

Papers and Originals

Institutional Care of the Mentally Subnormal*

THOMAS McKEOWN,[†] M.D., PH.D., D.PHIL., F.R.C.P.; IAN LECK,[‡] M.B., PH.D.

Brit. med. J., 1967, 3, 573-576

The trend of progressive opinion concerning the hospital care of the mentally subnormal is well expressed in a Ministry of Health Memorandum [(65)104] on *Improving the Effectiveness of the Hospital Service for the Mentally Subnormal*. It states: "In the absence of complicating conditions, such as severe physical disability or disturbed behaviour, the severely subnormal patient who has been adequately investigated and treated ought not to be primarily the responsibility of the hospital services for long-term care. Ultimately, when facilities outside hospitals are fully developed, continued hospital care will be necessary only for patients who require special or continuous nursing and for those who, because of unstable behaviour, need the kind of supervision and control provided by a hospital." Our object in this paper is to estimate the proportion of patients now in hospital who, according to these criteria, require hospital care and to consider the future organization of institutional care of the mentally subnormal in the light of the findings.

In 1965 an investigation was made of the needs of all (1,652) Birmingham patients (874 male and 778 female) in 13 hospitals for the subnormal in the Birmingham area. Each patient's requirements were assessed by a hospital doctor and nurse in charge of the ward. A previous report (Leck, Gordon, and McKeown, 1967) showed that in most respects Birmingham patients were similar to the subnormal in all hospitals in England and Wales. The exceptions were the lower proportion of young patients in Birmingham hospitals (accommodation for them in the area is deficient) and the higher proportion classified as "severely subnormal."

Classification of Patients According to their Needs

The earlier paper gave details of patients' requirements for medical care, nursing care, training, and occupation, and the

TABLE I.—*Classification of Patients According to Type of Care Required*

Care Required	No.	%
Investigation or active hospital treatment	7	0.4
Mental and basic nursing	366	22.2
Mental nursing	286	17.3
Basic nursing	212	12.8
Checking and counselling	302	18.3
Sheltered environment	479	29.0
Total	1,652	100

results were brought together in an attempt to present a picture of the essential needs of the whole hospital population. As a basis for the present discussion the observations are summarized in Table I. The types of care are here arranged in order of decreasing complexity—from "investigation or active hospital

treatment" to "sheltered environment"—and each patient is uniquely classified according to the most complex type of care he required.

Medical Treatment

Only seven of the 1,652 patients were thought to need medical investigation or treatment of a kind which would have made it necessary for them to be in hospital. This is much lower than the estimate (10%) made by Pilkington (1966) and confirmed by him in a recent survey (personal communication) of the proportion of his patients who required "detailed specialist, day-to-day diagnosis, care, and treatment." There are probably two main reasons for the difference.

Firstly, there is considerable regional variation in the pattern of care of the mentally subnormal. Birmingham is a relatively compact area in which paediatric and child psychiatric centres do a considerable amount of investigation which might elsewhere be done in hospitals for the subnormal. The mental hospitals are reasonably convenient and deal with more high-grade subnormal psychopaths than in some other regions. The pattern of care is also affected by the shortage (already referred to) of hospital accommodation for children.

But the estimate of the proportion of patients needing hospital investigation and treatment is also influenced by the judgement of the medical staffs on the scope for active measures. At the present time there are considerable differences of opinion and practice concerning the application of special methods. In some hospitals biochemical and structural abnormalities are investigated and a few centres are equipped for chromosome examination. Special units have been established for autistic children, for deaf subnormal children, for adolescents, for psychopaths, for psychotic children. In the United States, in the field of mental retardation, research is given high priority, and a large number of research units have been established in hospitals. Collectively these developments comprise the growing edge of the field of mental subnormality, but they have not yet greatly influenced the work of the average hospital, where active investigation and treatment are still restricted to a very small proportion of patients.

A further 794 of the 1,652 patients were considered to require treatment (mainly tranquillizers, anticonvulsants, sedatives) which would not have made it necessary for them to be in hospital. The remaining 851 patients were said to need no medical treatment.

Nursing Care

In relation to the organization of hospital care of the subnormal the most important features of the classification in Table I are the subdivision of the various types of nursing and the distinction between nursing and other forms of personal

* This investigation was supported by a grant from the Nuffield Provincial Hospitals Trust.

[†] Professor of Social Medicine, University of Birmingham.

[‡] Wates Foundation Senior Lecturer in Community Medicine, University College Hospital Medical School, London W.C.1.

care. About half the patients (871) were thought to need nursing: the seven who required investigation or hospital treatment (which would include skilled nursing) and 864 in need of mental nursing and/or basic nursing. Mental nursing is taken to comprise the care and supervision of potentially difficult patients. Basic nursing includes personal services, such as washing, dressing, feeding, lifting, attention to bladder and bowel of the incontinent, which require only a limited degree of nursing skill and experience.

Checking and Counselling

The other 781 patients, about half of the total population, needed only "checking and counselling" or a sheltered environment without personal service. The distinction between mental nursing and checking and counselling is important. The latter are interpreted as advice about activities such as dressing, washing, and time-keeping; the patients concerned have to be reminded about these things, but apart from such advice they need no other personal service. It seems essential to distinguish this kind of care, which can be provided by untrained staff, from skilled, basic, and mental nursing for which training is required.

Relation of Hospitals to Other Services

According to the recommendation quoted in the opening paragraph (that hospital care should be restricted to those "who require special or continuous nursing and . . . who, because of unstable behaviour, need the kind of supervision and control provided by a hospital") the evidence presented in Table I suggests that about half the patients now in hospital should not be there. This is the proportion of patients who need no medical or nursing care, and who require, in addition to training and occupation, only a sheltered environment with, in some cases, the simple personal attention described as checking and counselling. The central question concerning the future organization of institutional care of the subnormal is whether the two groups of patients—those who need medical and nursing care and those who do not—should be in the same institution and under the same administrative authority.

Before attempting to answer this question we should remind ourselves of the present difficulties of mental subnormality hospitals, which are perhaps the most formidable confronting any branch of the hospital service. The most serious problem is their inability to attract staff, particularly skilled staff. A recent estimate of nursing strength in the Birmingham Region showed that the number of trained nurses in posts was about two-thirds of the establishment and the number of student and pupil nurses was only one-third. These deficiencies had to be compensated so far as possible by an increase in the number of enrolled and other assistant nurses, which was much above the establishment.

The difficulties of medical staffing are well known. A recent survey of consultant psychiatric establishments in mental subnormality hospital groups of 1,000 or more beds in England and Scotland (Heaton-Ward, 1967) showed that the number of beds per full-time consultant equivalent ranged from 260 to 1,185. The national average (628) was far above the figure (300) recommended by the Mental Deficiency Section of the Royal Medico-Psychological Association in 1960. The high consultant bed ratios for established posts are due largely to the lack of applicants for consultant appointments: some hospital boards see little point in creating posts which there is little prospect of filling. Similar difficulties are encountered in attracting other professional workers such as psychologists and physiotherapists.

But the deficiencies of the hospitals are not only in respect of medical and nursing care. The Birmingham investigation included an assessment of the occupation required by each patient,

and Table II shows the proportions engaged in the occupations recommended for them. Of the 1,242 patients regarded as suitable for some type of activity, only about half (630) were in the occupation recommended, and 101 had no occupation of any kind. These results indicate that in many hospitals for the subnormal opportunities for education, training, and employment are very deficient.

TABLE II.—Proportion of Patients in Recommended Occupation

Occupation	No. of Patients Recommended	Patients in Recommended Occupation	
		No.	%
Training { Elementary	112	70	62.5
{ Scholastic	8	3	37.5
Domestic work on wards	80	52	65.0
Therapeutic occupation or vocational rehabilitation	755	323	42.8
Work in hospital service departments	159	100	62.9
Work outside hospital	128	82	64.1
Total	1,242	630	50.7

The figures quoted here give some idea, though an inadequate one, of the difficulties of mental subnormality hospitals. They are unlikely to be resolved by minor modifications in practice, and require nothing less than a radical reorientation of hospital work in relation to other medical and social services.

The key to this reorientation, we suggest, lies in separating patients who need medical and nursing care from those who do not. Under present conditions the requirements of neither group can be well met: the medical care of the first is prejudiced by inflation of their numbers with patients without medical needs; and the educational and welfare services for the second group are quite inadequate because they are provided in a hospital environment and by the wrong authority. These difficulties could be removed by restricting the hospital responsibility to what is essentially the medical task, and by assigning to educational and welfare authorities patients who need training, employment, and a home.

Fig. 1 shows diagrammatically the present organization of services for the subnormal; the figures apply to the Birmingham population at the beginning of 1965. At that time there were under the health authority 116 children and 20 adults waiting for admission to hospital, and under the education authority 29 children needing admission to E.S.N. residential schools. Places were required for a further 133 children in E.S.N. day schools.

Fig. 2 shows the arrangements which would result from the proposed redistribution of responsibilities. The patients in

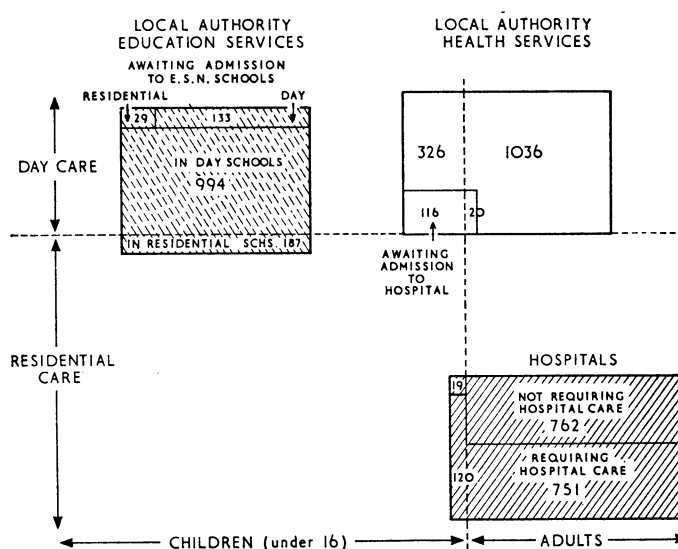


FIG. 1.—Diagram showing existing responsibilities for the subnormal Birmingham, 1965.

hospital who need no medical or nursing care would be transferred for residential care to health or welfare departments (762 adults) or to the education department (19 children). In return the hospitals would receive the 116 children and 20 adults for whom admission was needed. E.S.N. residential and day schools are shown expanded to accommodate the children on their waiting-lists. Finally the remaining 326 children under the health authority in 1965 would be transferred to the education authority.

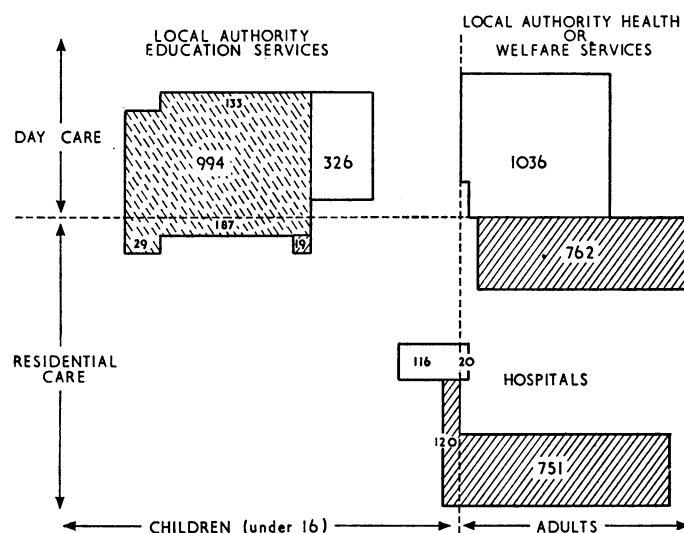


FIG. 2.—Diagram showing a proposed redistribution of responsibilities for the subnormal.

The last is possibly a controversial suggestion which is perhaps not essential to the present proposals. Such children have had advantages from being under the health department, and there is undoubtedly some risk that because of their relatively low potential for education they might be less well cared for under an education authority. Certainly the small number of children who can be kept at home in spite of substantial medical and nursing needs are best under the health department. But for most subnormal children living at home the main requirement is for education and training services, and we share the view expressed in a recent publication of the British Psychological Society (1966) that these services should be the responsibility of local education authorities. In Birmingham administration of the junior training centres has already been delegated by the health department to the education authority.

Hospital Care

We have seen that restriction of responsibility to patients "who require special or continuous nursing and . . . who, because of unstable behaviour, need the kind of supervision and control provided by a hospital" would reduce the hospital population of the subnormal to about half its present size. The way would then be open for reappraisal of the organization of hospital services, and particularly for consideration of the relation between subnormality hospitals and others.

As in the case of the mentally ill and chronic sick, it has been assumed hitherto that the subnormal should be segregated. This segregation results from historical circumstances and has had serious disadvantages which may be summarized as follows:

Heterogeneity of Patients.—Like other types of hospital patients, the mentally subnormal vary greatly in their medical, nursing, and social needs. Indeed they are the most heterogeneous of all hospital patients, since approximately half do not require medical and nursing services and should not be regarded as a medical responsibility.

Staffing Difficulties.—We have already referred to the formidable difficulty of providing staff, particularly professional staff. Again, as in the experience of mental and chronic hospitals, nurses and doctors cannot be attracted in sufficient numbers to institutions isolated from the main stream of professional interest. The problems which result from this isolation have been discussed fully and critically by Pilkington (1966). He refers not only to the effect of isolation on recruitment but also to its influence on the attitude of existing staff.

Excessive Hospital Size.—Though a good case can be made for large hospitals which receive all types of patients, they have serious disadvantages when their work is confined to a single class such as the mentally subnormal. Yet because of staffing and other difficulties in isolated institutions, concentration of patients is almost inevitable, and mental subnormality hospitals may have 1,000 or even 2,000 beds. The problem is aggravated by a number of administrative anomalies—for example, the linking of salary scales to bed numbers—which discourages discharge of patients and reduction of hospital size (Pilkington, 1966).

Lack of Research in Mental Subnormality.—In recent years there has been some increase in interest in the field of mental subnormality, but the pace of investigation is still very slow in relation to the size and variety of the problems. The remoteness of the hospitals from research centres, and particularly from teaching hospitals, undoubtedly contributes powerfully to this neglect. Indeed it seems unlikely that mental subnormality can receive the attention that is needed so long as the vast majority of hospital patients are in institutions rarely visited by research workers.

Costliness of an Adequate Service.—It could hardly be said that investment in the care of the mentally subnormal has been excessive, but the low cost has resulted from an inadequate rather than an economical service. If the level of care were raised to the standard now taken for granted in acute hospitals the cost in the existing segregated hospitals would undoubtedly be very considerable; for it would be necessary to reproduce laboratory and treatment services which already exist in other hospitals, but which cannot be used by the mentally subnormal so long as they are isolated.

These undesirable consequences of isolation point clearly to the need to unite mental subnormality and other types of hospitals. So long as the patients include large numbers who require no medical or nursing care, and so long as other hospitals—mental, chronic, and acute—are dispersed, this proposal is unrealistic. But if responsibility is restricted to patients needing medical and nursing care, and if major centres are designed for all other types of hospital work within a balanced hospital community (McKeown, 1958), it will be desirable to include provision for the mentally subnormal. In this way, and probably only in this way, will it be possible to raise the standard of their care to an acceptable level.

At least two objections will be raised to this proposal. It will be said that it would be unnecessarily expensive to care at a common hospital centre for patients whose medical and nursing needs are mainly basic nursing and psychiatric supervision. In reply we would say that while provision for the mentally subnormal, as for chronic and psychiatric patients, would be costly in the expensive wards of the traditional acute hospital, there is no reason why it should be so in appropriately designed facilities within a balanced hospital. Moreover, cost is not the only consideration, since history has shown that a satisfactory service cannot be provided in isolated institutions.

The other likely objection is that the number of beds required for the mentally subnormal is too large to be acceptable at a common site such as a district general hospital would offer. Some people are doubtful about the advisability of including all psychiatric patients, on the grounds that 175–350 beds (according to the optimism of the estimate) per 100,000 of population would create an imbalance between psychiatry and other services. The proposal to add a further 80 beds per 100,000 (the number suggested by our results) is certain to be resisted for the same reason.

These objections are rooted in a traditional view of hospital work in which the centre of interest is the patient with acute physical illness, and other types of patients—the majority—take

a secondary place. The number of beds required for psychiatric and mentally subnormal patients is large because they comprise a considerable part of the total hospital population; and with the continued decline of acute illness their contribution, together with that of the aged sick, will be even larger. Medical research has not yet been very successful in unravelling the nature of these problems, and many patients still require prolonged care. But this is not a reason for accepting an inferior standard of care, and given well-designed services there are no financial or other grounds for not admitting all types of patients, including the mentally subnormal, at the same hospital centre in approximately the proportions in which they are found in the general population.

Summary

Investigation of the medical, nursing, and social needs of all Birmingham patients (1,652) in hospitals for the subnormal showed that only about half needed the kind of care—mainly basic nursing and psychiatric supervision—which made it necessary for them to be in hospital. The other half of the patients required training and occupation—both inadequately provided in hospital—in a sheltered environment with, in some cases, simple personal attention described as checking and counselling.

In accord with the recommendations of HM(65)104, it is suggested that hospital responsibility should be restricted to

patients needing medical and nursing care and that the remainder should be transferred to local health, welfare, and education authorities. The reduction in the number of mentally subnormal patients in hospital would make it possible to care for them with all other hospital patients at a common centre. Only in this way will it be possible to focus research interest on the problems of the subnormal and to raise the standard of their care to an acceptable level.

For collaboration in the assessment of patients' needs we are indebted to the medical superintendents (Drs. R. A. Browne, A. P. Buchan, T. Crowley, A. S. Patterson, and R. J. Stanley) and staffs of the mental subnormality hospitals in the Birmingham Region. Dr. Stanley also provided valuable advice about the organization of the inquiry and the interpretation of its results. The data were collected and analysed with the help of Dr. W. L. Gordon, Miss Ida Giles, and Mrs. Betty Mann. National statistics relating to patients in mental subnormality hospitals were made available by Miss E. M. Brooke, of the Ministry of Health. Finally we should like to express our indebtedness to Dr. T. L. Pilkington for giving us the results of his investigation and for his helpful comments on our own.

REFERENCES

- British Psychological Society (1966). *Children in Hospitals for the Sub-normal*. London.
 Heaton-Ward, W. A. (1967). *Brit. med. J.*, **1**, 234.
 Leck, I., Gordon, W. L., and McKeown, T. (1967). *Brit. J. prev. soc. Med.*, **21**, 115.
 McKeown, T. (1958). *Lancet*, **1**, 701.
 Pilkington, T. L. (1966). In *Report of the Annual Conference of the National Association for Mental Health*, p. 50. London.

Clinical Application of Demand Pacemakers

EDGAR SOWTON,* M.D., M.R.C.P.

Brit. med. J., 1967, **3**, 576–578

Treatment of patients with chronic complete heart block by artificial pacemakers reduces the one-year mortality from approximately 40% to approximately 17% (Sowton, 1967), and with modern techniques and apparatus the morbidity is now low. Parsonnet, Gilbert, and Zucker (1966) reported that after the first few months have been successfully negotiated there is a high probability that one or two uneventful years of stable pacing will follow, and Chardack, Gage, Federico, Schimert, and Greatbatch (1966) claim a better than 90% chance that any individual patient will experience uninterrupted pacing for at least 18 months.

One problem found with patients treated by fixed-rate pacemakers is that sinus rhythm may return, so that competition occurs between natural and artificial pacemakers. This leads to an irregular ventricular rate, palpitations, variations in systemic pressure which occasionally cause symptoms, and the possibility of dangerous arrhythmias provoked by pacemaker stimuli falling in the vulnerable period of the cardiac cycle (Sowton, 1965). These risks are especially important when short-term pacing is carried out in patients with temporary heart block following cardiac infarction (Harris and Bluestone, 1966), because the threshold for arrhythmias is considerably lower than normal and the chances of sinus rhythm returning are considerably higher.

Competition can be avoided by the use of a pacemaker which automatically detects any spontaneous activity and cannot

deliver a stimulus until a preset interval has elapsed: such pacemakers are referred to as "demand," "standby," "ventricular-inhibited," or "R-top" units. A pacemaker capable of functioning in this way was described as early as 1956 (Leatham, Cook, and Davies, 1956), and several other external demand units have been described more recently (Nicks, Stening, and Hulme, 1962; Zacouto, 1963; Lemberg, Castellanos, and Berkovits, 1965). Completely implanted demand pacemakers have also been produced, but experience is still limited. Chardack *et al.* (1966) have reported successful results in animal experiments with a Medtronic unit and have implanted similar units in patients (personal communication, 1967). Experience in animals with American Optical miniaturized demand units has been reported by Goetz, Dormandy, and Berkovits (1966), and these units have been used externally in patients; a very few of these pacemakers have also been completely implanted (Berkovits, personal communication, 1967). Most experience under clinical conditions with fully implanted units in patients has probably been gained with the Cordis Ventricor II Standby pacemaker, and Parsonnet, Zucker, Gilbert, and Myers (1966) have reported successful results for periods of over a year. In the present paper some of the clinical experience at the National Heart Hospital and Institute of Cardiology with various types of demand pacemakers is described.

Material and Methods.—The patients were all treated at the National Heart Hospital, initially as inpatients and subsequently followed in the pacemaker clinic. All had had complete heart

* Institute of Cardiology and National Heart Hospital, London W.1.