PROGRESSIVE PATIENT CARE

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The 2 overriding factors which concern hospital administrators are the very high cost of hospitalization, and the relative shortage of trained and untrained nursing staff. In America the average cost per patient per day, for hospital care, is about R23, and a further R40 for a private duty nurse when constant nursing attention is required.[1] The cost per patient per day at the Groote Schuur and Red Cross Hospitals are R12.83 and R13.67, respectively.[2] The cost of equipment is also tremendous. It is therefore felt that by grouping patients according to their dependency on the amount of nursing care needed, the necessary economies could be effected. Thus has come the concept of progressive patient care which, it is claimed, not only conserves nursing skill, but also gives better care to the patients and thereby reduces the length of their hospital stay.

In an effort to relieve nurses of all non-nursing tasks, it seems sensible to place highly-skilled trained nurses where their skills are needed most and to use nursing trainees, auxiliaries and nursing assistants for patients who do not require constant skilled nursing attention. It is illogical to place critically ill patients, needing constant nursing attention (coupled with the use of complicated and noisy equipment) in beds adjacent to those occupied by ambulant or convalescent patients who need an entirely different environment. Ambulant or convalescing patients should not be kept awake at night by the comings and goings of nurses and doctors ministering to the seriously ill patients in the same wards.

Patients should be grouped according to their degree of illness and their dependency on the nurses' skills, rather

than by the classification of their diseases. This idea does away with the established trends of thought in present-day hospital practice.

The nursing staff will be divided into the following units:

(*i*) Intensive care unit
(*ii*) Intermediate care unit
(*iii*) Self care unit

Recently 1,700 ex-patients treated at the Manchester Memorial Hospital over a 2-year period, were quizzed about their experience of progressive patient care, and it is reported that, almost without exception, they were enthusiatic about this.[2]

Percentage of Total Beds for the Different Units

This has been investigated over some years, and patients have been classified carefully according to the number of nursing hours required over a period of 24 hours. The percentage of beds for the different categories of patients were suggested as follows:[3]

(*i*) Intensive care unit ..... 10 - 12%
(*ii*) Intermediate care unit ..... 60 - 70%
(*iii*) Self care unit ..... 10 - 12%
(*iv*) Others, e.g. continuation or rehabilitation unit ..... 5 - 8%

The method of policy of progressive patient care can be applied:

(*i*) To the entire hospital, such as the Manchester Memorial Hospital, or
(*ii*) to different sections or specialties in the hospitals, such as at St. Mary's Hospital, Rochester, Minnesota. In this instance the intensive care unit can be used solely for certain types of patients (e.g. cardiac or neurosurgical patients), or
(*iii*) to a floor, or even to individual wards of a hospital, such as the Walter Reed Army Hospital, Washington.

There is no need for extensive building operations to institute progressive patient care. Any hospital, or any section of a hospital, can be so altered as to fit in with this scheme of things. A great deal will depend on the needs of a particular hospital.

INTENSIVE CARE UNIT

The basis of intensive care is really 'intensive observation'. Instead of the 'special nurse' being ordered to come to a general ward to observe a very ill patient, it is the very ill patient who is taken to the specially staffed and equipped unit for observation and treatment. These units are designed for the admission of acutely ill patients of either sex, regardless of diagnosis, but needing constant nursing attention throughout 24 hours. Where the unit serves one section of the hospital, the size may vary from 3 to 12 beds. A large intensive care unit serving a whole hospital may have as many as 35 beds. The unit is best divided into 2, 4 or 6-bedded wards. One or two single-bedded wards may be advisable for infectious cases or for those with respiratory problems.

It is important that a good deal of space is given to each bed, much in excess of that given in ordinary wards. This is essential because of the bulky equipment required for observation and treatment. The nurse's station is of great importance and it must be so placed as to give observation of all the patients in the room, however many beds it may contain. In addition to visual control, some plans are now being made for auditory control of the larger units.

Type of Patient

Any severely ill patient with the slightest chance of recovery should be admitted to the intensive care unit.[4] Patients in the terminal stage of a disease, e.g. those with advanced malignancy, should not be admitted to intensive care units. It is most undesirable that patients should obtain the idea that it is to this unit that people are admitted to die.

The following patients are suitable for care in an Intensive Care Unit:

Patients with multiple injuries
Patients requiring maintenance of an adequate airway, e.g. tetanus, or overdosage of respiratory-depressant drugs
Patients requiring relief from severe shock, from whatever cause
Patients undergoing major operations, particularly those on intravenous therapy and gastric suction
Severely burnt patients
Uncontrolled diabetics
Patients with myocardial infarction
Patients with severe infections—a large proportion of patients requiring intensive care are infectious and these patients are a potential source of infection to other patients. The need for single-bedded wards and barrier nursing must be stressed.

Policy for the Unit

There should be very strict criteria for admission to this unit, and a senior medical officer is usually selected to make decisions on admission and discharge. This should be done in consultation with the patients' own doctors, who are actively engaged in the treatment. The specially selected senior medical officer, however, decides whether the patient is ill enough to remain in the intensive care unit, and it should be agreed to abide by his rulings. It is found that the usual length of stay in the intensive care unit is from 3 to 5 days.

Visitors should be restricted to the immediate family and a special room for visitors should be available near the unit. It is also important to have special rest rooms for nurses and doctors close by.

Equipment

Important features of the intensive care unit are the following:

(*i*) For specific therapy, requirements are piped oxygen and suction and efficient artificial ventilator with humidifier. Facilities for a pacemaker and defibrillation for cardiac patients. Specially adapted railings for the suspension of intravenous bottles or sphygmomanometers. Sound-proofing and air-conditioning are essential. Special bedside lockers, wash-basins, trays, etc.
(*ii*) To allow greater numbers of patients to be handled by the nursing staff there should be suitable beds, which can easily be moved and whose positions can

be altered by the smallest nurse. Beds are usually 8 ft. apart, from centre to centre. Special intercommunication systems, enabling nurses in the subsection to talk with those in the main unit, while continuing to maintain visual observation of the patient.

(*iii*) Monitoring equipment. These specialized machines can never replace a skilled doctor or nurse in constant attendance, but are important additions.

Nursing Staff

The role of the nurse is the frequent observation of vital signs, e.g. the recording of fluid intake and output, the observation for signs of shock, haemorrhage, respiratory difficulty and increased intracranial pressure. It is suggested that there should be 1 trained nurse for each patient, with the addition of student nurses and State registered nurses, working 3 shifts per day. The nurses in this unit will have to deal with an assortment of consultants and their teams. Difficulties may arise because the continuity of treatment can be broken at 2 points; firstly, different doctors may result in partial responsibility towards the patient and secondly, nurses work on a shift system.

Effects of this lack of continuity can only be overcome by the goodwill of all concerned.

There are many problems with regard to nursing in this unit. The nurse must grow used to a mortality of at least 15 - 20%,[5] and will not get the satisfaction of nursing the cases through to final recovery. They must be able to withstand the strain of nursing only very ill patients. Student nurses should spend up to 6 weeks in this unit as part of their training.

Medical Staff

A consultant or senior medical officer with particular interest in physiological and metabolic aspects of disease and injury should be available or have administrative charge. His colleagues should be able to seek advice from him on matters of fluid, electrolyte and acid-base balance. A consultant anaesthetist on the staff of the unit is also advised. An unexpected benefit from this unit is consultation between many specialists in the various branches of medicine and surgery. All medical instructions should be in writing and should be signed before they can be carried out. This is the only way the nursing staff can be protected from confusion by a multiplicity of medical instructions.[6]

Pathological Services

The pathological laboratory should not only be situated nearby the unit, but the service should be available 24 hours per day. The Micro Astrup apparatus and a pCO_2 electrode for the assessment of pH, pCO_2 and pO_2, and standard bicarbonate, should always be ready for use to diagnose and correct severe degrees of metabolic and respiratory acidosis.

The Cost

It is estimated that the cost to the patient would be under half if he were cared for in the intensive care unit, as compared to a general ward with the addition of a private duty nurse.[1]

INTERMEDIATE CARE UNIT

This accommodates 60 - 70% of the patients in the hospital or of that section. In this section of the hospital the services provided are similar to those provided in the usual medical or surgical wards, but without the very acutely ill patients. Patients in this section are often seriously ill without complications, but as the very acutely ill group has been removed from this section, it no longer calls for the very highly specialized equipment and the ratio of trained nursing staff to patients can also be lower. A large proportion of patients are admitted to, and discharged from this unit without transfer to any other section of the hospital. Many patients can be transferred to this section from the intensive care unit. In this unit the nurses may need to teach the techniques of ambulation following operation.

SELF CARE UNIT

In this section the patients are ambulant and physically self-sufficient, and could well be attended to by State registered nurses or nursing auxiliaries under supervision of trained nurses. The unit is simple and homely, and no elaborate equipment is necessary. Single rooms may be provided with toilet facilities, or there may be larger wards. In this unit, patients may be admitted for diagnostic procedures, radiotherapy, or for preparation of major operations and they may be transferred from other sections of the hospital to this unit for convalescence. The nurses' role in this section is also different, in that there is no intense nursing needed—the care is supervisory and in co-operation with the medical and catering staff. This section of the hospital, if separated from the usual hospital ward, would prove of great benefit to patients as it would save hospital beds for those who need hospitalization, and would free trained nurses for other work.

This unit has the great advantage of being much less expensive in personnel than the ordinary type of ward. Of great importance is the fact that in these units there is time to rehabilitate the patient properly. In this section there is an ideal opportunity for the student nurse to link up with the public health nurse, and to learn something of the importance of follow-up care and perhaps to pay some home visits. This is also an ideal section for the introduction of general practitioners into the hospital. In this section of the hospital they can learn of their patients' illnesses, get to know them and also to prepare their patients for the life these people are to lead in the community. It is an excellent set-up where the general practitioner can be re-introduced to his patient, to hospital service and to the consultants of the hospital. It will be an ideal situation where the services of both hospital and domiciliary organizations could be combined. There are great possibilities here for drawing in the general practitioner, the home-visiting nurse and the health visitor to facilitate and continue the care and support of the patient on his or her return home.

RECOVERY ROOM

The post-anaesthetic recovery room is quite separate from the intensive care unit. The recovery room is situated on the same floor as the operating theatre, and is required for those patients who need to recover from the effects of the anaesthetic at the conclusion of the operation. Upon recovery, these patients may then be admitted, either to the intensive care unit, or to the intermediate care unit, de-

pending upon the severity of the operation. This unit is equipped with new adjustable beds, oxygen tent, piped oxygen and suction apparatus to each bed.

CONCLUSIONS

With the increasing demands made by ill patients on hospital facilities, it is important that we adopt the newer and more economical progressive patient care and principles. This method of treatment and care is being adopted by more and more hospitals in America and Europe, and we, in this country, should give this matter serious attention.

SUMMARY

The need for progressive patient care is stressed. Care in hospital can be divided into intensive care, intermediate care and self care. These various units are described. A suggestion is also made as to the role of the general practitioner in this scheme.

My interest in progressive patient care was stimulated as a result of discussions with Mr. R. Raven, Senior Surgeon, Royal Marsden Hospital, and with Mrs. Kathleen Raven, Chief Nursing Officer, Ministry of Health, England. My thanks go to them for patiently supplying me with much detail and literature on this subject. I also wish to thank them and the matron of the Royal Marsden Hospital, for showing me round their newly-built intensive care unit and recovery ward.

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