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The Mental Health Services: A Review of the Statistical Sources and a Critical Assessment of their Usefulness

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Introduction*

The National Health Service has entered a period of substantial change. The impending reform of local government (1974) will coincide with considerable reforms in the administrative structure of the N.H.S. (1). In addition, our subject matter—the mental health services—has been the subject of various Government White Papers and policy decisions (2). These reforms are an attempt to increase the efficiency of the service, and throughout their pages reference is made to the need for scientific management and administrative efficiency.

Such goals are laudable but, as their proponents realize, they create a new matrix of problems with which management has to wrestle. Scientific management has to be related to policy objectives. The consequent art of defining objectives and relating policy to these objectives is now being developed. The definition of the objectives is usually in the form of crude provision or input indicators. Such indicators may be poor reflections of the quality and quantity of output produced by a health care system, but unfortunately they are the best we have at the moment, and until the art of creating output indicators (3) is developed, the policy maker will be compelled to have recourse to crude input indicators.

The purpose of this paper is to review the present system of mental health services statistics (Section 1) and to relate this output to the planned development of the service during the 1970s and beyond (Section 2). The radical reforms which are planned necessitate a considerable reform of data output. Such a reform would seem to be necessary if the avowed policy of management by objective is to be prosecuted meaningfully.

The Mental Health Services: A Review of the Sources

The Report of the Royal Commission on the Law Relating to Mental Illness and Mental Deficiency, 1954–57 (the Percy Report) (4), drew attention to the deficiencies in the available statistics relating to the mental health services. Since that time probably no other field has seen such a substantial expansion in the quantity of available statistics. However, these statistics are complex. There are distinct sets of mental health service statistics collected on different bases and relating to quite different aspects of illness evidence and medical provision. The methods of collection of these statistics and the form of presentation in published form are reviewed below. Throughout our survey of the statistical sources we shall assume that the statistics are accurate. Local officials often argue that they are inaccurate, but no estimate of the meaningfulness of the data has ever been attempted so far as we know.†

Section 2(A) reviews the basic data sources from which the published material, described in section 2(B), is derived. Both parts of this description are, by their very nature, rather prosaic, although they are essential for our purposes since they demonstrate that the data yields of today bear little resemblance to the data requisites of the 'scientifically managed' mental health services of the future. Those readers who are familiar with the present system of data collection and published material can

* Those to whom some of the terms in this paper may be unfamiliar can find some definitions in an Appendix at the end of the analysis.

† Dr. Hugh Freeman notes that in the early period of their psychiatric case register they found that one general hospital merely guessed out-patient figures and had no systematic machinery to record data in a proper manner.

omit this section and proceed to our discussion of the rationale of data collection and publication (section 3).‡

(*A*) *Data sources*

Since 1949 all National Health Service hospitals in England and Wales have completed annual returns which when compiled by the Department of Health and Social Security have provided an in-patient, out-patient, day patient and night patient series for each broad diagnostic category for all the fifteen hospital regions of England and Wales, together with national aggregate data, and teaching and non-teaching hospital data. The categorization of the mental health services has changed over time, particularly in the early 1960s. However, since 1961 the changes appear to be minor and terminological rather than definitional.

The Mental Health Enquiry provides a much more comprehensive coverage of the mental health field than is available from the previous source. The Enquiry has been conducted since 1964 and has been extended since 1969 by S.B.H., 112 returns. Both of these returns apply to both psychiatric hospitals and psychiatric units in general hospitals. Local authority data are covered by a set of S.B.L. returns, the coverage of which has been extended considerably in the last three years because of the Government's increased emphasis on community care.

(*B*) *Published sources*

The statistics are compiled and published by the Department of Health and Social Security, one data source usually being the basis for one set of published statistics, although some, notably the Digest of Health Statistics are compounded from several different sources. In recent years the psychiatric hospitals have been quite well covered, although the data are spread over many different Reports and looking for any one index of provision can be somewhat frustrating, especially when they are not always compatible from year to year. The published form of the statistics is as follows:

‡ Any researchers who are in need of a more detailed account of the basic sources and their published forms may acquire a fuller version of this paper from the authors.

(i) *Digest of Health Statistics* (4) *for England and Wales* (5)

This has been published annually since 1969 and is designed to give the salient statistics for the health and closely related welfare services. Population statistics for the national and for the Regional Hospital Boards; data on manpower and the financing of the health services are provided in addition to indicators of hospital provision and diagnostic statistics. Although this is a very useful statistical series it has some limitations.

The majority of tables refer to England and Wales only, but the 1970 and 1971 Digests have included summary tables at the beginning of each section for Great Britain, defined as England and Wales and Scotland.

As regards psychiatric statistics, S.H.3 derived data are presented as a continuous series since 1962 for beds allocated (up to 1969); average beds available daily; discharges and deaths; waiting lists; out-patients; new and total attendances. These figures are to be found in section IV, the data being presented for total psychiatry, mental illness (including mental illness children and the chronic sick under psychiatric supervision) and subnormality. Totals are given for Great Britain and for England and Wales, although the 1969 Digest provides only the total for England and Wales. Confusingly, the same statistics are provided in another table where figures for the year of publication of the Digest are produced alongside those for the year ten years previously. However, in this case the figures are produced for the four categories of psychiatric disorder: mental illness, mental handicap, psychiatric children, and the psychiatric chronic sick. In both cases, the figures relate to teaching and non-teaching hospitals combined, as no separate statistics are produced for these except on the original S.H.3 forms (6).

No breakdown of these figures between the Hospital Regions is provided in the Digest, although some selected provision ratios are produced by Regions. Allocated beds, average daily occupied beds, throughput (cases treated per available bed) are presented per 1,000 population for England and Wales, for England, and for the Hospital Regions. The grouping

used is: total psychiatric, mental illness (including children and chronic sick) and mental handicap, and relates to the year preceding the year of publication of the Digest. For out-patients the numbers of new out-patients and new out-patient attendances are presented in total for psychiatry only. It is difficult to see the reason why the subdivision for out-patients should have been made different from that for in-patients, as similar information is available, and also why the interesting indicator (from the policy makers' viewpoint) 'beds available', has been omitted, especially when the 'beds allocated' series must cease in 1969 (i.e. in the 1971 Digest).

Nowhere in the Digest is there information on night patients, and the only information on day patients is to be found in Section IX; and, as will emerge in the next paragraph, this is presented in such a way as to be not directly comparable with the information in Section IV. This is a limitation, as with present policy it can be expected that day provision will become increasingly important. It emerges, then, that although the Digest is to be commended for producing very useful S.H.3 derived data for the first time, the data are inadequate in some respects and can be confusing to the uninitiated. To make any detailed study of psychiatric bed provision still entails resorting to the original S.H.3 forms.

Section IX (X, 1969, 1970) of the Digest (Psychiatric Services) is based almost entirely on information obtained from the Mental Health Enquiry, emphasis being on incidence of illness rather than on hospital provision. The only tables to give provision series are 9.1 and 9.2 (1969, 10.1; 1970, 10.1 and 10.2) which incorporate S.H.3 information and provide for mental illness and mental handicap separately (apart from Day Patients) average daily occupied beds; discharges and deaths; out-patients, new and total attendances; day patients, new and total attendances; and, for the local authority services, persons under care, attending training centres, and resident in homes and hostels. Tables 9.2 (1971), 10.2 (1970) and 10.1 (1969) together provide information since 1961 in total for England and Wales; and Tables 9.1 (1971) and 10.1 (1970) give totals for Great Britain since 1961.

(ii) *Psychiatric Hospitals and Units in England and Wales: Department of Health and Social Security Statistical Report Series: 4, 5, 11, 12* (7) *Statistical and Research Report Series* 4

These reports present the statistical data on psychiatric in-patients derived from the annual Mental Health Enquiry. No. 4 (published 1969) presents data for 1964, 1965 and 1966. No. 5 (published 1969) presents data for 1967, No. 11 (1970) presents 1968 data, No. 11 (1971) 1969 data, and statistical and Research Report Series No. 4 (1972) 1970 data.

Apart from the first two tables in each Report, which provide the male/female population for the Hospital Regions and the total population of England and Wales by age groups, all other information is given by sections determined by hospital type. Thus, while the Mental Health Enquiry aims to obtain diagnostic information and is concerned with patient numbers and types of disorder rather than with the bed and manpower provision type information obtained from S.H.3s and S.B.112s, in published form this information is presented by hospital type rather than mental health type. Reports 4 and 5 follow the same format, the four hospital types referred to being: mental illness hospitals, mental subnormality hospitals, teaching hospitals, and special hospitals (Broadmoor, Rampton and Moss Side). For these purposes mental illness hospitals are those having beds for mental illness and chronic sick under psychiatric supervision. Patients in a 'mixed hospital', i.e. one containing mental illness and mental subnormality beds, who are mentally ill or suffering from psychopathic disorder are assigned to mental illness hospitals, and those in similar hospitals suffering from mental handicap are assigned to mental handicap hospitals. As described earlier, mental illness in the Mental Illness Enquiry takes the wide definition, and so no information is available from these reports on chronic sick under psychiatric supervision, or on child psychiatry. Presentation is confusing, as the section on mental illness hospitals is presenting data on all admissions to mental illness hospitals and mental illness units in other

hospitals, regardless of whether the mental category of the patient is mental illness or mental handicap, and to obtain comprehensive figures for the total number, of, for example, mental illness admissions the appropriate figures for mental illness admissions to subnormality hospitals, teaching and special hospitals must be added together.

Unfortunately, although Reports 4 and 5 both followed the format described above, certain changes were made for Reports 11 and 12. The special section on teaching hospitals was dropped and instead teaching hospitals information is incorporated in the mental illness hospitals section in such a way that some totals are inclusive of teaching hospital data and some are not. In many cases the teaching hospital figures are presented under separate columns in the tables, but in other cases figures are fully incorporated. As well as being confusing this means that fully comparable figures are not available for all categories over the years 1964–1970. The section on mental subnormality hospitals has been changed to mental handicap hospitals, but this is a simple change in terminology. Two new sections have been introduced which deal with those patients resident in mental illness hospitals and mental handicap hospitals at the end of each year. In this way the stock of patients is covered as well as the flow —admissions and discharges and deaths. These data help to throw some light on the residue of long-stay patients in hospitals which the other figures do not cover.

Generally these reports are comprehensive, and all the information obtained from the mental health enquiry is published in various forms. From a research point of view, however, it might be more useful to present the data ordered by the mental health category type of patient and hospital type to which the patients were admitted, rather than by the latter alone.

(iii) *The Facilities and Services of Psychiatric Hospitals in England and Wales*
Department of Health and Social Security Statistical Report Series 3, 6, 9, 10
Department of Health and Social Security Statistical and Research Report Series No. 2 (8)

These reports present the data on psychiatric hospitals and units as covered by the Mental Health Enquiries collected on S.B.H.112 forms. The forerunner of the series was the Department of Health and Social Security Statistical Report No. 3, 'The Activities of Psychiatric Hospitals: a Regional Comparison of Mental Illness Hospitals and Units 1964', published 1968. The other Reports are as follows: No. 6, 1966 (published (1969); No. 9, 1967 (1970); No. 10, 1969 (1970); and No. 2, 1970 (1972).

The aim of the series was laid down clearly in the Report No. 3.

> 'the aim of present day care is to maintain the patient in the community as far as possible. This involves training in social adjustment and work capability as well as the modification of symptoms. It is clear that assessment in terms of the functions quoted above requires both activity analysis and medical audit. To this end a start was made in 1965 to collect statistical data relating to the staffing and services of comprehensive hospitals and of units in non-psychiatric hospitals serving the mentally ill.'

An important emphasis on Regional data was laid down:

> 'as Regional Boards may be interested in the comparison of their own regional summaries with those for other regions, a series of regional indices has been prepared.'

Report No. 3 dealt only with mental illness hospitals and units and aimed at producing for 1963 various regional indicators in easily understood bar graph form. From the beginning the main emphasis has been on regional differentials in provision, and in highlighting and illustrating these differences, the series is very important. However, the series suffers from all too typical inconsistencies, which become particularly apparent when an attempt is made to produce a time series of regional indicators. For example, the first year of publication (1964) dealt with mental illness hospitals only, and it was not until 1966 that additional data were produced for the mental illness hospitals, or any data produced at all for the mental handicap hospitals. Since then the data have been published annually, apart from 1968 when although the information was collected it was not published. Copies of the report were circulated to psychiatric hospitals and Regional Hospital Boards.

Report No. 6 (1966) presents regional indices in diagrammatic form for both mental illness (section 1) and mental subnormality hospitals (section 3), and information on individual mental illness hospitals over 500 beds (section 2) and mental subnormality hospitals with over 300 beds (section 4), together with additional information on individual hospitals in figure term.

Report No. 9 (1967) presents data numerically rather than diagrammatically. This is a pity, as the regional differentials are not so obviously striking. Data for teaching hospitals are provided for the first time. This Report is in five sections, the additional section being section 1 which summarizes the information of the other sections, giving the highest and lowest figures for each index and the frequency of hospitals in various ranges of provision. The indices produced in the four sections are similar to those in Report 6.

Report No. 10 (1969) for the first time extends the coverage to hospitals with less than 20 beds. Section 1 sets out side by side comparable statistics for an earlier year—generally 1964, but if that is not available 1966 or 1967 (1966 is the earliest possible year for mental handicap hospitals). In some cases the 1969 figure is expressed as a percentage of the earlier year. The usefulness of this comparison can be doubted somewhat, particularly as the earlier years taken are not the same. Some additional indices are provided in the other four sections, for example the percentage of patients participating in various kinds of work or educational training, or the reasons why they are not participating.

In this Statistical and Research Report Series No. 2 it was decided to present in published form yet more of the information obtained. Accordingly, section 1, as well as presenting data on the range of services provided, named the hospitals falling into the lowest tenth for certain services, and sections 3 and 6, presenting statistics for individual mental illness and mental subnormality hospitals respectively, extended their lower limits to include hospitals with 200 or more beds; and in addition two new sections (4 and 7) gave particulars of some services provided by the hospitals with less than 200 beds. Sections 2 and 5, giving the regional and national indices of provision, were unchanged.

(iv) *Annual Report of the Ministry of Health/ Department of Health and Social Security*

Each year the Annual Report of the Ministry of Health/Department of Health and Social Security presents in its appendices some of the statistics relating to the mental health services. The information collected has changed considerably since the reports were first published, and this is reflected by a considerable growth in data presented in the Digest. The data are to be found in two separate sections: Local Authority Mental Health Services under the Local Authority section, and hospital statistics under the Hospital and Specialist Services section. Of the two, the former is the more important, since it is now possible to find the hospital statistics duplicated in the published sources already mentioned, whereas the Local Authority section presents some series which are to be found nowhere else.

The reasons why the particular statistics presented in the Annual Reports are selected have little to do with availability, however, or even usefulness; rather they are bound up with data which are legally required to be produced by the Department, and comply with Sections of the 1959 Act. Since in any case the emphasis is now to extend statistical coverage significantly, shown by the growth of the Statistical Report Series and the Statistics and Research Report Series of recent years, releasing statistics in the Annual Report is now something of an anachronism, and the Department intends to abolish the statistical appendix. This would seem reasonable if the Digest of Health Statistics is extended to provide a coverage of the Local Authority statistics at present found in the Digest only, and preferably data collected by the Department (S.B.L. forms) but not yet released.

(v) *Local Authority publications*

The Institute of Municipal Treasurers and Accountants (IMTA) produces two annual publications which are of immediate interest to any person reviewing psychiatric care outside the hospital. The Local Health Services Statistics

have expanded in scope during the 1960s. For instance, the 1964–5 edition gives expenditure data for each local authority providing residential accommodation (adult and juniors).* Also cost per case data are given for attendances at training centres. The 1969–70 edition gives much more comprehensive data for training centres and residential accommodation: numbers of trainee days, occupancy rates, costs per trainee (broken down into numerous categories), number of resident days, percentage occupancy, costs per resident day; all statistics being given for junior and adult centres separately. Also day centres and workshops data are provided for the few local authorities undertaking these activities. The second source of local authority data is the IMTA's Welfare Services Statistics series. This has also been substantially developed of late. The 1970–71 publication gives an analysis of net expenditure per 1,000 population for the handicapped (all types) in all local authorities. It also provides data on the number of mentally handicapped persons registered in the particular year (e.g. 1970–71) and the net expenditure per person registered.

However, the extensive range of information collected by the DHSS via the S.B.L. returns previously mentioned is the most useful and comprehensive of all. Continued and substantial pressure should be placed on the DHSS to publish it.

The Rationale of Data Collection and Publication

So far we have presented a rather prosaic account of the nature of local and central government's output of the mental health services' statistical data in England and Wales. We must now turn to the reasons why these statistics are collected and their usefulness in meeting consequent needs. We assume that the principal objective of data collection is to monitor the working and assess the efficiency of the psychiatric service. As we pointed out in our introduction, such an objective begs the question of fixing provision standards in the various sections of the system of psychiatric care. This difficult problem is being faced by the Department of Health and Social Security who have now begun to publish explicitly provision objectives.

The first publication of such data for the mentally handicapped came in 'Better Services for the Mentally Handicapped' in 1971 (9). Table I below reprints some of this publication's data. The figures in brackets show actual provision levels in 1969 and the figures outside the brackets show aggregate and provision per 100,000 total population input objectives.

These objectives have been supplemented by labour input objectives of the following nature:

(a) nursing staff: a nurse-patient ratio of not less than 1 to 4·4 (ward staff only). This ratio is estimated to be the average of ratios ranging from 1 : 1 for very high dependency patients to 1 : 8 for hostel type patients.

(b) medical staff: not less than 1 medical practitioner (whole time equivalent) for each 250 patients.

(c) domestic staff: domestic staff in wards equivalent to 6·1 hours per bed per week for high dependency beds and 3·5 hours per week for low dependency beds; for corridors and other parts of the hospital one hour per week for each 165 square feet.

(d) dental service: not less than one dentist (whole time equivalent) for each 2,000 patients.

Similar objectives have been set for the mental illness sector, and these are outlined in Table II. (10) These are complemented by labour input objectives as outlined below:

(a) nursing staff: a nurse-patient ratio of 1 to 3.

(b) medical staff: not less than 0·45 consultants (plus supporting grades) per 100 resident in-patients.

(c) domestic staff: domestic staff equivalent to 2·75 hours per in-patient week.

(d) dental staff: 0·5 dentists per 1,000 in-patients.

It is emphasized in all the relevant publications that these objectives are to be interpreted as flexible minimum standards which if found impracticable can be amended. However, despite this inclination to be flexible it is apparent that this approach is not likely to be wholly abandoned. Management by objective is here and here to stay.

* We should note that high and low expenditures are not necessarily correlated with 'good' or 'poor' service.

TABLE I

Planning figures for services for the mentally handicapped: Objectives (exuting provision), 1969

	Children aged 0–15 years		Adults 16+	
	Per 100,000 population objective	Aggregates	Per 100,000 population objective	Aggregates
1. *Residential care in the community*				
(i) in local authority, voluntary or privately owned residential homes	10	4,900 (1,800)	60	29,400 (4,300)
(ii) foster homes, lodgings, etc.	2	1,000 (100)	15	7,400 (550)
2. *Hospital treatment*				
(i) for out-patients	13	6,400 (7,400)	55	27,000 (52,100)
(ii) for day-patients	6	2,900 (200)	10	4,900 (500)*
3. *Occupation and training for adults*				
(a) in the community				
(i) adults living in the community		—	130	63,700 (24,500)
(ii) adults living in the hospital		—	20	9,800 (100)
(b) in hospitals				
(i) for in-patients		—	35	17,200 (30,000)*
(ii) for out-patients		—	10	4,900 (200)*
4. *Day care or education for children under 5 years*	8	3,900 (500)		
5. *Education for children of school age*				
(a) in the community				
(i) living in the community	56	27,000 (23,400)		
(ii) living in hospital	6	2,900		
(b) in hospitals				
(i) for in-patients	7	3,400 (4,600)		
(ii) for day-patients	6	2,900 (200)		

* Estimated.

Source: Better Services for the Mentally Handicapped. Department of Health and Social Security, Cmnd. 4683, June 1971, Table 5, page 42.

The implication of this technique for the published statistics is likely to be substantial. It is apparent that the Department has still to complete its list of objectives. Even before this list has been completed the detail and coverage of publications is beginning to change. However, it is necessary that more radical changes should take place in the next few years.

The essence of the present Government's psychiatric policy is to transfer emphasis from hospital care to treatment in the community. This change of emphasis is prompted by economic constraints which point to the apparently (11) lower costs of community care, and medical constraints which prefer integration, rather than isolation, to be the centre of modern care. This calls for the contraction of some hospital facilities and the expansion of local authority provision and hospital out-patient and day patient provision. The magnitude of the changes required in the mental handicap sector is apparent from Table I. At the same time as the role of the local authorities is being expanded, the structure of local government is to be totally reshaped (12). This reform will place the administration of all personal social services in the hands of the County Councils outside metropolitan areas (28 authorities) and of the Metropitan District Councils inside metropolitan areas (34 authorities). Those patients continuing to obtain treatment in the hospitals will be in the care of a new set of

TABLE II
Mental illness objectives

Mental illness adults	
(i) in-patients	0·5 beds per 1,000 population
(ii) day patients	0·65 places per 1,000 population
(iii) out-patients	A minimum of 6 clinic sessions per week per 100,000 population
Mentally ill or seriously maladjusted children (in-patients)	20 to 25 beds per million population
Psycho-geriatric assessment (in-patients)	10 to 20 beds per 250,000 population
Elderly patient with severe dementia	2·5–3 beds per 1,000 population aged 65 and over
Elderly patients requiring joint geriatric/psychiatric assessment	10–20 beds per 250,000 total population. Sited in the geriatric department of the D.G.H.

Sources:
Hospital Services for the Mentally Ill. Department of Health and Social Security, December 1971, Appendix, page 12.
Services for Mental Illness related to Old Age. Department of Health and Social Security, October 1972, Appendix, page 10.

health authorities (13). There will be 14 Regional Health Authorities in England and within these regions there will be 72 Area Health Authorities in England (outside Greater London) corresponding to the local government Counties and the Metropolitan Districts mentioned above.

To monitor the workings of the psychiatric service in this reformed National Health Service, a vast new series of statistical indicators will be needed. Comprehensive statistical data must be produced for both the hospital and the community section of the service. It is inevitable that the published statistics of the present will be radically altered. Let us examine the provision objectives produced by the DHSS so far and relate them to the data available. Table I highlights the paucity of the present published data. Categories 1, 3, 4 and 5—residential care in the community, occupation and training for adults day care or education for children under five years of age and education for children of school age—cannot be monitored with the present published material. S.B.L. data are available but largely unpublished. The I.M.T.A. presents only limited data about residential care, and this is in expenditure terms. Individual local authorities prepare reports annually which with varying degrees of comprehensiveness throw light on the number of places available. However, this information is not collected together into one single source, and attempts to research via private efforts are hampered by a reluctance of some local authorities to give or lend their reports to researchers. The nature of occupation and training for adults is obscure both within and without the hospital. The DHSS Statistical Report series gives some information about instructors and social workers employed in psychiatric hospitals, but no accurate assessment of the general availability of these services is available. Data about education for handicapped children living in and outside the hospital are similarly scarce. Labour provision data are available for both the mental handicap and the mental illness hospitals. This is in the DHSS's Statistical Report series. Similarly this series, together with SH3s, give us a fairly accurate picture of the state of psychiatric hospital bed provision. This shows wide variations regionally (14) and enormous discrepancies between regional bed provision and the bed provision objectives cited above. The contraction of bed provision in some areas—in particular the South West Metropolitan Hospital Region—is going to produce a large outflow of patients, the demands of whom the local authorities will have to meet by some means or other.

Even with the limited production of provision objectives that has appeared so far it is apparent that the statistical series collected and published by the various agencies are inadequate. The continued expansion of defined provision objectives brings with it a concomitant need for statistics to monitor the system to ensure the objectives are met. Furthermore, there is little reason why the published data should be simply in terms of bald numbers. There seems to be no reason why elementary statistical manipulation

(e.g. means, standard deviations, correlation coefficients, etc.) should not be carried out and published. The precise nature of these statistics will be determined by the nature of the provision indicators selected.

Conclusion

The application of the techniques of management by objective will necessitate a radical change in the nature of published statistics. If the performance of the mental health services is to be adjudged by the attainment of provision indicators, both local and central government will have to implement a comprehensive programme to produce accurate and uniformly defined indicator series. The changes in organization and management which are now before us will render many series obsolete, but this will free resources to produce the statistics needed to achieve greater management efficiency in the N.H.S.

APPENDIX

DEFINITIONS

(1) *Management by objective.* In such a system of management attention is directed to the objectives of the organization as a whole, how the activities of each particular part of the organization fits in with and contributes to these objectives, and what it costs to pursue these objectives by carrying out one selection of activities or programmes rather than another.

(2) *Input and Output indicators.* The objectives pursued by any organization can be of an input nature (nurses, doctors, buildings, etc.) or an output nature (e.g. measures of reduction in mortality, measures of reduction in pain, etc.). It is possible to try to define input indicators in the mental health services, as the DHSS has shown. It is difficult to rank these (i.e. which is most important?). Output indicators, on the other hand, are difficult to define because there is no agreed measure of mental health service production. Until we have a proxy output measure we will have to use input indicators if we wish to practise management by objective (the indicators being 'objectives' for the organization to pursue).

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6. From 1970 onwards SH3 data for Wales no longer gives separate information for teaching and non-teaching hospitals.

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11. Whether community care is cheaper is not known. Benefits cannot be measured due to lack of output measures and so cost benefit analysis of this problem is not possible. Costs are usually ill defined as most observers take account of apparent costs (cost of hospital treatment, etc.), but ignore hidden costs (such as the cost to families of caring for mentally ill patients resident in the community).
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