while she is on duty. Then she makes a written or oral study of the hospitalization of said patient. By this method she learns to select and organize all pertinent information and to use it in developing her own insight and understaning of the nursing care.
6. Conference method- This is a discussion of one phase of nursing, a medical question, or most anything between a supervisor and her students. The size of the group should be limited to allow for active participation. The material for discussion should be limited and assignments made before the conference so that no time is lost. The superviser must keep the conference in control so that the full material is covered in the alloted time and then summarize it in the end.

All the above methods are and will be used in teaching surgery today. Usually two or three types are worked in together into one teaching period to gain more cooperation and interest of the student.

The students first real contact with surgery is usually gained through their Operating Room Technique class. This can combine or use separately the lecture, recitation, demonstration, case method, and conference type of teaching. Then when the student enters the Operating Room Dept., the laboratory, demonstration, case method and conference method of teaching are used.

Chapter II

"History of Surgery"

Surgery got its start shrouded in mystery and magic. It was at first a "queer muddle of demonology, tribal ritual and social necessity",*but even in its earliest civilizations surgery developed rapidly.

Trepanning was the first operation ever to be preformed. This was done because so called demons lived in the head of the sick man and they had to be released.

Slowly over many thousands of years, man became civilized and rather more slowly, surgeons followed suit. In Babylon in 2250 B.C. Hammurahi, the great law giver, drew up his code which contained the exact fees surgeons were to receive for operations. Leeching,cupping and bleeding were well known and actual cahtery was used extensively. But medicine and surgery had never been completely divorced from religion and gradually the mystical incontation began to have far more significance than any rational treatment and surgery was gradually absorbed into exorcism.

In India and Egypt it became a menial trade. Then about 350 B.C. Hypocrates, a son of Asklepiad and called the father of medicine, came along and began to practice medicine and surgery as one. He elevated the standards greatly and was admired and respected by many then and now.

Between Hypocrates time and up to the fourteenth century nothing much is recorded about surgery. During the 14th century John of Ardione, an Englishman, helped recreate surgery in Europe.
He recorded all his operations, describing in detain every step, and their results, failures as well as successes. This doctor and a few others helped make the 14th century a starting point from which surgery in England was to rise and flourish. The start was late but from here on England was to help the advance of surgery and medicine as much as any other country.

Also at this time surgery and medicine were becoming more widely separated. Surgery was regarded as greatly inferior to medicine and surgeons could not receive their doctors degree unless they promised not to practice medicine. Because of this the surgeons became closer united and formed guilds and universities of their own.

* Flack, T.H.- History of Surgery, N.Y. Doubleday Doran & Co. 1939.

The first act regulating the practice of surgery in England was passed in 1421 A.D. Parliament enacted a law against unqualified practioners of either medicine or surgery. This law was not enforced so the physicians and surgeons entered into an alliance with the idea of protection and restoring the old unity. After three years the organization dissolved and the surgeons reorganized their guild.

In 1511 London develped a system where all surgeons and physicians should be licensed. This seemed to lower their prestige instead of raising it and they had to lean upon and associate themselves with the barber surgeons.
The union was recognized and strangely enough, served to raise the status of the profession so that a systematic teaching course for students was introduced.

In France surgery was advancing rapidly at this time because of Ambroise Pare who introduced many new and good methods, including the suture.

By the end of the 16th century the anatomists had begun to impress upon surgeons the importance of a knowledge of the structure of the human body. William Harvey came into prominence about this time and taught the medical circle many valuable facts including the circulation of the blood.

Around the end of the 17th century younger surgeons were working in the hospitals and becoming the heads and had increasing success. Young students began to go directly to the hospital rather than apprentice themselves to the Barber Surgeons Co.
The governors of St. Thomas began to recognize this system of teaching that had been growing up and began to regulate it so far as they were concerned. In this way great medical schools came into being.

At the beginning of the 18th century the plague that hit England brought physicians and surgeons lots closer together. During this century many many advances were made in surgery. At the beginning of the 19th century, Scotland took the lead from England in the advancement of Surgery with Robert.

Surgery had been advancing slowly but steadily, and the art was tending to become a science. More young men were attracted to surgery as a career. Pain and sepsis were still two great barriers that hadn't been dealt with.
The other barrier to perfect surgery, sepsis, began to crumble with Oliver Wendell Holmes demonstrating how contagion could be prevented; but it was Robert Lister that brought it into practice as far as surgery was concerned. When he sterilized his material and prepared the local field of operation.
At this time new specialties arose and since then surgery has been advancing rapidly and still is.

The term anesthesia means the complete loss of feeling or sensation over the entire body or over limited areas. The introduction of anesthesia and development of various anesthetic agents has been one of the greatest aids to the rapid progress of surgery.

Surgical anesthesia was introduced in Boston in 1846 with the use of ether, by Dr. Morton, a dentist. The following year chloroform was used in Edinburgh for obstetrical patients.

These two substances were the only anesthetic agents used for years. Finally it was shown that chloroform produced yellow atrophy of the liver and since then has been practically eliminated as an anesthetic agent.

Local anesthesia was first introduced in 1884 when cocaine was used for eye operations. Spinal anesthesia was first introduced about 1910, but had a high mortality rate which was discouraging its use. Since about 1928 the technic has been greatly improved and the mortality rate reduced so that its use has greatly increased.

The choice of the anesthetic agent and its administration are equally important as the operation. The kind of anesthetic will depend on the type of operation planned and the patients physical condition. An anesthetic to be ideal, must be easily taken into the system, produce the least danger to life, and permit necessary relaxation.

The physicians anesthetist can and should assume all responsibility of the anesthetic. That is, he should have knowledge and ability to recognize complications early and be able to treat them properly. Before giving the anesthetic, the diet, proper elimination and medication should be looked after.

Chapter III

The O. R. Suite

The O. R. should be isolated from the rest of the hospital so that the noise and odors from the surgeries can not bother the floor patients. It should also be located on one of the upper floors to remove it from the street noises and dust.

Although the surgeries are cleaned every morning and evening, the dust from a busy street can easily sift in and cause a great deal of trouble.

The location should be so that there is plenty of diffuse natural light. Most surgeries are located on the northern side of the building so that they obtain plenty of light but no direct sunlight. In this way it is cool in the summer and can be warmed in the winter. Each operating room has ceiling lights, drop lights that are easily adjustable and direct the light over the field of operation. Most of the spot lights have no heat and do not cause shadows.

The rooms are done in restful colors, such as light green or gray and less frequently a cream color. Now days the trend is to get away from white as much as possible. It frequently causes glaring from light and also is just another reminder of the hospital environment.

The opening of the windows must be such that there is good ventilation but no drafts. This is often accomplished by having double windows and an adjustable screen in between. Then a section of the outside window can be raised and a section of the inside but on the opposite end. The more modern hospitals have air contioned ventilation which gives a warm moist air in winter and a cool clean air in summer.

The temperatures of the surgeries should be kept around 76 - 78 degrees F. as this is best for the patients. Maintaing proper humidity in the room makes conditions more healthful for all and aids in preventing the sparking from static electricity that is so inducive to explosions.

The best size for an operating room is 20 by 20 '. It is more ideal not to have sharp angles so that is is easier to clean. The housekeeping of the rooms must be flawless and planned. Everything has its proper place and should be put there.

Each hospital has their own routine but it is generally accepted that after the days work in a surgery has been completed, the furniture and floor is washed with soap and water. In some places the furniture is dusted previous to operations with 50% alcohol on a cloth; the furniture should be kept well oiled. If there are any radiators in the room they should be covered with a sheet that can be changed every other day and in this way it can be kept clean more easily.

The equipment of the O.R. should be adequate but not excessible, and arranged for maximum efficiency with minimum energy expended.

It should consist of a tilting table (so that surgeon can have the patient put in any position he chooses), adjustable artificial light, instrument tables that are easily rolled (this includes the Mayo table or the table that can be raised and slipped over the patients feet so the instruments can be placed closer to the surgeon); waste baskets or buckets preferably on wheels, anesthetic table, low benches, standards to hold basins of water, cabinet or shelves to hold extra supplies and solutions and the suction apparatus.

Other rooms that are included in the surgery besides the operating room, are dressing rooms (one for doctors and one for nurses) that have a lavatory, shower, lockers, chairs etc. The scrub up rooms with the necessary facilities for scrubbing, that is sterile soap, files, brushes etc. In many surgeris the dressing and scrub up rooms are combined.

The anesthetic room that contains all the anesthetics. In some hospitals, they have an anesthetizing room also where the patients are given their anesthetics and then wheeled in the O.R.

The work room is where all the supplies are made and wrapped and all the sterile and non-sterile supplies are kept. In some hospitals the sterile supplies are kept in a separate room. The sterilizing room is where the autoclave and steam sterilizers are kept and all supplies and instruments are sterilized.

The utility room is where the cleaning of instruments, I.V., and hypodermoclysis sets are washed and wrapped and solutions are made. Usually each hospital has a small room for the instruments.

A list of all the requirements (that is equipment for the room) for an operation, should be kept in a place that is easily accessible to all workers. The general supplies of every room is a separate unit and requires standard equipment and supplies. Frequently certain types of operations are assigned to particular rooms therefore, particular routines are can be developed for certain rooms and this makes the running of the surgery smoother. A convenient arrangement saves unnecessary steps and loss of time.

Chapter IV

Asepses In O.R.

The first advance toward modern practice of aseptic surgery was made by a chemist, Louis Pasteur. In 1857, while studying the phenomena of fermentation, he demonstrated the presence and activity of micro-organisms or bacteria. These organisms he found, were killed by heat.

A short time later a surgeon, Joseph Lister, attempted to prevent putrefaction and pus formation in wounds by destroying the germs with carbolic acid.

Since Lister's time surgery has advanced by great strides. Today surgical procedures have been changed from the antiseptic methods of Lister, to the aseptic (without infection) technic of today. An effort is made to operate without any initial entrance of bacteria into the wounds. This object is gained by sterilizing all material used in an operation.

Principle of aseptic surgery: "The successful practice of aseptic surgery requires a strict observance of pre-operative sterilization of surgical materials, of rigid precautions against infection during the course of the operation and of guarding the wound from infection afterwards until such a time as it is healed." *

* Eliason, Ferguson, Farrand- Surgical Nursing.

Pre-operative treatment consists in sterilizing and keeping sterile all surgical materials that are to come in contact with the wound and exposed tissues or that are to be handled by the surgeon or his assistants. These include the following things:

1. The creation and maintenance of a surgically aseptic field. To do this everyone must practice rigid aseptic technic. If one little break is made one should not hesitate to admit it and have it fixed.

2. The patient's skin over an area considerably larger than that requiring exposure during the course of the operation demands the highest degree of cleanliness and the application of some chemical agent. The rest of the patient's body is covered with sterile drapes. During the operation neither the surgeon nor his assistants or nurses, touch anything that is not considered sterile and non-sterile people refrain from touching the sterile articles.

3. The surgeon and his assistants and nurses, must prepare themselves before touching any of the sterile field. The hands and arms are rendered as clean as possible by scrubing with soap and water for a certain length of time, depending on the type of operation and are then covered with sterile gloves. Cap and mask, covers the head and mouth and is put on before the person starts scrubbing. The long sleeved sterile gown is put on as soon as the scrubbing is finished and the alcohol has been applied.
Then the gloves are put on. These extra clothes often make the operators sweat, and the utility nurse must prevent the perspiration from dripping onto the operating field.

4. There must be a complete sterilization of supplies such as linen, basins, pitchers etc. by wrapping them in double thickness of cloth and autoclaving them from twenty to sixty minutes depending on what it is.
Instruments are sterilized by boiling twenty minutes in a steam sterilizer. After instruments are used they should be scrubbed with bon ami and rinsed in hot water, oiled and dried. Sometimes they are boiled again before being put away for the day. Non-boilable articles such as cystoscopes, retoscopes etc. can be put in cyanide 1:1000 for half hour. Other non-boilable instruments such as delicate eye instruments can be put in 70% alcohol for sterilizing. Rubber can be put into a disinfectant for 20 minutes. Acids and lysols never used. Catheters can be boiled.

A ligature is a free piece of suture material not threaded and 10-18 inches long. A suture is threaded on a needle and used for sewing; most sutures, catgut, comes in glass tubes in a sterile solution. The outside of these tubes are washed with soap and water, then placed in a disinfectant, such as 10% lysol, for at least 24 hours.

The catgut derives its name from the methods of preparation. There is the absorbable that is made from the submucous coat of sheeps intestine which is cleaned, dried, twisted into threads of various sizes and prepared for use by special process. It is used in most any wound, while the non-absorbable is usually used just for closing. The plain catgut lasts from six to ten days, and chromic, that has been treated with a solution of chromic acid lasts ten to thirty days.

Gloves are autoclaved for sterilization. Cautery points are sterilized by their own heat but they and the cords can be boiled five minutes and then handled by the sterile nurse.

Needles come in different sizes and calibers. The smallest in size and caliber is used in more delicate work. There are two kinds: the cutting and the round points. The cutting has two types, the trocar point and the spear point. Cutting needles are used on skin or dense tissues or in orthopedics. Round needles are used on intestinal work, brain or such delicate tissue. The needles can be sterilized by boiling or by disinfecting solution such as formalin.

Ointments and solutions are autoclaved for sterilization.

Sterile surgical dressings are applied to the wound when the operation is finished. These dressings are applied to protect the wound from contamination and further injury, to absorb drainage, and to retain or hold in approximation to the wound various ointments or antiseptics which may have been used.
They should be of soft material which will not scratch or irritate the tissues and which will absorb any discharge. They should be sterile and applied with proper pressure to give support and prevent oozing or the formation of dead spaces.

Dry dressings are usually applied to clean wounds. Ointment dressings may be used to combat infection or prevent infection or sticking of the dressing. Wet dressings are applied where there is some inflammation reaction.

In using a bandage the size should be selected according to the part to be covered. The proper size makes application easier, and gives neater less bulky appearance. You will learn the kind of bandages and how to apply them with experience. Binders are used when broad surfaces are to be covered and for additional support or pressure to an area.

The hospitals differe in their providing of ways to care for changing of dressings. Some places have a dressing room for each floor, while others have one dressing room for the hospital and dressing carts that go from floor to floor and come for all the dressings.

There are many points in doing a dressing or assisting. The observation of the following points will prevent contamination of supplies or field:

1. Never hold sterile forceps with point upward, as any liquid on it runs up to the contaminated part held by the fingers and then runs down again when the point of the forceps is lowered.
2. Never turn your back to a sterile field if you are anywhere near the field.
3. Never allow your hands when wearing sterile gloves, or holding sterile instruments, to fall below your waist.
4. Never use any contaminated or possibly contaminated supplies.
5. In using solutions always pour some of solution out first over the edge of bottle or flask before using solution as sterile.
6. Place handle of instruments off edge of sterile field so they may be picked up without contaminating the area.
7. In preparing an area always start from the center and work outward.
8. Always dress clean cases first.
9. Guard carefully against mistakes.

Chapter V

Personal In O. R.

The personal of any surgery should include only the necessary number of persons to carry on its work in a systematic and efficient manner.

In the operating room, more than in any other department of the hospital, there must be coordinative and cooperative teamwork so that the workers function as a whole and not as an individual. To have this idea work well, each member of the group must have her exact duties, for which she alone is held responsible.

The head nurse is in charge and there should be no question that she is the one that gives the orders. She must have support and cooperation so that her staff will act as one unit. Since she is responsible for everything, mistakes as well as good results, she must get good cooperation and obedience from her staff. She can explain and outline the various duties and procedures for her workers, but she must depend on their conscientiousness and reliability for their perfect execution.

Some characteristics that can help judge an Operating Room supervisor are:

1. Is she popular? She must be well liked and admired by her students and fellow workers. She can do this by always trying to help and understand their difficulties. This cannot be accomplished by being temperamental, cross or egotistical.
2. Number of post-operative infections. She must be sure that the supplies, solutions, instruments etc., are completely sterile. The best way to do this is to see that her graduates and students know how to clean, wrap, and length of sterilization needed for all supplies. Also she should frequently check on the technin used by her nurses to be sure it is correct. She must insist upon accuracy and perfect technic.
   All humans are subject to mistakes and in the operating room, each must check on the other.
3. Smooth running of the department. The operating room is like complicated machinery and it is often supercharged with nervous tension. There are many causes for this such as hot rooms. These small details cannot be overlooked if the head nurse is going to have a well satisfied and happy staff.
4. Has she tact? The head nurse has to deal with many people, namely doctors, that operate, internes, hospital doctors, directors of the hospital, heads of other departments, and her staff. This requires very delicate handling.
5. Ability to take orders and carry them out. Because she has to please so many people she has to be able to take their orders and carry them out as she is told to. She must also be able to take and profit by criticism.
6. Up to date. She has to keep up on her current literature and know about the most recent investigations along the line of surgery so that she knows what the doctors want.
7. Hmanitarianism. That is if the patient or even a student nurse is frightened, she must stop and help if only with an understanding word or gesture.

The assistant to the head nurse has her certain routine that varies with different hospitals and different head nurses. She often has the ordering to do, supervising younger students, and other tasks that are assigned to her.

There are usually some other graduates working in surgery, the number depending on the size of the hospital. These nurses help teach the younger students by being in charge of one operating room and she is called a utility nurse. She sees that the proper preparation of the room, equipment and patient is carried out.

Than she stays in the room during the operation so that she can get excess articles for the scrub nurse to prevent delay in the operation. Then, usually each graduate has one thing such as anethesia trays, pylograms, linen, solutions, cleaning surgeries etc., that she is held responsible for a certain length of time.

The student nurses are sent up to surgery in about the early part of their junior year. Their part in the surgery usually consists of scrubbing for operations mostly. The graduates are there to teach them the necessity of aseptic technic, how it is carried out, how to assist the doctors, etc.

O. R. nurses should be clean and neat in appearance. The best of health is also essential. In every O. R., no matter how busy, there come days of comparative lesiure. At such times the head nurse should gather her pupils together and question them on various points of technic, names and uses of instruments, meanings and names of different operations etc. The pupils gain much from such discussions and the head nurse finds out how much actual knowledge her pupils have acquired beyond their mere mechanical duties.

Chapter VI

The Student Nurse

The purpose of surgery in the training of the student nurse is to help her develop an appreciation of the scientific basis for aseptic operative technic and routines and their application to nursing procedures in general; to help the student acquire skill and thoughtfulness in the care of the patient in the operating room and to give her an understanding of the more common types of operative procedure and their relation to the patients safety and progress.

The actual operation, with its passing of instruments and handling of sutures, seems to the student nurse the only essential factor in her operative experience. However, there is training that is gained in the operating room that is impossible to acquire in any other department of the hospital. Sound experience in the practice of rigid aseptic technic, the ability to think and act quickly in emergencies, and the knack to cooperate as a member of a team, are for greater assets to the nurse who wishes to specialize in operating room.

Some necessary characteristics of a surgery nurse are: Physically strong because of long irregular hours, and high nervous tension, mental alertness, reaction time is short therefore she must think logically; and unfailing conscience and an unlimited patience.

These personal qualifications together with a sound knowledge of the fundamental principles and practice of a faultless aseptic technic and a keen sense of responsiblity usually meets the demands of the most exacting surgeon.

When a student comes up to the surgery for her first time she must be shown where everything is. Also a card with procedures to check off as she learns to do them during her two weeks orientations period. The following list is used by Mrs. Sharf at the Multnomah County Hospital, in Portland, Oregon.

1. Clean room after an operation.
   Sterile supplies, instruments, linen, basins, washing furniture and lights, furniture in right room, reset doctor's scrub room.
2. Gloves-- wash, patch, test, powder, mark, count, sterilization.
3. Preparation of Patient.
   Shaving, head-save the hair, abdomen-special attention to umbilicus, thyroid, breast, face, arms, legs, perineum.
4. Preparation of patient in O. R.
5. Set up Surgery before an Operation.
6. Sterilization- autoclave-water- how to operate.
7. Technique.
   hand-scrub,gown,glove, aseptic technique with forceps.
   draping-different kinds of drapes.
8. Transfusion-How to take care of.
9. Trays- Set up sterile Anesthesia.
10. Utility Room.
    wash & oil instruments, clean needles, I.V. sets, Subq. sets, transfusion set, solution.
11. Care of Specimens.
12. Utiling in Room.
    Use of Diack control, set scrub nurse up, open sterile packages, tie gowns--sponge count. Applying dressings.
13. Dressing Room.
    care of cart (instruments, solution, supplies)
    Changing of dressings.

Some things the student nurse should memorize and that are routine in most every surgery are the following rules:

1. Be systematic.
2. Strive to carry out perfect technique.
3. Be conscientious.
4. Learn to pick up.
5. Not to change any procedure without consultation with supervisor.
6. Finger nail polish is prohibited.
7. Finger nails must be kept short.
8. Learn good housekeeping. Everything removed when utilizing.

9. Seven minute scrub for all minor surgery. Ten minute scrub for all major surgery. 15 minute scrub for all orthopedic surgery.
10. Wash powder from gloves as soon as water is ready in hand basins.
11. Keep gloves wet and clean.
12. Be alert, accurate, and quick.
13. Anticipate needs.
14. Never turn back to sterile field.
15. When two nurses are scrubbed, must always put muslins on backs.
16. Do no let hands fall below waist.
17. Do not bend over table when arranging supplies.
18. Always drape nearest thing to you first.
19. A double suture is a full suture doubled and knotted in the end.
20. A single suture is ½ length, threaded through eye of needle not more than three inches.
21. Do not permit end of suture to drag over end of instruments or draping.
22. Discard sutures and supplies hanging over edge of table.
23. Never strip a suture or ligature.
24. Do not break more tubes than sutures necessary.
25. Keep reserve of suplicate suture being used.
26. Replace needle in needle holder as soon as laid down by surgeon.
27. Never hand suture to surgeon point first.
28. Place instruments within easy reach of surgeons hands.
29. In passing instruments always place handle end in surgeons hand.
30. Always discard scalpel used for skin incision under mayo table tray or towel or mayo table.
31. Always discard as dirty any instruments used in clamping or suturing the appendix.
32. Do not take scissors or knives from mayo table, wipe with sponge.
33. Keep instruments washed off and in proper position.
34. Shake linen well for instruments before putting in laundry.
35. Discard basins must be gone through carefully.
36. There must be sponge counts for major surgery, GYN, GU.
37. Provide extra sponges as needed. Throw dirty sponges away from you.)
38. Be sure sponge count is o.k. before giving suture for closing peritoneum. (not behind you.)
39. Provide basin for Doctor to put dirty G.I. instruments in.
40. Have specimen pans ready.
41 Suction must be put up and attached as soon as possible.
42. Watch supplies & ask for more before they are all gone.
43. Have final dressings in readiness.
44. Be responsible for necessary supplies & equipments in room.
45. Be responsible for cleaning after operation, arranging instruments on drain board.

The following outline covers twelve lessons in operating room technic for students that should be given previous to their experience in surgery.

Operating Room Technique.

Outline

Lesson I- Orientation.
- Tour of Surgery.
- Antisepsis & asepsis-Sterilization.
- Requirements for a surgical nurse.

Lesson II
- Arrangement of furniture in rooms
- suffixes and defination of.
- housekeeping of rooms and equipment.
- Transporting patient.
- words to look up-kinds of operations.

Lesson III
- Operating Room- size,ventilation, humidity, etc.
- Personal
- Orientation of student thru surgery.
- Plan of work-Basic routine to follow.

Lesson IV
- Complete set up of one surgery.
- weekly schedule for surgery.
- Certain cases in certain rooms.
- Positions of patient on table.

Lesson V
- Instruments
- Complete appendectomy set.

Lesson VI
- Sutures
- Drains

Lesson VII
- Anesthetics - Dressing Room
- Needles - Pylograms

Lesson VIII
- Duties of a scrub nurse.

Lesson IX
- Set up for different operations
  - Drapes, gloves.

Lesson X
- Duties of utility nurse
- Probably have to continue lesson IX

Lesson XI
- Watch an operation.

Lesson XII
- Exam.

Following each month it might be advisable for the student to self evaluate her own progress in surgery. The following is a sample:

Self-evaluation in Surgery (scrub nurse)

1. Organization
   Complete room set up in short time.
   Perfectly sure of what she is to do and why.
   Is able to associate her instruments with the type and can organize her work so has plenty of time for everything.
2. Accuracy and punctuality.
   Never keeps the doctor waiting.
   Knows the kind of operation well enough so she knows the type of instruments the doctor next needs.
   Always has everything that is to be used usually in her room.
   Is accurate and punctual with recordings.
   Is speedy and does not get excited.
3. Dependable.
   Has initiative and not afraid to use it.
   Is neat in appearance and type of work she does.
   Can receive an order and carry it out as told.
   Can shoulder some responsiblity.
4. Technic of procedures:
   Has good technic.
   Can and does change the procedures when necessary.

The student usually spends three months in surgery and should be rotated through so that she gets time spent on each service. They should enjoy their time spent here and feel that they have profited or the experience has been almost wasted.

Chapter VII

The Patient

In regard to the patient the essential characteristics of a good nurse are effieiency, conscientiousness, and pleasing personality. By efficiency is meant general knowledge of the condition of the patient and what he is being treated for,and ability to carry out order with the least mental and physical disturbance to the patient. The conscientious nurse will see that the patient is cared for properly and records kept up. The personality of the nurse is the most important and requisite from the patients standpoint.

A pleasant voice and smile and a cheerful willingness will make the greatest impression, help him through his illness, improve his mental attitude and help greatly in the rapidity of recovery.

The care of the patient on the table is usually in charge of the utility room nurse. It is important to avoid chilling; that the chest and unexposed parts are well covered and that artificial heat is used if necessary. The position must be as comfortable as possible, the arms supported preferably at the sides and avoiding tight constrictions on an arm hanging over the side of the table. Each operation demands a different position and the patient must be made comfortable no matter.

Nursing Care Studies* cont.

B. Operative care.
   1. Care during operation- warmth, etc.
   2. Asepsis- how created & maintained.
   3. Technic of operation- medical findings, reviewing anatomy, drawing.
   4. Condition of patient on leaving operating room.

C. Post-operative Care.
   1. Resp. in taking patient to room (warmth, vomiting)
   2. Placing in bed- reassuring pt. and relatives.
   3. T.P.R.
   4. Nausea, vomiting, complications, pain.
   5. First dressing- when, condition of wound
   6. Up out of bed.
   7. Condition on leaving hospital.

D. Ethics of conversation regarding operation both in and out of hospital.
E. What might have prevented need of operation.
F. Things learned.
G. References used and read.

Post-operative treatment and nursing care.
Conferences.
Conclusions- Students most significant observations on nursing situation and what learned from this study.
Bibliography
Aims of student making nursing care studies.
Improve ability to solve nursing problems as an individual by detailed study. Realize need for understanding each patient as an individual. Aware of significance of preventive aspects of nursing and including interest in health teaching in hospital.
Become familiar with work of other agencies-learn to collect information about patient with tact.
Record nursing observations in organized system- work out nursing plan to fit needs of patient- become familiar with professional literature.

* Jenson, Deborah- Nursing Care Studies- MacMillan 1940

Chapter IX

Student Experience Record *

Proceedures to be mastered in connection with O.R.P.

Appliances- care and manipulation of.
Autoclave- care & operation of.
Cap and masks.
Drains- Rubber
Draping & position.
Patient- abdomen, breast, ear, eye, extremities.
head, neck, nose, throat, pelvic, spine.
Tables.

Preparation of operating field.
gauze- preparation and sterilizing
iodoform
packing-plain
abd. packs.
squares
vaseline.
Gloves- prep. & sterilizing.
Instruments- Cleaning & sterilizing.
Needles.
Lights- manipulation-cleaning- sterilizing.
Linen folding- wrapping.
Plaster- making- wringing of.
Pus cases- procedure after & before.
Solutions- Prep. & sterilizing.
Suctions- care of manipulation
Tanks-water, care of.

General Surgery.

Appendectomy.
G.B. operation (names)
G.I. operation (names)
Herniotomy
Mastectomy
Plastic operations (names)
Thoracoplasty
Thyroidectomy
GYN.
Pelvic abd. surgery (names)
Pelvic floor surgery.

Neurology
Cranial (names)
Spinal (names)
Ophthalmology
(names)
Orthopedics
Amputations
Bone Surgery (names)
Costs-
Otolaryngology (names)
Tonsillectomy
Tracheotomy
Urology
Cystoscopy
Bladder (names)
Kidney (names)
Prostatectomy
Supra pubic
Transurethral

* Students Experience Record- University of Minnesota School of Nursing.

Chapter X

Conclusion

This paper has attempted to briefly summarize the methods of surgical and nursing care and to assist in coordinating the activities of the nurse and the physician to the best interests of the patient.

A surgery supervisor or head nurse has more work to accomplish than in any other department. The teaching of her student nurses and the smooth running of the surgery are her two main objectives. Considerably more changes are coming up with the advance of surgery and nursing methods.

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