THE ECONOMICAL USE OF THE HOSPITAL BED AND OF THE NURSE*

BY

E. B. BROOKE, M.B., M.R.C.P., D.P.H.

Medical Superintendent, St. Helier Hospital

AND

J. P. WETENHALL

Secretary, British Hospitals Association

Much of the content of this memorandum is not new matter. We have, however, deliberately attempted to incorporate a brief reference to the more important aspects which bear directly on the problem of the shortage of nurses. We have done this because we are strongly of the opinion that this problem is not resolvable by piecemeal approach, and that its solution depends upon a simultaneous attack on all its various angles as revealed in a survey which must of necessity be wide.

Although the qualitative and quantitative needs of the nursing profession have already received consideration [see the memorandum on "Recruitment and Training of Nurses," submitted to the Ministry of Health jointly by the B.M.A., the B.H.A., and the Medical Superintendents' Society (Part II, Paras. 5-10)—and Addendum by the B.H.A.] it is in connexion with the quantitative aspect that the wider survey is essential.

First the unwelcome fact must be realized that the supply of nurses, actual and potential, if used as hitherto, is and will remain inadequate on account of the woman-power position, as is starkly evidenced by official statistics. In consequence it becomes imperative to view the problem of nurse-shortage not only from the aspects of recruitment and training but also from other closely related aspects, in particular the economical use of the nurse and of the hospital bed. It is convenient first to consider the latter factor.

A. Economical Use of the Hospital Bed

The Nature and Purpose of a Hospital.—There may have been an undue tendency to regard a hospital as primarily a place which provides beds for the reception of the sick—with the specialist and ancillary services as an aid to diagnosis and treatment *after* admission—and so to measure the scope and importance of the individual hospital in terms of beds. The consultative and therapeutic facilities in out-patient departments—which, with a few notable exceptions, have been confined to the erstwhile voluntary hospitals—have not been sufficiently developed as one of several means of affording some relief on bed pressure and also as a means of extending the scope of the work of a particular hospital. We stress the importance of relieving bed pressure not only because a vast growth in the number of available hospital beds is unlikely within the next decade but also because the mere addition of beds itself aggravates the problem of the shortage of nurses without necessarily securing the more efficient provision of hospital treatment. This part of our survey is therefore concerned with any measures which, without undue inconvenience to the patient, can be employed to secure a more economical use of hospital beds at present available.

Out-Patient Departments.—While avoiding extremes, it is possible to regard a hospital more as a polyclinic with beds than as a ward-nucleus with ancillary departments. This approach paves the way to greater discrimination in the selection of patients for admission to wards for acute cases, as contrasted with admissions to a hospital bed of some kind or other. A general extension of consultative and therapeutic out-patient facilities to the hospitals that do not at present possess them is therefore a first step towards avoidance of the admission of patients to a hospital bed in default of other facilities for treatment. The out-patient department also provides the services for determining what type of accommodation

is appropriate where admission is necessary, and is therefore a twofold factor in promoting the economical use of the existing beddage. Even if health centres were ultimately developed along lines which included much of the consultative specialist service at present available only in hospital out-patient departments, the latter would still be necessary, partly as a screen to determine the nature of the accommodation appropriate to the individual patient and partly to provide out-patient treatment in relief of beds.

Short-stay Hostels, Recovery Annexes, or Convalescent Hospitals, and Provision of Various Kinds for the Chronic Sick and for the Elderly and Infirm.—In respect of these three items as aids to the economical usage of "acute" hospital beds, to avoid repetition we would only refer with general agreement to the B.M.A. memoranda "The Care of the Elderly and Infirm" and "The Right Patient in the Right Bed." In particular, we think that in a variety of cases much more use could be made of the patient's own home if appropriate procedures for care, visiting, and supervision were thought out and applied. The services of the voluntary worker could be especially useful in this field. For instance, in the neighbourhood of the St. Helier group of hospitals a "meals on wheels" service for chronic invalids in their own homes has been started by the W.V.S. This domiciliary scheme, with the backing of district nurses and home helps, is reproducing in the home many of the facilities normally available only to hospital in-patients. It is hoped soon to include a laundry service, and already, with the aid of transport, much that the hospital has to offer, both of consultative advice and of treatment, is being made available to these patients without ever admitting them to its wards. We would lay great emphasis on the need for utilizing to the full all such resources as may protect the acute hospital bed from use for other than its proper purpose.

Administrative Procedure of Admission to Beds.—The economical use of beds (i.e., avoidance of wastage by non-occupation between discharges and admissions and by over-lengthy stay) is largely dependent on efficient administrative arrangements for admissions, and on the existence of sound contacts between the administration and the clinicians in charge of beds. Regional bed bureaux perform a most useful function in dealing with emergencies; but admissions, or acceptance of responsibility for alternative arrangements, should normally be undertaken at management committee (or where necessary at component unit) level, and thus the group would be imbued with a sense of its responsibility to the sick in the geographical area which it is intended to serve.

The Hospital Group.—It may well be that the principle of grouping provides the National Health Service with its greatest opportunity for improvement in hospital resources. The initial grouping of hospitals—to enable the Service to operate on the appointed day—was necessarily undertaken at short notice. It is therefore reasonable to hope that the groupings themselves, and the purposes for which beds may have been initially allocated, may be subject to review and readjustment in the light of experience. Since one at least of the purposes of grouping hospitals is to provide an integrated and more comprehensive service, it follows that the group must within itself provide, *inter alia*, suitable alternative accommodation for patients requiring admission but not admission to an acute ward.

For example, it may be possible to increase the output from the group as a whole by the provision, even from its existing resources, of beds in recovery annexes or convalescent hospitals so as to make the fullest possible use of the specially equipped and staffed acute beds. Or, again, it may prove necessary to supply a group with ancillary accommodation—e.g., of hospital-recovery type—at present non-existent. And, yet again, the question of invalid settlements and long-stay annexes for the chronic sick and of their contiguity to one or more of the well-equipped hospitals in the group requires urgent consideration and solution. Underlying all such considerations is the necessity on the one hand to have regard to the convenience of the patient—e.g., by avoidance of long journeys and of undue separation from relations—and on the other hand to facilitate continuity of medical supervision of his case.

The group can in our view greatly increase not only its total output but even its range of service if individual clinical departments have a balanced complement of acute and recovery (or long-stay) beds—not necessarily all within the same curtilage

*This memorandum was originally prepared for, and is now under consideration by, the B.M.A. Committee on Nursing, of which the joint authors are members.

—to meet their particular requirements. This is supported by experience gained in the thoracic unit at St. Helier Hospital.

Nurse-Staffing for the Hospital Group.—A further consideration in the matter of grouping which is of fundamental importance in connexion with the nursing problem is that the group must be of such size and be so arranged that it is reasonably self-contained for its purpose, but able to regard itself as one entity. Each group should therefore provide its own nurse-training school. Since the formation of a particular group may be much affected by local conditions it would be unwise to dogmatize on such matters as maximum size. What does matter—and in particular from the point of view of nurse-staffing—is that the group should be a close-knit body with a strong *esprit de corps* and a full sense, both at its centre and throughout its components, of a common duty to the neighbourhood which it serves. This set-up will facilitate the circulation of the nursing staff throughout the component units of the group in a manner comparable with the established practice of posting from one ward to another in the same hospital.

Where a group is centred round a "special" hospital the position regarding its nurse-training school must remain as dealt with in Paras. 22-23 (Part III) of the memorandum on "Recruitment and Training of Nurses." Where for some reason a group is not self-contained interworking between contiguous groups may be necessary, particularly for certain types of specialized investigation and treatment; but such interworking should *not* involve the transfer of nursing staff from one group to another.

The higher output obtainable from the acute wards by greater selectivity of admission, the provision of recovery annexes, etc., would, generally speaking, involve an increase in the nursing staff of the acute wards which in some cases would be substantial. This need for more staff in one section may, however, be more than offset by economies in nurse-staffing in other directions, as shown in Section B below.

B. Economical Use of the Nurse

This part of our memorandum deals with a more difficult aspect of the problem, and one which is more open to controversy. We therefore approach it from the point of view of exploration.

The Nature of Nursing

It is impossible to approach the matter of the economical use of the nurse without some agreed conception of the essential nature of the nurse's work. No definition has so far been offered in reply to the questions so often asked recently on precisely what nursing is and what is the function of the nurse.

Without attempting a precise definition we would suggest that nursing comprises two main and distinct functions: one is to minister to the patient's comfort; the other is to assist the doctor in safeguarding the patient and in the progress of the case. It is on this conception of nursing that we base the considerations which we venture to submit below. Nor is this basis merely hypothetical, since it accords with actuality. To illustrate the point, at one side of the scale there are untold numbers of infirm and sick people who are daily nursed in their own homes by relations or friends. The services thus rendered relate, though not exclusively, to requirements connected with the patient's comfort. This contrasts with the other side of the scale, where the highest degrees of nursing skill are called for.

It follows, therefore, that the division of nursing function as between comfort and skill enables nursing requirements themselves to be subdivided into those of skilled nursing and unskilled nursing. It therefore becomes possible to consider in practical terms how waste of skilled nursing can be avoided by ensuring that it is applied only where required and that full use is made of unskilled nursing wherever appropriate.

Is it possible, as a primary step towards the economical use of the skilled nurse, to approach the problem of nursing staff in the wards—no matter what their type—in such a way that the highest degree of nursing skill is combined with the unskilled devotion met in the home? In our view this is possible, and is indeed inevitable; but its achievement depends upon factors which may involve a reorientation of view and may even

be regarded by many as revolutionary. For example, the skilled nurse will need to have a greater realization of the two-sided nature of her work. One side, of course, is the exercise of her skill on a particular patient requiring it; the second side is the avoidance of wasting her time on duties which fall within the competence of others not possessing her skill. This involves a conscious realization of her nursing duty as a supervisor of unskilled nursing and is the starting-point in the economy of effort, since unless she is trained in the art of delegation the skilled nurse cannot make the greatest or the most effective use of her own training and experience.

These considerations apply strictly to economy of skilled practical bedside nursing and are not intended to refer to ward administration or to imply the up-grading of a staff nurse into a junior ward-sister.

Nursing Aides

It being established that the skilled nurse must herself exercise a discretion regarding which of her patients require more of her personal attention and which require less, there follows the need to provide her with appropriate personnel to whom she can delegate. Under no circumstances must the nursing aide be confused with the domestic or semi-domestic ward worker. His or her alignment should, on the contrary, be intrinsically with the ward nursing team. A proper—even safe—use of the nursing aide cannot, however, be made unless the right type of recruit is attracted to the work (quite as much a question of status as of pay), and unless the general orbit of the aides' duties is clearly demarcated and they receive adequate encouragement and a short preliminary training. Actual experience of their satisfactory use appears to have been obtained by hospitals that have seriously addressed themselves to the experiment.

Non-Nursing Duties

We have avoided referring to matters of smaller moment, obvious though they are in themselves: for example, elimination of the practice of employing nurses on non-nursing duties, such as chaperonage and certain administrative work. We would, however, make passing reference to the importance of a memorandum by King Edward's Hospital Fund (*Lancet*, Aug. 14, 1948, p. 266) on the loss from hospitals of newly trained staff, and to their plea for the employment of suitably trained non-nursing personnel in the public health nursing field wherever possible.

Conclusion

The idea that a person without a nursing qualification should be allowed, either nominally or actually, to undertake any form of nursing duty may at first glance be distasteful to many. At the risk of repetition, however, we would once again stress the fact that, on account of the woman-power position alone, nursing requirements cannot be met unless measures of this kind are studied, evolved, and implemented. It is sheer necessity that is the spur. Surely it is better to make a virtue of necessity and to solve the problem by its frank realization.

Summary

The problem of nurse-shortage can be solved only by multilateral approach.

Two aspects of this problem which have as yet not received due attention are the economical use of the nurse and the economical use of the hospital bed.

The economical use of the hospital bed can be achieved by: (a) the conception of a hospital as a polyclinic with beds rather than as a ward-nucleus with ancillary facilities; (b) economy in the use of beds in well-equipped hospitals by a greater selectivity of admissions; (c) the provision of a balanced bed complement—within the group—e.g., acute, recovery, and long-stay; (d) the provision of short-stay hostels in conjunction with out-patient departments; (e) the provision of various kinds of accommodation for the chronic sick of all ages and for the elderly and infirm; (f) efficient administrative procedure for admissions to avoid wastage of beds.

The group must form one entity, as this is essential to: (a) *esprit de corps*; (b) nurse-training and staffing; (c) its shouldering of responsibility for the sick in its area.

The economical use of the nurse may be achieved by: (a) recognition of the fact that not all nursing is skilled nursing; (b) recognition that the duties of all skilled nurses should include a supervisory function; (c) provision of appropriate personnel to whom unskilled nursing can be delegated under supervision; (d) recognition of the importance both of the training and of the status of the nursing aide.

As official woman-power statistics show, the problem of nurse-shortage demands a fresh outlook if it is not to remain intractable.

THE KING'S HEALTH

OPERATION FOR LUMBAR SYMPATHECTOMY

The following bulletin was issued from Buckingham Palace on March 8:

The King's general health continues to be excellent.

In the left leg the flow of blood has been restored in the main arteries to a satisfactory degree.

In the right leg the main artery is still obstructed and the circulation is being carried on, less efficiently than in the left leg, through a collateral circulation.

With a view to improving the blood supply to the right foot, and to safeguard this for the future, we have advised his Majesty that the operation of lumbar sympathectomy should be performed on the right side. The King has accepted this advice and the operation will be performed at an early date.

MAURICE CASSIDY. J. R. LEARMONTH.
THOMAS DUNHILL. J. PATERSON ROSS.
HORACE EVANS. JOHN WEIR.

On Saturday, March 12, the next bulletin stated:

The operation of lumbar sympathectomy was performed on the King at 10 a.m. His Majesty's condition is entirely satisfactory.

MAURICE CASSIDY. C. J. LONGLAND.
THOMAS DUNHILL. J. PATERSON ROSS.
HORACE EVANS. A. J. SLESSOR.
JOHN GILLIES. JOHN WEIR.
J. R. LEARMONTH.

A further bulletin, issued on Saturday evening, read:

The King has had a restful day. Temperature, pulse, and respiration rate have not varied from normal, and his Majesty's recovery from the operation is proceeding smoothly.

MAURICE CASSIDY. J. R. LEARMONTH.
THOMAS DUNHILL. J. PATERSON ROSS.
HORACE EVANS. JOHN WEIR.
JOHN GILLIES.

A bulletin issued on Sunday morning stated:

During the night the King has had periods of sleep. Temperature, pulse, and respiration are normal. His Majesty's condition and progress are those usual after lumbar sympathectomy.

MAURICE CASSIDY. J. R. LEARMONTH.
THOMAS DUNHILL. J. PATERSON ROSS.
HORACE EVANS. JOHN WEIR.
JOHN GILLIES.

A further bulletin issued on Monday, March 14, confirmed that the King's general condition remains satisfactory.

It is understood that the operation was performed by Professor J. R. Learmonth, professor of surgery at Edinburgh University, with Professor J. Paterson Ross, professor of surgery at London University. The anaesthetist was Dr. John Gillies, director of the department of anaesthetics at the Royal Infirmary, Edinburgh. Professor Learmonth had the assistance of Dr. A. J. Slessor, medical superintendent and assistant surgeon to the Western General Hospital, Edinburgh, and Professor Ross was assisted by Dr. C. J. Longland, first assistant in the surgical professorial unit of St. Bartholomew's Hospital.

Professor Learmonth remained at the Palace throughout Saturday night and Sunday.

TUBERCULOSIS IN ENGLAND AND WALES

MINISTRY STATEMENT

A recent statement issued by the Ministry of Health points out that the present situation regarding tuberculosis in England and Wales needs to be judged against the background of the progress made during the period between the two world wars. Between 1918 and 1939 the number of deaths from all forms of tuberculosis fell from about 58,000 in 1918 to about 25,600 in 1939. Then in 1940 and 1941 the number of deaths rose to over 28,000. This increase, however, was checked, and the figures for 1942, 1943, and 1944 were approximately 25,500, 25,600, and 24,100. The fall continued in 1945 and 1946, when deaths numbered 23,955 and 22,847, respectively, rising slightly in 1947 to 23,550.

These mortality figures are the most reliable criterion of the trend of tuberculosis, as against the numbers of notifications of the disease, which are not necessarily an accurate reflection of its incidence. It is observed, however, that the numbers of deaths in the war years, unexpectedly favourable though they were, were higher than they would have been if the pre-war rate of decline had continued; the number of notifications rose above and still remains above the pre-war level. In 1918 the total number of formal notifications was about 90,000; in 1938, about 50,000; and it has since been as follows:

1939	..	46,000	1944	..	54,000
1940	..	46,600	1945	..	52,000
1941	..	51,000	1946	..	51,300
1942	..	52,600	1947	..	51,700
1943	..	54,000			

The relation between respiratory and non-respiratory types of tuberculosis, which hitherto has shown no substantial deviation from year to year (although such a factor as increasing pasteurization of milk may materially affect the incidence of non-respiratory tuberculosis as time goes on), may be gauged from the fact that in 1947, of the total of 23,549 deaths, 20,156 were due to respiratory tuberculosis.

The admission of patients to tuberculosis institutions for treatment with reasonable promptness continues to present a serious problem. The reason for this is not the lack of sufficient accommodation but the persisting shortage of nurses. The number of patients under institutional treatment at June 30, 1948, was about 29,200, while the number on the waiting-lists for such treatment was about 9,000. The number of new patients who came on the registers of tuberculosis dispensaries in the quarter ended June 30, 1948, was about 13,000.

Developments in the Tuberculosis Service

The introduction in 1942 of mass miniature radiography to detect respiratory tuberculosis in its earlier stages constituted an important advance. Owing to the wartime limitations on the production of the apparatus and on the availability of medical man-power it has been possible to provide these mass radiography units only gradually in selected areas of the country. By Dec. 31, 1948, there were 37 of these units in operation in England and Wales, and the Ministry itself operates one at a fixed centre in London as a training and research unit. By June 30, 1948, about 2,500,000 persons had been examined, of whom approximately 94% were found normal at the time of examination. The number of cases in which clinical investigation following evidence of abnormality in the miniature film led to diagnosis of active tuberculous conditions was approximately 9,564, or between 3 and 4 per 1,000 of all the persons examined.

Under the National Health Service Act the responsibility for the tuberculosis treatment services—namely, institutional and out-patient services, including the mass radiography service—passed on July 5, 1948, from county and county borough councils to the regional hospital boards, though the local authorities remain responsible as the local health authorities under the Act for the preventive and care and after-care work in relation to tuberculosis.

Under the National Assistance Act, persons who suffer a loss of income in order to undergo treatment for respiratory tuberculosis and need financial help over and above such statutory