King Edward's Hospital Fund for London

(Division of Hospital Facilities)

Report on

COSTING INVESTIGATION

for the

MINISTRY OF HEALTH

10, Old Jewry, London, E.C.2.

September 1952

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CONTENTS.

This report and that of the Nuffield Provincial Hospitals Trust was submitted to the Minister of Health on September 1st, 1952, together with a joint statement by the Fund and the Trust. It is now included in the report as Appendix I.

The two reports are now being published at the request of the Minister.

KING EDWARD'S HOSPITAL FUND FOR LONDON

(Division of Hospital Facilities)

REPORT OF COSTING INVESTIGATION

for the

MINISTRY OF HEALTH

I. INTRODUCTION

To the Rt. Hon. Iain MacLeod, M.P.,
Minister of Health.

1. On April 11th, 1950, Captain J. E. Stone, Director of the Division of Hospital Facilities and Consultant on Hospital Finance to the King's Fund, received a letter from Mr. H. B. Riddle, Deputy Accountant-General, Ministry of Health, informing him that the Central Health Services Council had recommended that King Edward's Hospital Fund and the Nuffield Provincial Hospitals Trust should be invited " to undertake a costing investigation in a selected number of hospitals " and asking him to attend a meeting at the Ministry to discuss preliminary points. A similar letter was sent to the Nuffield Trust. The meeting was held on April 25th, 1950, when there were present, Mr. H. B. Riddle and Mr. W. O. Chatterton of the Accountant General's Department, Ministry of Health; Miss D. Livock, Accountant to the Nuffield Trust; and Captain J. E. Stone.

Terms of Reference.

2. On May 2nd, 1950, we received the following letter from the Ministry of Health: —

> " I am directed by the Minister of Health to say that he has received a recommendation from the Central Health Services Council set up under Section 2 of the National Health Service Act, 1946, in the following terms: —
>
> > ' The Minister should invite the King Edward's Fund and the Nuffield Trust to undertake a complete unit costing of a small number of representative London and provincial hospitals. The system to be adopted should be agreed in detail beforehand, and the results of the analysis should be the subject of a joint report by the two bodies '
>
> and he has informed the Council that he accepts the recommendation.

(*c*) Following the completion of the first stage of the work covering the investigation of existing systems, methods and procedures, each investigator was given a free hand to draw up a system of accounting based on his knowledge and experience and the results obtained from his preliminary survey. These systems were subjected to examination at conferences of the investigators after which each was given a trial run for one month.

(*d*) Following an examination of the results of these trial runs, and the making of various amendments to the preliminary systems, arrangements were made for an extended trial of three months, for the period January to March, 1952. In general, three types of systems, including standard costing, were used during this extended run. In some hospitals, the system adopted was maintained independently of the general financial accounts; in others it was integrated with these accounts.

(*e*) Monthly conferences, attended by all investigators, have been held throughout the whole period. Special conferences have been attended by the Treasurers of the four Metropolitan Regional Hospital Boards and the Secretaries and Finance Officers of the six (subsequently seven) groups at which the experimental systems were outlined and fully discussed. Mr. W. O. Chatterton, Deputy Accountant General, Ministry of Health, attended one of the early conferences, when the general plan for the investigation was under discussion.

Examination of Results.

8. As a result of the investigation and the trial runs, a considerable amount of information has been made available. A study of this information reveals great variation in organisation, staffing, and the degree of completeness of the accounting systems and records in use.

9. An almost continuous process of change is going on and much good work is being done in each of the seven hospital groups, particularly in the way of improvement of method. Nevertheless, defects of organisation, management and accounting remain, and adjustments of existing systems and procedures will be necessary as a preliminary to the development of an adequate system of hospital accounting. We would like to have made a more intensive investigation into such matters but this would have meant considerable delay in the presentation of the report.

10. It follows from this that the statistics given in the Tables in Appendix E, must be seen as the results obtained from: (1) hospitals whose accounting organisations and systems are necessarily in the process of change, and (2) the use of experimental systems designed more particularly for the purpose of testing the practicability of various systems of departmental accounting rather than to arrive at figures which might be used for purposes of assessing the efficiency of the hospitals or for purposes of making comparisons between hospitals. They do, however, reflect the actual conditions which prevailed.

11. This report deals mainly with matters of general principle. We feel that the Minister would not wish us to burden him with the mass of detailed information obtained, or to include the statistics of all hospitals investigated, and the results of all time studies undertaken. This information, together with the answers to the questionnaire and copies of all books and forms used during the investigation, has been classified for reference, and the amplification of our recommendations. Nor do we feel that he would wish us to include herein a detailed description of the techniques, including specimen forms, definitions, terminology, codes, etc., by which the system of departmental accounting we recommend may be implemented. These, too, can be made available at very short notice.

Other Sources of Information.

12. In addition to the information obtained as a direct result of the investigation, and the trial runs of experimental systems, we have drawn upon a large field of other knowledge and experience. This includes the Interim Report of the Sub-Committee of the Regional Hospital Board Treasurers (which forms the basis for the present system of hospital costing); various memoranda of the Department of Health for Scotland; the Costing Returns previously published by the Ministry of Health; the Costing Returns of the Ministry of Health for the year ended March 31st, 1951 (published towards the end of our investigation); appropriate reports of the Select Committee on Estimates; the Report of the Committee on Public Accounts; and the report on "Management Accounting" of the Anglo-American Council on Productivity.

13. We have taken into consideration at all stages of the investigation the observations made by officers of the hospitals in the groups investigated, and also discussed the subject with officers of a number of hospitals and groups not included in the investigation.

14. The Report of the Costing Sub-Committee appointed by the Regional Board Treasurers "to consider hospital costing and to make recommendations," contains the following:—

> "While costing undoubtedly has a part to play, we feel that in any effective system of financial control the budget must become the pivot of the whole financial organisation, and to this end must be directly associated with both accountancy and internal audit, further supplemented by the best measuring rods that can be provided by statistics and cost accounting. Regarded in this light costing is simply one element—although an important one, of an extremely complex problem requiring solution, namely, the problem of introducing financial responsibility into a service in which the local spending authorities do not account directly to the taxpayers from whom the money is raised. In general, we think that the introduction of functional, or objective cost accounting should proceed with caution; that the time and labour spent would be largely wasted unless the results obtained by costing were accepted and used by those responsible for spending, and finally that the cost of any costing system introduced must always be relative to the advantages likely to be gained."

15. We are in sympathy with these views, but having regard to the improvements made since the issue of the sub-committee's report, we suggest that a much more positive attitude may now be adopted. Throughout our investigation we have given consideration to the wider problems of hospital finance and matters of accounting principle, as distinct from the narrower question of the mere introduction of cost accounting. These include: —
    (1) the allocation of public funds on the basis of ascertained departmental costs;
    (2) the use of the accounting system as an alternative to rigid control by regulation;
    (3) the more effective control of expenditure by means of departmental budgets allied to units of cost;
    (4) the possibilities of ' specialty ' costing, that is, per type of case, for national purposes;
    (5) the introduction of provision for depreciation on capital assets; and
    (6) the introduction of an income and expenditure account and a balance sheet.

16. Under the system in use in the Scottish National Health Service, " Hospital Maintenance Expenditure " is divided into three arbitrary divisions: A—that which may be regarded as varying directly with the patient occupancy rate; B—that on which the influence of the patient occupancy rate is undoubtedly strong, but not fully proportionate; and C—that of the fixed charge type which must be met irrespective of the patient occupancy rate.

17. To obtain units of cost, Group A expenditure is divided by the number of patient days; Group B expenditure, according to a set formula, is divided partly by patient days and partly by bed-days, and Group C expenditure by the number of bed-days. From the resulting figures a composite bed-day rate is obtained.

18. This system does not, however, in itself produce information of the cost of maintaining any department of the hospital and, moreover, it still continues the use of the all-in unit of " cost per occupied bed," calculated on subjective headings of expenditure. It therefore suffers from the same disadvantages as the system prescribed in Statutory Instrument No. 1414.

19. Expenditure control is essentially a personal responsibility and, unless expenditure is grouped as far as possible to follow this responsibility, there can be no effective control or guarantee that money is spent to the best possible purpose. To maintain the mere stability of total expenditure is not " effective " control.

II. RECOMMENDATIONS.

20. Based on the results of our investigation, the study of the documents referred to, and the considerations contained in Appendix 'A of this Report, we submit the following recommendations:—

    (*a*) **that the existing subjective analysis system prescribed in Statutory Instrument, No.1414, be discontinued;**
    (*b*) **that a Departmental System of Accounting be substituted, this system to be based on the units of the organisation of a hospital, e.g., departments, wards, and services (see paragraphs 36-41);**
    (*c*) **that Budgets be prepared on the departmental system (see paragraphs 52-59);**
    (*d*) **that the whole of the accounts be finalised in an income and expenditure account and a balance sheet, prepared in accordance with recognised accounting principles (see paragraphs 42-44).**

21. Under recommendation (*b*) a separate account will be set up and maintained for each department or sub-department of the organisation. Within each such account the analysis of expenditure will be grouped under significant headings appropriate to the work carried on in each department. Finally, the departmental expenditure will, in suitable instances, be reduced to a unit of cost, such cost being determined by the nature of the service rendered in each case (see paragraphs 45-51 and Appendix C.)

22. The major points arising out of the above recommendations are:—

    (1) the acceptance of the view that hospital accounting is an integral part of hospital administration and an instrument of management;
    (2) that a costing system separate from a financial system, is neither necessary nor desirable;
    (3) the essential and inseparable relationship between the organisation, the budget and the accounting system;
    (4) that efficiency and economy can best be secured by a liberal delegation of authority to executive officers, control being augmented by an accounting system which brings out the results of the exercise of the delegated powers;
    (5) the linking of financial with executive responsibility to develop the money sense in executive officers.

23. We are of the opinion that the introduction of the departmental system of accounting will go far in supplying the answers to those who have criticised the futility of existing methods as an aid to effective control of hospital expenditure, and the use of the unit of cost " per occupied bed " as the only basis for comparisons between hospitals.

24. The departmental principle is fairly generally accepted to-day. Some government departments have already adopted it, and appropriate funds partly by subject and partly by object. For example, in Statutory Instrument No. 1414, the Ministry of Health recognise the practical application of this principle by making provision for the maintenance of separate accounts on an objective basis for such departments

as canteens, farms and gardens, estates, occupational therapy; also by subsequent developments which tend to establish purpose as well as the nature of expenditure, e.g., the division of "Other Salaries and Wages" between laundry, catering, works, etc. The fact that the accounts referred to are of the nature of trading undertakings, and only take in certain items of expenditure, does not alter the contention.

25. By reason of the simplicity of the methods required to implement our recommendations, little difficulty should be experienced by any hospital authority in putting them into practice with the least possible disturbance of existing systems and procedures—a factor of the greatest importance when the introduction of a new system is contemplated.

26. Whether or not the accounts are centralised or decentralised depends upon the circumstances of each individual hospital, or group of hospitals. The principles of the departmental system are equally applicable to both methods, and the selection of the method is one for decision locally. The same considerations apply to mechanised or manual methods of accounting.

Advantages of the Departmental System of Accounting.

27. As the implementation of our recommendations would involve a fundamental departure from the present system of hospital accounting, it is necessary that we state the advantages which, in our opinion, should accrue from the proposed system. They are given in Appendix B.

Staff.

28. It has been argued that the introduction of a costing system will involve an increase in staff, not only in the finance department, but also in some other departments where primary records are initiated. If a costing system were to be introduced and maintained as a separate and distinct system, then it would be difficult to reject this argument.

29. So many factors, however, enter into any consideration of staff that it is impossible to generalise on this subject. Some of these factors are:—

(*a*) the adequacy of the existing accounting system and its accompanying records;
(*b*) the efficiency of the accounting organisation, and the degree of co-operation with other departments;
(*c*) the experience, knowledge and physical fitness possessed by the existing staff;
(*d*) the nature and extent of mechanical equipment in use; whether appropriate or necessary for the work; and the skill of the operators;
(*e*) the extent to which duplication of work and records exists;
(*f*) the extent to which records that no longer serve any useful purpose are maintained;
(*g*) the suitability and extent of centralisation of accounting records;
(*h*) whether there is determination and drive throughout the administrative organisation.

Expense of a Departmental System.

30. Will the cost involved in setting up and operating a departmental system of accounts be justified by the results it is hoped to attain? To give a satisfactory answer to this question, it is necessary to ask: What is the essential purpose of a hospital? From the all-important national point of view, it is to treat and care for as many patients as possible in the shortest effective time so that they may resume their normal way of life and, in the case of the "breadwinner," that he may resume the task of earning his living and supporting those dependent upon him. For every day spent in hospital, the individual and the nation suffers loss. While in hospital, the breadwinner is on the industrial scrap-heap and, therefore, in his own interest and in the interests of the nation, it is desirable that he should be able to take his place as a working member of society with all possible speed.

31. For this to be secured it may be necessary to provide greater accommodation than at present exists, and for hospitals to be in a position to avail themselves of the latest apparatus and other means of treatment. Under present conditions of hospital finance this increased accommodation and improved equipment can only be obtained slowly and with difficulty. By finding out where economies can be effected or activities adjusted, it is conceivable that these additional resources may be partly obtained by the efforts of the management.

32. We do not suggest that the departmental system of accounting provides a solution to all the problems of hospital finance, but we do claim that a hospital which knows exactly how it stands currently, and in what directions it is expending its funds, is in a much better position to cut expenditure that does not yield an adequate return in service than a hospital not in possession of such information. If cuts have to be made or bed accommodation and other facilities increased, the accounts will show what departments or services can best be curtailed without undue loss of service to patients or lowering of standards of efficiency. If regarded only from these two points of view, the answer to the question—will costing pay?—must obviously be—yes.

Basic Plan of Hospital Finance.

33. Many of the matters discussed in this report have already attracted the attention of hospital authorities and their officers, and a number of plans and experiments have been introduced, both at the hospitals co-operating in the investigation and at others. These plans and experiments present a great variety in completeness and in quality, but it is submitted that by reason of the fact that the underlying motive has been, in the main, the introduction of methods of costing and the compilation and submission of statements of costs on a subjective basis, they fall short of providing a sound basic plan of hospital finance.

34. Such a plan, must, in our opinion:—

(*a*) safeguard the quality of the financial service, and preserve the essential relationship between administration and finance;

(*b*) incorporate a system of accounting specifically designed for the all important function of operating as an aid to management. It is this characteristic—the manage-

rial significance of the results—which distinguishes the system we recommend most sharply from hospital accounting as it is practised to-day;

(*c*) provide for the maximum co-operation between the finance department and all other departments of the hospital. It must, therefore, be developed with the co-operation of the heads of these departments and not be merely imposed upon them;

(*d*) be basically sound and flexible in order to provide for logical future development.

35. It will be appreciated that the finance department can record only the information passed to it by the functional and service departments. If this is incorrect, delayed or inadequate, so will be the accounting records and the statements prepared therefrom. The accounting system must, therefore, cover all transactions in all departments of the hospital which have an effect on its finances, and the finance officer should have the necessary authority to test or check all statistics supplied to him by other departments. However accurate the departmental accounts may be they are rendered valueless if the figures upon which they are based are unreliable.

III. THE DEPARTMENTAL SYSTEM OF HOSPITAL ACCOUNTS.

36. The departmental system of hospital accounts recommended in this report is based directly on the organisation of the hospital, each unit or service of the organisation representing a "department" or service for accounting purposes, which, with a few exceptions, corresponds to the functional responsibilities the various departments would ordinarily be expected to assume. The starting point of the system is a classified schedule of all departments, services, etc., which make up the complete organisation of the hospital. Every hospital can be departmentalised to some extent, but the subdivisions will vary according to the size of the hospital, nature of activities, volume of work, amount of expenditure involved and extent of delegation of authority, etc.

37. No hard and fast rules can be laid down. As a result of our preliminary surveys we found that, from an accounting point of view, the conditions in various types of special hospitals, e.g., tuberculosis sanatoria, mental hospitals, etc., do not differ materially from those of general hospitals, and the principles set out in this report may, with appropriate modifications, be applied to them. Methods will differ according to special conditions, e.g., cost of patient labour in mental hospitals, but these do not affect the general principles. It would seem that little advantage would be gained by departmentalising an infectious disease, tuberculosis, or maternity hospital of (say) 50 beds. But one of 100 beds might well be costed departmentally. Again, little purpose would be served by departmentalising a general hospital containing up to (say) 75 beds, unless it possesses some special features. Wherever practicable, however, the cost of out-patient

departments should be separated from in-patients. We suggest that these are matters for consideration on practical grounds by the Ministry of Health in consultation with hospital authorities.

38. We have studied a number of departmental groupings and we recommend the following three basic groups:—

Group I *Patients' Departments*:

(*a*) In-patients

(*b*) Out-patients

Group II *Special Service Departments*:

This group includes departments which furnish service of a professional or semi-professional character to patients; generally, in the form of direct treatment of patients, e.g., X-ray; massage; physio-therapy; operating theatres; etc.

Group III *General Services*:

This group is divided into two sections:—

(A) major departments which furnish service of a lay or domestic character to practically all other departments, e.g., boiler house; laundry; kitchens; staff services;

(B) other services having the character of departments, and in respect of which an appropriate and significant unit of cost may generally be calculated. These have no direct contact with the patients. This group also includes trading accounts, and a number of miscellaneous service and other items which are more in the nature of expenses than departments.

The main areas of responsibility in this system are the Group I and II accounts, to all of which Groups III (A)—III (B) provide service. As, however, there is no common organisation applicable to every hospital, external comparisons between hospitals can only be made on a like with like basis after Group III expenses have been re-distributed. For internal purposes re-distribution is not of such vital importance as, provided the same classification of expenditure is adhered to from period to period, control may be maintained. These principles are discussed further in Appendix "D."

39. The classification for accounting purposes of departments and services within each of these three groups is a matter for practical consideration by each hospital. The schedule on pages 14 and 15 is given as a guide in this connection, and to ensure as great a measure of uniformity as is reasonably possible. Some of the accounts shewn may require further sub-division for the larger hospitals, or merging for smaller hospitals. Some hospitals will not have all the departments listed in the schedule, while other hospitals may have departments and expenses in addition to those shewn.

SCHEDULE OF DEPARTMENTS AND EXEMPLIFICATION OF DEPARTMENTAL SYSTEM OF HOSPITAL ACCOUNTS IN THREE STAGES

Department & Service	STAGE I	STAGE II	STAGE III
GROUP I			
Patients' Departments (a) In-patients	General Wards	General Wards: Medical, Surgical, Children	Each individual Ward
	Other Wards	Special Wards: Maternity, Geriatric, Other Special; Pay Beds (Section 5) Part III (Nat. Asst. Act)	Each individual Ward
(b) Out-patients	All Clinics, including Casualty	Clinics (Self-contained Clinics, e.g., V.D., Dental, should be separately costed).	Each individual Clinic
		Casualty	As Stage II
GROUP II			
Special Service Departments	All Theatres	All Theatres	Each Individual Theatre
	All other Special Departments	All Laboratories	Each individual Laboratory
		X-ray	As Stage II
		Radio-therapy	As Stage II
		Physio-therapy	Physio-therapy Electro-therapy
		Occupational Therapy	As Stage II
		Other Special Departments	Dental Workshop etc., etc.
GROUP III (A) General Services (See Note (a))	Boiler House and/or Power House	As Stage I	As Stage I
	Laundry (by direct labour)	As Stage I	As Stage I
	Kitchens	As Stage I	Main Kitchen Other Kitchens, e.g., Pay Bed; Diabetic, etc.
	Staff Services	Residential Staff Services	Residential Staff Services: Nursing, Medical, Domestic, Other
		Non-Residential Staff Services	As Stage II
	Bakery	As Stage I	As Stage I
	Canteens—Out-patients (See Note (b).)	As Stage I	As Stage I
	Shops (See Note (b).)	As Stage I	As Stage I
	Farms and Gardens (See Note (b).)	As Stage I	As Stage I

Department & Service	STAGE I	STAGE II	STAGE III
GROUP III (B)			
General Services (See note (a))	Transport	As Stage I	Ambulance Other Transport
	Unit Administration (including Stores; General Porters; Telephones and proportion of Group Administration)	Unit Administration (including proportion of Group Administration) Stores General Porters Telephones	Administration: Proportion of Group Administration Secretarial Nursing Engineering Catering Stores: General Catering Engineering etc., etc. General Porters Telephones
	Dispensary (excluding Drugs & Dressings)	As Stage I	Dispensary Manufacturing Laboratory
	Medical Records and Social Service (including Almoner; Admissions; Appointments; Registration; Photography)	Almoner and Social Workers Admissions Appointment & Registration Medical Records Photography.	As Stage II
	Training: Nursing Other	As Stage I	Training: Nursing—P.T.S. Nursing—Block System Midwifery Physio-therapy etc., etc.
	Miscellaneous—including: Corridors; Stairs; Lifts; Gardens and Lawns; Chapel; Libraries; Linen sorting and distribution; Steriliser; Incinerator; Etc., etc.	Corridors; Stairs; Lifts; Gardens and Lawns. Chapel Libraries Linen sorting and distribution Other General Services	Each individual Service as required.
	Burials (See Note (b).)	Burials (See Note (b).)	Burials (See Note (b).)
	Travelling Expenses of Patients and Escorts (See Note (b).)	Travelling Expenses of Patients and Escorts (See Note (b).)	Travelling Expenses of Patients and Escorts (See Note (b).)

NOTES: (a) The arbitrary distinction between Group III (A) and (B) is mainly an accounting one for local decision bearing in mind (i) the relative importance of the units of organisation concerned, and (ii) the intention that Group III (B) should first be re-distributed, as appropriate, to Groups I, II and III (A): following which Group III (A) should be re-distributed as required amongst the accounts within this Group itself and then to Groups I and II as a final step. (See also Appendix D.)

(b) If it is not considered desirable to re-distribute these items of expense, an alternative treatment is to include them as individual items on the final cost statement.

40. We realise that it may not be practicable on the introduction of the system for the majority of hospitals to maintain accounts in accordance with the complete classification shewn in the third column of the schedule and we suggest that this classification be reached by stages as indicated in the three columns. With the successful introduction and

maintenance of Stage I, the ground is well prepared for its logical development to Stages II and III. Some hospitals are already in a position to adopt Stage II, or even Stage III, almost immediately, and the flexibility of the classification allows this to be done wholly, or in part, at any time. It also allows hospitals which, as a whole, may be costing at Stage I level to undertake any particular development which may be deemed of consequence from the point of view of local management and yet fit these detailed costs into the complete scheme. (See also diagram between pages 24 and 25).

41. Within each of the departmental accounts expenditure is classified by nature of expense appropriate to the particular accounts. We suggest the adoption of a basic classification of three main items, e.g., 1. Salaries and Wages; 2. Supplies; 3. Other Expenses. with such appropriate sub-divisions to each as may be agreed between the Ministry of Health and hospital authorities. Expenses may be arranged according to their fixed or variable nature, or grouped to show the form of service rendered, e.g., medical, nursing, housekeeping, administration, etc. So long as the basic classification is adhered to, uniformity will not be sacrificed if some hospitals, for special reasons make further sub-divisions.

Income and Expenditure Account.

42. The departmental accounting system readily permits of the preparation of an Income and Expenditure Account (see Appendix E), showing the cost of maintaining each department of the hospital, that is, in complete conformity with the units of the organisation of the hospital. It will be seen that although the expenditure in respect of each department and service is shown in the Income and Expenditure Account, the effective charge for General Services expenses is distributed to, and included within, the Patients' Departments (Group I) and Special Services Departments (Group II), thus providing a comprehensive picture of the cost of maintenance and treatment of patients.

Balance Sheet.

43. Having regard to the requirements of Statutory Instrument No. 1414, it is not at present possible for hospitals to prepare a Balance Sheet in the accepted accounting sense. No special funds, reserves, or capital balances are maintained from Exchequer monies, and expenditure upon certain permanent assets is not capitalised, but recorded as an outgoing in 'Hospital Maintenance Expenditure'. In all these circumstances, the normal presentation of assets and liabilities in such manner as will reflect the degree of financial stability and liquidity has no application, the balancing statement being merely the final act giving accounting proof of double entry and indicating the cash balances in hand together with revenue assets and liabilities.

44. The paucity of the information afforded by this balancing statement as to past and present resources and future prospects in the financial sense, reflects the fact that hospitals or hospital authorities cannot be regarded as financial entities, but only as financial agents reimbursed upon an 'out-of-pocket' basis. In other circumstances, as for example, a relatively fixed contribution from the Exchequer, together with the opportunity of supplementing this grant from chari-

table or other sources, by borrowing or by contributions from local exchequers, etc., the planning for local development could proceed in the complete sense of financial responsibility. In such conditions the integration of accounts—maintenance, capital, endowment and other funds—into a cohesive accounting system would be possible and the balance sheet would show the financial position. Within such accounts, reserves against contingencies and specific future liabilities would be established, e.g., renewals and repairs, depreciation, etc. Such provisions are dictated by continuing financial responsibility, but are not essential in a system providing finance automatically on a yearly basis.

IV. UNITS OF COST.

45. Aggregate departmental expenditures are more significant when they are reduced to units of cost, related to, and calculated on, the volume of work performed. This enables the meaning of the figures to be more easily understood and changes and trends more easily detected and assessed. There is, for example, little use in knowing that the expenditure on the X-ray department is £X without knowing also the quantity of work performed, or that provisions cost £X without information as to the number of persons fed. An appropriate yardstick or unit of measurement should, therefore, be determined for each department whereby its efficiency can be measured.

46. Unit costs have a definite place in the efficient and economical management of hospitals. They are really 'index' figures and, by their intelligent use, it is possible to make significant comparisons with other periods for the same hospital, and on a like with like basis between hospitals; to set up standards where appropriate; and to facilitate the preparation of more accurate budgets. For the purposes of subsequent investigation each unit of cost may be still further divided to show the cost of its constituent elements. (See Appendix E, Statement No. 2, col. (6), Statement No. 2(*a*) col. (5)).

47. The same unit of cost is not significant for all departments and services. For example the all-in 'cost per occupied bed', the official unit at present used, is not a significant unit of cost for every department. It assumes that all revenue expenditure responds freely to every variation in the number of beds in use. The fallacy underlying this unit of cost is well illustrated by the fact that a relatively small proportion of hospital expenditure responds to ordinary fluctuations in the average number of beds occupied. Other defects of this unit, and its use with subjective headings of expenditure, are given in paragraphs 90-95.

48. It is not easy to set down a just unit of cost for each department, but it will be obvious that each unit of cost should have a direct relationship to the service represented by the expenditure incurred and it must, therefore, be determined by the nature of the service. This is a fundamental principle, and the only sound one if the costs are to serve any useful purpose. All units are defective in some degree or other and, in any

case, they are averages, a fact often forgotten. Some expenditures may be expressed in terms of more than one unit, e.g., cost per occupied bed, cost per established bed, and cost per staffed bed; cost per meal and cost per basic meal; cost per 100 lbs. dry weight washed, and cost per man hour, etc. As a guide in this connection we set out in Appendix C methods for determining units of work and cost together with a list of such units, practically all of which have been experimented with during the trial runs previously referred to. The list is not exhaustive, but read in conjunction with the suggestions for their determination, it is sufficiently indicative of the principles to be adopted.

49. Although separate direct accounting will rarely be possible in all hospitals for each out-patient clinic, nevertheless the allocation of the main elements of expenditure to individual clinics is practicable, and appropriate costs can be calculated for each. (See Appendix E, Statement No. 1. Part III.)

Cost per type of Patient, Illness, Disease, etc.

50. In our consideration of the wider aspects of hospital accounting and statistics, we have reviewed the possibilities of 'specialty' costing in conjunction with departmental accounting, and the use of medical and other records as the basic data upon which to calculate costs for the treatment of each main type of illness, disease, or operative treatment. At the present time no statistics are available showing the cost to the country of treating cancer, rheumatism, tuberculosis, diabetes, etc. We feel that if the cost of the hospital service can be 'broken down' to show this information it will be of greater national value than information showing the cost of individual departments or the amount of expenditure on salaries and wages, provisions, light, water, etc. We have carried out some experiments on these lines and some interesting results have been obtained. These are far from conclusive, but they are of more than passing interest in that they indicate a constructive approach to the subject of hospital accounting in relation to the nation's social services.

Weighting and Time Studies.

51. A number of time studies have been carried out, and consideration has also been given to the question of 'weighting' units of work in order to enable the relative costs of various treatments, tests, activities, etc., to be ascertained. In the time studies undertaken (see Appendix F), no attempt was made to assess the speed, effort and skill of the persons observed, nor were the times adjusted for other factors which normally compose a time rating, e.g., fatigue, breaks, etc. The times shown are simply those taken from start to finish of the operation or treatment. Studies are being continued in some of the hospitals co-operating in the investigation, but the time involved and the absence of sufficiently detailed records is proving a difficulty. Many items may give useful information if treated in this way, e.g., operations, X-ray examinations, physio-therapy treatments, laboratory examinations, etc. Some suggestions in this connection are set out in Appendix C.

V. THE HOSPITAL BUDGET.

52. To be effective and take its proper place as an instrument of control over expenditure, it is essential that the hospital budget, like the accounting system, should be based on the departments composing the organisation of the hospital, so that the results may be compared periodically with the departmental budget. It pre-supposes a properly aligned organisation of departments, functions and personnel, so that responsibility may be definitely fixed. The budget is not a single entity; and it should not be prepared, interpreted and administered as such, but as a composite of the departmental budgets. This method may involve some difficulties in the initial period, but the extra effort required will be amply repaid by the saving obtained through better control, as the budgeted unit costs become the yardsticks against which future departmental performance is measured.

53. It will be realised that the undoubted advantages to be gained from departmental budgets are not inherent in the method itself. With a budget prepared on sound principles, these become available in greater or lesser degree as its real purpose is comprehended, and as it is maintained as an instrument of expenditure control by positive and continuous executive action.

54. The budget of a hospital or group is at present regarded as a sum of money to cover the estimated expenditure to be incurred during the next financial year; as a document laying down limits which must not be exceeded. This, in our opinion, is not a budget; it is an appropriation of funds. We regard a budget as a constructive plan of action, which has, in its several parts, been agreed by the heads of all departments concerned and approved by the management. It is an expression, in accounting terms, of the plan and future policy of the hospital and a pre-requisite to sound management. This view of a budget places emphasis on the financing of the cost of care rendered to patients rather than on that of financing the hospital as an institution. Within a hospital or group it must be flexible to meet changing conditions in the volume and incidence of service rendered, and to allow of just comparisons.

55. It is necessary to recognise the fact that the budget is for a full year, and that for many reasons expenditure will not accrue evenly throughout the year. It is not correct, therefore, merely to divide the yearly budget by twelve to arrive at a monthly figure, but to assign to each department, each month, such amounts as will be proportionate to the needs of that particular month. Budgetary control will become the more effective as these principles are applied with the skill that comes with experience.

56. We are aware of the criticism levelled at the use of the budget system in hospital finance. This criticism arises, we suggest, because the philosophy of a budget system is not understood. First of all it should be appreciated that any system of accounting that does not contemplate an evaluation of the important sections of hospital activity, will not produce an effective budget. A budget cannot be prepared correctly unless coincidentally with the financial analysis, there is a a service analysis as well. Any consideration of the financial

problems of a hospital must involve a study of the service rendered by each department. Therefore, a budget system does more than control the financial performance and, because it touches every phase of operation and cannot be effective otherwise, it should never be considered primarily as a financial function.

57. The form of budget or estimate prescribed in Statutory Instrument No. 1414 shows expenditure under eighteen main subjective headings. Included in the latter are items which range from 60 per cent to less than 1 per cent of the total maintenance expenditure. Experience has proved that a budget prepared on these lines is of limited value. Under the departmental system the items of expenditure are first ascertained under subjective headings for each department. In this form the budget represents a programme of estimated future expenditure in terms of departmental responsibility. This method is fundamental if the budget is to serve its purpose of securing and maintaining control over hospital expenditure. It offers not only a continuous record of financial performance, but also the means whereby that performance may be studied in an analytical way, and thus it provides all relevant information upon which to determine the relative efficiency of a department.

58. The first step, therefore, in the preparation of a budget is a forecast of the services to be rendered. This cannot be done in the composite, nor by a consideration only of expenditure under subjective headings. Each department of the hospital must be taken by itself, analysed, and its objectives determined and laid down, leaving the head of each department with an objective towards which to work, and for the cost of which he will be responsible. In the preparation of the departmental budgets the finance officer will work in close collaboration with the heads of all departments. After final approval has been given by the board or committee no alteration should be allowed to any of the amounts approved, except within the framework of standing orders. The head of each department should be supplied with a copy of the budget approved for his department.

59. As under the departmental system of accounting recommended in this report the budget and accounting system are inter-related, no difficulty will be experienced in the preparation of comparative statements for each department showing actual compared with the allowed budgeted figures, or, alternatively, the variations above or below the latter.

VI. FINANCIAL AND STATISTICAL STATEMENTS.

60. The foregoing machinery has been created for the purpose of obtaining complete information of the financial transactions as they affect the departments of the hospital. This information is recorded, however, not merely to serve as an historical record, but as an instrument of internal control. It is only by the focusing and expression of this information in the form of periodical financial and other statistical statements, the prompt submission of these statements to appropriate committees, and taking action thereon where indi-

cated, that this purpose may be effectively carried out. Periodical statements of this kind are, in fact, an integral part of a sound system of accounting and of effective management. They require a knowledge of hospital management and its problems in addition to that of accounting. Much of present day hospital accounting and the financial statements prepared therefrom fails to bring out this knowledge, with the result that although the figures are arithmetically correct they are not relevant to the problem of management. What is wanted is the presentation of data solely for practical application, rather than elaborate returns of great interest to their authors, but so comprehensive in their nature as to make their assimilation and application very nearly impossible. The importance of special returns should not be overlooked.

61. We have examined a number of financial statements and forms used for the submission of financial and other statistical information to finance committees, and we have used a number of others during our investigation. We suggest the use of simple forms which may be developed as experience is gained in the working of the departmental system and as the demand for further information arises.

62. We feel that members of committees would give the little time required for a study of relevant information contained in such forms, raise questions thereon, and ask for further information. Such has already proved to be the case with some hospitals co-operating in the investigation. The finance officer will of course, have available much more information than is contained in the forms with which to answer questions and supply additional data requested. We suggest that this is a better course to adopt than to supply committees with numerous forms and masses of statistics which they have not the time to study. Copies of the statements should be circulated to heads of departments so that they may see how actual expenditure compares with the budgets previously approved by them, and their comments thereon invited. Apart from the silent control introduced by these statements this practice helps to develop the money sense in heads of departments.

VII. CAPITAL COSTS (DEPRECIATION, ETC.).

63. One of the foremost aims of departmental accounting is to provide 'yardsticks' of efficiency to enable more reliable conclusions to be drawn from comparisons. It is, therefore, of importance that due consideration be given to all factors which may contribute to differences in unit costs of apparently similar services. Of these, capital charges represent important items which, though outside the scope of 'Hospital Maintenance Expenditure' as prescribed in Statutory Instrument No. 1414, are nevertheless, in the form of depreciation and interest on buildings, plant and equipment, ever-present costs which must inevitably be borne in some form and at some time by the community. Therefore, unit costs which ignore depreciation and interest on capital may be most misleading for the purposes of comparisons between hospitals.

64. Buildings, plant and equipment fall naturally into three broad categories (1) buildings and permanent building equipment; (2) furniture, surgical apparatus, diagnostic and therapeutic equipment; and (3) instruments, utensils, bedding and linen, etc. The characteristics which govern the classification of items in these three categories are as follows: —

Category 1. Generally those which form part of the building and have a fairly long life, e.g., in addition to permanent buildings, such permanent equipment as boilers, calorifiers, engines, generators, wells, lifts, fire alarm systems, heating and water systems, refrigerators, etc.

Category 2. Those which have a life of more than (say) five years. They do not form part of the building; they are of sufficient individuality, size and cost to make possible control by means of identification, e.g., desks, chairs, safes, lockers, bedsteads, room furniture, certain furnishings, curtains, floor coverings, operating tables, instruments and scientific apparatus, radiographic tables, cooking ranges, and other items generally classified as furniture and fittings. It will also include motor vehicles.

Category 3. Those which have a life of not more than (say) two years. They are small in size; in general use; and a reserve supply is kept in stock with inventory records, e.g., ink-stands, waste paper baskets, thermometers, crockery, brooms and brushes, charts, etc.

65. Of these we regard Categories 1 and 2 as capital assets, and in our opinion their loss in value through use, obsolescence, or other causes should be charged in the accounts as an expense by means of an annual provision for depreciation.

66. We are aware that this is a matter about which varying opinions have been expressed, but to which the answer is becoming increasingly clear. Whether or not depreciation is recognised as an expense in the maintenance of a hospital's buildings, plant and equipment, there is no gainsaying the fact that it is an expense. There is no essential difference between steel consumed by rust, wood consumed by rot, or equipment consumed by wear and tear. Provision for depreciation may properly be regarded as prepaid expenditure, and as it is a sound principle of accounting to charge expenditure at the time it occurs, so depreciation should be charged at the time it occurs. We are aware also that this opinion is contrary to the principles of accounting in most government departments and that it cannot be brought into the accounts under the present Regulations. Nevertheless, it is a simple matter for hospital authorities to keep memorandum accounts of appropriate charges from the property records of the hospital. Where these are not at present complete they may be built up gradually. We believe it to be sound policy, and indeed the only policy if the accounts are to show the financial position of the hospitals more in keeping with the actual facts.

67. We do not accept the view that the annual renewals, repairs and general upkeep of the buildings and plant will sufficiently preserve their value from year to year, and so adequately provide for depreciation. Again, where hospitals have works departments for carrying out normal maintenance renewals and repairs, if the only charges to the works department

account are those of the actual materials used and labour employed on the works carried out, the cost will be much lower than that which would be charged by an outside firm leaving out the question of profit. As a result, a hospital will feel that its works department is economical and that it carries out work at a much cheaper figure than would be possible by an outside firm. It may be that the opposite is true if all expenses including depreciation and interest on the capital employed in the works department are taken into account. The same comment applies to the laundry, and any manufacturing department.

Interest on Plant and Equipment.

68. Allied to the question of depreciation and the making of comparisons between hospitals is the question of interest on plant and equipment. In some hospitals expensive equipment is used which reduces considerably the labour charges, whereas in others the work is almost wholly performed by the more costly manual labour. Some departments contain heavy and expensive machinery occupying space, consuming power, and involving expense in wear and tear, as compared with other departments with light and inexpensive machinery, or with no machinery at all. Only when the capital charges in respect of such equipment are included as a cost is it possible to say if the services of one hospital are more economical than another. On the other hand the saving resulting from the use of expensive equipment may not be enough to justify its purchase if the cost of the capital locked up in the equipment is taken into account.

69. One may also look at the matter from another point of view. If a hospital authority elects to rent (say) its punched card machinery the amount of this rent is charged in the accounts as an expense, as indeed it should be. Another hospital, however, may buy the machinery outright and the amount paid will not be included in the accounts as an expense except in the year of acquisition. In this case, the purchase money is in effect nothing more than a capitalisation of the rental, and it would seem equitable that recognition of this fact should be made in the accounts. It is therefore a matter for consideration whether interest on capital invested in such equipment should be considered an element of cost and included as an expense in the accounts. Even if it is not desired to introduce interest as an expense, the item must not be lost sight of when comparisons are being made.

Inventory of Plant and Equipment.

70. Closely related to questions of interest and depreciation is the problem of maintaining accounting control over plant and equipment. This is not strictly a problem of departmental accounting as such, but the records and procedures are so closely related to those needed for purposes of calculating depreciation charges that reference is made to it in this report. Such an inventory is of value in any hospital whatever the nature of the accounts maintained.

71. Inventories at present maintained in hospitals are often restricted to showing only the numbers of each category of movable equipment, apparatus or utensils. This is valuable for the single purpose of property control, but it is suggested that as a long term proposition all plant and equipment should be valued and a complete inventory made.

VIII. STORES ACCOUNTS.

72. Regulation 22 of Statutory Instrument No. 1414 provides for the maintenance of stores records, but it is not clear from the wording of this regulation whether such records form part of the accounting system or are memoranda only. Stores control is an integral part of efficient and economical management of a hospital and adequate stores accounts should be an integral part of the accounting system. The system of accounting recommended in this report pre-supposes the existence of such accounts. The method of pricing adopted, i.e., 'actual' or 'standard', is not a material factor in this connection.

73. With the possible exception only of daily deliveries for the kitchen all supplies taken into a store should be treated as purchases for stores and charged to Stores Control Accounts, classified into as many divisions as may be found convenient, e.g., provisions; drugs; dressings; medical and surgical supplies; etc. Moreover, they should, wherever practicable, actually be taken into physical store(s) and issued only to wards and departments in exchange for requisitions signed by authorised officers. The need for such a control cannot be emphasised too strongly. Not only is it an effective method of securing the economical use of supplies, but it creates an important relationship between the use of supplies and purchasing. Good practice in the one will react favourably on the other. With such control it is possible to obtain close estimates of requirements based on accounting records of issues over stated periods. It will lead to quantity buying at more convenient times with more favourable prices in both instances, and afford a sound basis for standardisation and the preparation of reliable supplies budgets.

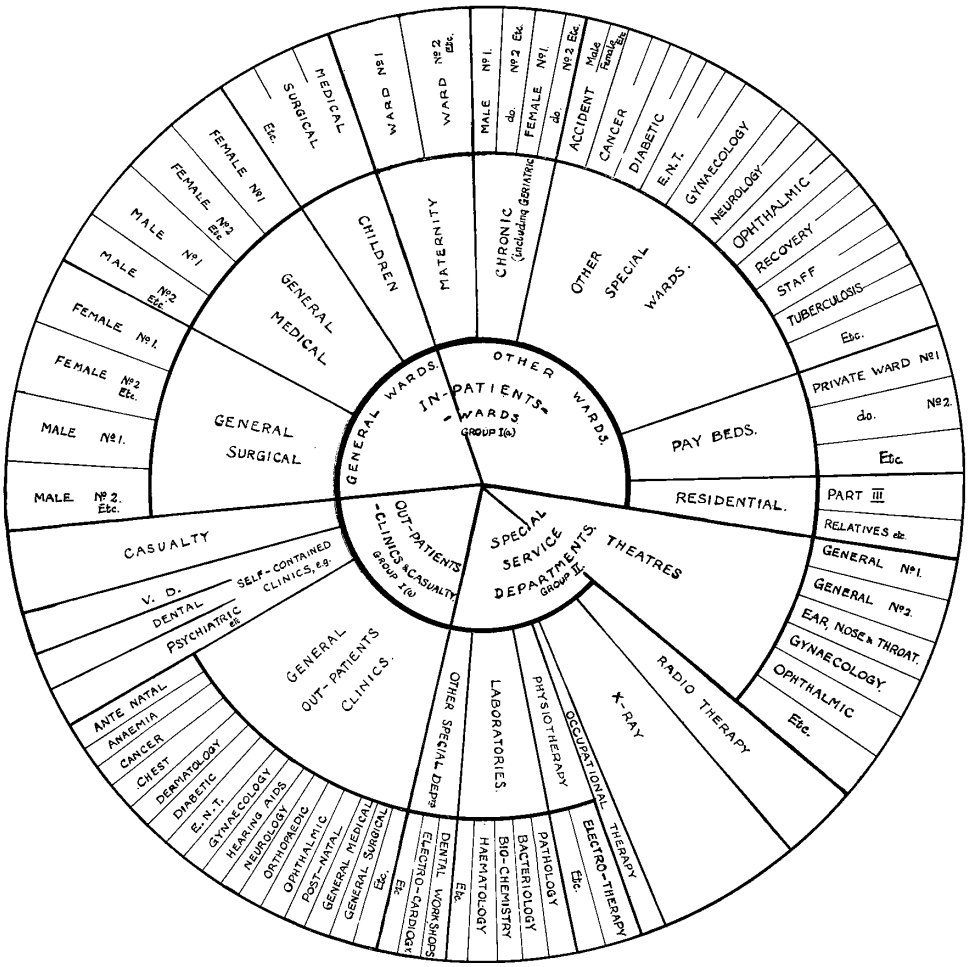
74. The main principle to be observed in connection with supplies is that everyone concerned should be given to understand that supplies are cash in another form, and that they must be guarded just as carefully. If this principle is observed a considerable saving in expenditure will result.

IX. ACKNOWLEDGMENTS.

75. We are happy to record our thanks to the governing authorities, executive officers and the staffs of the hospitals selected for the investigation. They afforded every help and co-operation to our investigators. We appreciate the fact that the bulk of the work connected with the investigation placed a heavy burden on the finance officers and their staffs, particularly as it was often necessary for figures to be taken out in a different manner for our purpose, and special thanks are due to them. We are also grateful to the members of the medical, nursing, and professional and technical staffs who afforded opportunities and assisted whole-heartedly in the carrying out of time studies. Our investigators were instructed not to criticise or interfere in any way with the existing systems and arrangements, and to give advice only when asked for. We understand that they have complied with this instruction, and willingly given of their knowledge and experience to assist the hospitals to improve their existing systems. We record our indebtedness to them for the able manner in which they have carried out the difficult task assigned to them. Their names are given in Appendix H.

Departmental System of Hospital Accounts

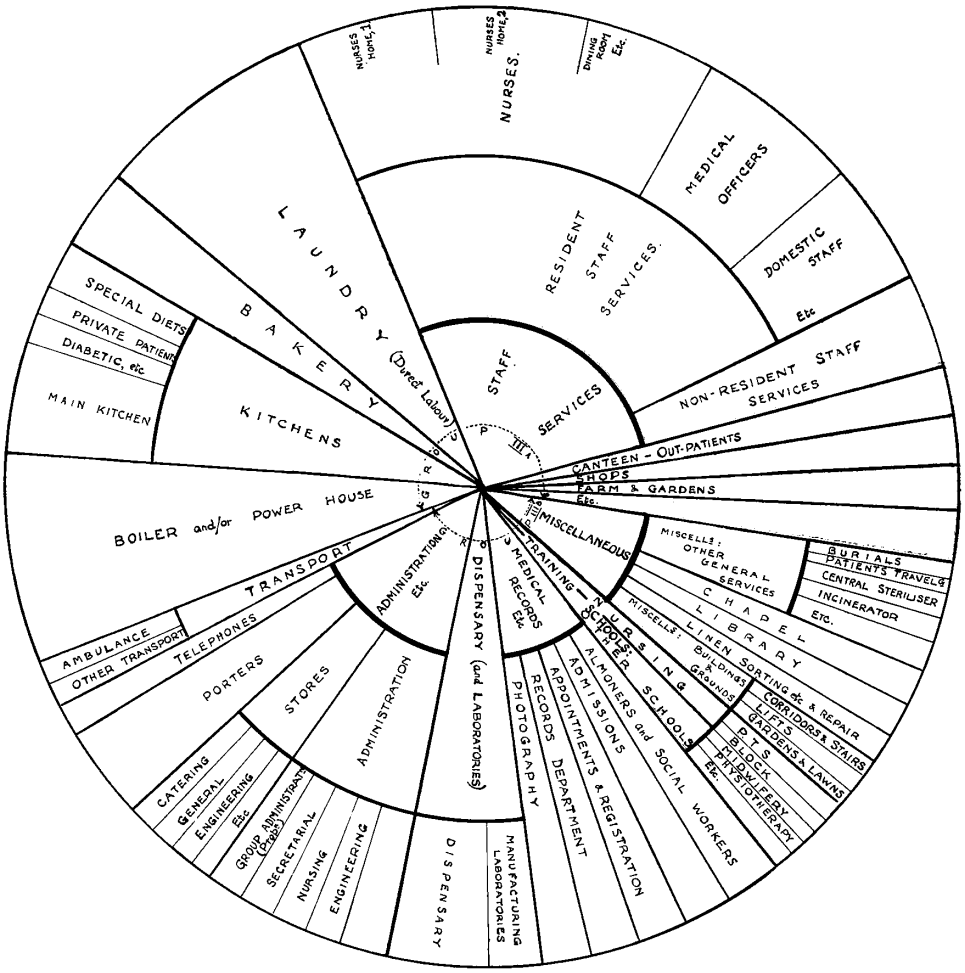
Diagram illustrating the development of Patients and Special Services accounts in Three Stages.



Key: Stage I Pink
Stage II White
Stage III Green

Departmental System of Hospital Accounts

Diagram illustrating the development of General Services accounts in Three Stages.



Key: Stage I Pink
Stage II White
Stage III Green

APPENDICES

APPENDIX A

CONSIDERATIONS LEADING TO THE RECOMMENDATIONS.

Cost of Hospital Care.

76. We have attempted to put the problem of hospital accounting in its proper perspective. The problem is to provide a maximum of efficient service within the limited resources available. In the long run, hospitals cannot render service costing more than the allotted funds. It is to be noted, however, that given equivalent resources, similar type hospitals provide (1) varying amounts and qualities of service; (2) the same services at differing costs. From an economic point of view these divergencies in costs arise primarily from variations in (*a*) prices paid for the factors of service, and the quantities used; (*b*) size and range of activities; (*c*) the effectiveness with which the various factors of service are organised and controlled; and (*d*) the submergence of capital costs in these figures.

77. We feel, therefore, that the problem of an effective system of accounting for hospitals requires for its solution something more than the introduction of a costing system to control expenditure as is implied in our terms of reference. The control of expenditure is admittedly of the greatest importance, but the problem as seen by the Fund is more a matter of controlling the cost of essential hospital care, rather than that of the cost of maintaining a given number of hospitals and beds.

78. Hospital care to-day is expensive, and it has been rising steadily for many years. There are, however, a number of important items on the credit side—lower death rate, fewer complications, shorter convalescence, reduced disability, etc. Treatment is more effective because of scientific discoveries of new drugs and principles of therapy; diagnosis is more accurate because of new and complicated tests; and due to refinements in methods of hospital practice care has been improved. These results may justify the cost, but in our opinion it is possible that high quality patient care could still be provided for a greater number at less cost.

79. Many methods offering possibilities for the reduction of cost were brought to light during our investigation and these are being subjected to further tests.

Cost versus Service.

80. The general conditions of hospital service and the wide variety of types of work undertaken add to the difficulties of operating a system of accounting with units of cost. Criteria and standards vary, and it may be argued that the head of a hospital department cannot measure his success by cost per unit alone as can a manufacturer of equipment. He may assume, in fact, that the more he spends per unit of service, the more successful is his contribution to the service. Again, if he is a good officer, he will be an idealist, and he may even despise money and its implications as unimportant.

81. It is fully appreciated that, although it is easy to measure its cost, it is difficult to measure the ultimate value of a social service. A dearer service resulting from increased quantity or improved quality might in the long run be more economical than a cheaper service. In our opinion these conditions do not in any way detract from the advantages of an adequate system of accounting but make such a system all the more desirable. Hospital service is now 'big business', and handsome dividends in the way of economies and increased service may be secured by more effective control of expenditure.

Factors which Influence Costs.

82. Bearing in mind the importance of securing reliable units of cost for purposes of comparisons between hospitals, we have given much thought to the factors which in our opinion influence such costs. Some of these factors are outside local control, but it is essential that they should be known and evaluated, not so much perhaps for current comparisons, but as guides to future planning, organisation and staffing. (See Appendix G).

Historical Review.

83. Excepting the municipal hospitals, which were mainly financed from local rates and non-specific government grants, hospital service has been developed over the years on a foundation of voluntary support. With the passing years that foundation has proved to be inadequate from the standpoint of maintaining the structure erected and developed thereon. Just prior to the second world war the foundation was weakening and its ability to support the structure was decreasing.

84. In the early history of these hospitals, maintenance costs and operating deficits were comparatively low. Persons with large incomes were more numerous and they supported the hospitals very generously. Generally, therefore, there was no pressing need for hospitals to adopt any system of accounting other than that necessary to record faithfully the receipt and payment of cash. Developments such as the conversion of cash records to the income and expenditure basis and improvements in stores records took place, but little action was taken to introduce modern business methods, including that of an adequate accounting system.

85. Therefore, when the National Health Service Act came into operation, thinking in hospital circles was still dominated by a pattern of hospital accounting which dates back to 1869, when the Uniform System of Hospital Accounts was introduced into the Queen's Hospital, Birmingham. This System was revised and adopted by the King's Fund in 1906 and, as amended, it was the system in force in the great majority of the voluntary hospitals in the country in 1948.

86. The system prescribed by the Ministry of Health in Statutory Instrument No. 1414 is for all practical purposes similar to this system. Thus hospitals have at present no sound basis upon which to meet to-day's perplexing financial problems, referring particularly to the use of the accounting system as an instrument of control over expenditure; to form a guide for the preparation of reliable budgets; and as a means by which much needed decentralisation of authority may be introduced with adequate control at the centre.

Statutory Requirements.

87. The Statutory requirements relating to hospital accounts are contained in The National Health Service (Hospital Accounts and Financial Provisions) Regulations 1948, (Statutory Instrument No. 1414). Table B provides for an analysis of "Hospital Maintenance Expenditure" under eighteen main headings and thirteen sub-headings mainly corresponding to the nature or subject of the expenditure. In 1950 the analysis was extended to twenty-three headings and twenty-six sub-headings. (R.H.B. (50)66; H.M.C. (50)64; B.G. (50)59). Salaries and wages which previously had three sub-headings now has ten. Four new sub-headings termed " Extraordinary " are introduced. They refer to "expenditure which is not repeated at yearly, or less frequent, intervals and would unduly affect the normal running costs of the hospital."

88. The Annual Cost Account provides for the analysis of hospital expenditure, also on the basis of nature or subject, with a few objective headings interpolated, under thirty-four main headings and ten sub-headings. The Account is divided into two main sections: (1) Running Charges; and (2) Standing Charges. After the deduction of a notional expenditure in respect of out-patients, and excluding 'Extraordinary' expenditure, the remaining expenditure on in-patients is reduced, for each heading and sub-heading of expenditure, to the unit cost 'per occupied bed'. Five items of 'Extraordinary' expenditure appear in this account including Transport—'Purchase of Vehicles'—in respect of which the same unit of cost is calculated.

89. The additional cost statement "for experimental use in selected hospitals" is divided into the same two main sections, and comprises the same headings and sub-headings of expenditure as are included in the Annual Cost Account for each of the following departments: Administration, Transport, Maintenance Department, Laundry, Pathological Laboratory, X-ray Department and Physio-therapy Department. No units of cost are provided for these departments, and the expenditure on all of them is worked up into two accounts—In-patients and Out-patients, and costs calculated on these two accounts, in addition to the cost per occupied bed for each subjective item. This list omits an important 'department' in most hospitals, viz:—residential quarters and services.

Defects of the Present System.

90. The headings of expenditure in Table B and the Annual Cost Account are practically the same as those prescribed in the Revised Uniform System of Hospital Accounts which was rendered inoperative for all hospitals within the National Health Service on July 5th, 1948. We appreciate the fact that the system was introduced as a temporary expedient until such time as an adequate system could be evolved. We do not, therefore, comment on the decision to instal the system now in use, but it is necessary to consider its defects in order to show that it is quite inadequate for present day hospital management.

91. Important defects of this system are well illustrated in the following example. If we take the X-ray Department, we find that (*i*) plates and films are merged in 'Medical and Surgical Appliances and Equipment'; (*ii*) Laundry—if by contract—under 'Laundry'; (*iii*) Water under 'Water'; (*iv*) Salaries of Radiographers under 'Salaries and Wages—Professional and Technical Officers'; Nursing staff in this department under 'Salaries and Wages—Nursing': X-ray clerks under 'Administration and Clerical'; (*v*) Renewals and Repairs under 'Maintenance of Buildings—plant and grounds'. Stated thus, the cost of the X-ray department has no significance. By reason of the fact that its constituent elements are merged with other elements merely because they have a similar designation, it is incapable of being considered in relation to any activity whereby its efficiency, and its effective use may be measured. The same comments apply to nearly every department and service of the hospital.

92. When regard is had only to the wide range of differences in the nature and extent of the specialised services available, a fact much in evidence during our investigation, it is obvious that the subjective classification of expenditure is inadequate for reliable comparisons to be made between hospitals. Again, many of the heads of expenditure reflect the domestic facilities afforded by hospitals, but these facilities depend upon the proportion of resident staff, which varies considerably, and of which at present no account is taken.

93. Some hospitals possess elaborate and most up-to-date apparatus for radiology and various forms of electrical treatment, while in others the equipment may be very limited and the volume of work comparatively negligible. Some hospitals have laboratories for bacteriology and pathology, etc., especially equipped and employing large staffs; in others little or no work of this kind is performed. Again, massage and remedial exercises are now recognised as valuable forms of treatment. In some hospitals this work is practically non-existent, whereas in others there is special provision, both of staff and apparatus. The average number of beds occupied in two hospitals may be the same, but one may possess all recognised special departments and the other only some of them, or perhaps none at all. One may possess two operating theatres; the other four; and so on. There are also marked differences in the physical layout, internal arrangements, residential services, and the nature and extent of the training and research work carried on. Finally, one hospital may have capacity for a greater output than is demanded of it or vice versa.

94. Perhaps the most important defect of the present system is that the whole of 'Hospital Maintenance Expenditure' on in-patients is reduced to the unit of cost 'per occupied bed', a unit which is calculated for each subjective heading of expenditure. Where so many different kinds of services are concerned, the great majority of which have no direct connection with the 'occupied bed', and so many variations exist between hospitals, an all-in unit of cost 'per occupied bed' cannot be accepted as a reliable unit of cost.

95. Two other instances in which the present accounts fail to assist management must suffice. Certain propositions are often in the mind of management, e.g., that maternity patients

cost more than ordinary patients; that dressings for surgical patients are a heavy expense; that 'old' buildings cost more to maintain; that 'contract' laundry is more costly than a hospital's own laundry. Isolated ideas such as these deteriorate into mere prejudices unless they can be substantiated or measured. Secondly, no real help can be gleaned from the accounts in the many matters in which management has a plain choice, e.g., can savings be made by relying on private enterprise rather than attempting to be self-sufficient for laundry work, repair work, drugs manufacture, linen conversion, central storage, transport, etc. ?

Control of Expenditure by Regulations.

96. Under our initial terms of reference it was not incumbent upon us to inquire into the broader problems relating to the general financial structure of the National Health Service. These problems, however, are so intimately related to the question of efficient and economical management of hospitals that we have found it impossible to disregard them.

97. A major problem connected with the administration of the social services is how to secure adequate control of bodies entrusted with statutory duties which are neither government departments, elected bodies, nor trading undertakings. The hospitals are such a service. As part of the National Health Service their finances are controlled by accounting methods similar to those devised by the Treasury for the close control of administrative departments of State rather than for bodies engaged in activities of an operational and developing nature, where flexibility of financial control and the costing of activities is of paramount importance.

98. The essence of the Treasury system is control of payments (not expenditure) by reference to detailed yearly estimates. The form of these estimates is prescribed by the Treasury and consists of a number of subjective expense headings. Payments are controlled by reference to the amount spent under each heading, and it is not permitted, without prior sanction, for savings on one heading to be used to meet an excess on another, nor for any unspent balance to be carried forward from one financial year to the next. In short, the size of the purse and the allocation of its contents, is laid down. Payments must not only be kept within the limits of the purse, but also within each of its compartments, with the result that the hospitals find themselves within a kind of financial straightjacket. As experience has proved, this method affords no safeguard against extravagance. It leaves the door wide open for waste and inefficiency as, in a last minute scramble to spend the balance in hand, money is frittered away on short term palliative works, pieces of equipment, furniture, etc., small enough to be completed within the financial year. It is also stultifying to long term planning and the careful husbanding of resources to this end, since there is absolute prohibition against the carrying over of unspent balances.

99. We are of opinion that economical service cannot be attained while hospital authorities are controlled by a rigid financial regime of this kind. It is the return obtained for expenditure and not the expenditure itself that is of vital importance, and the real problem of hospital finance, and its control, is to

maintain productivity of expenditure at a maximum. A highly centralised rigid financial control of one side only of the equation—payments—is thus quite inadequate and inappropriate, as, under it, success comes to be measured more by the degree to which expenditure is kept within the defined limits, than by the return obtained for the expenditure.

100. It is becoming increasingly clear that some more flexible method of controlling the cost of the hospital service must be found to take the place of the existing traditional system of government control by centrally imposed detailed regulations. One alternative which has very definite possibilities is control by accounting and the judging of hospital authorities on their stewardship. We respectfully submit that, had an adequate system of accounting been in use in the hospitals when they were transferred to the Minister of Health, it is conceivable that the existing rigid control by regulation would not have been imposed, and that expenditure would not have risen to its present height.

Ad hoc Costings.

101. Consideration has been given to the question of extending the present system of accounting to include *ad hoc* departmental costings. At first sight this offered an easy and attractive proposition, but the knowledge and experience gained from our investigation has convinced us that this method, whether carried out by the hospital's own staff or by staff specially engaged from outside, offers no satisfactory alternative to continuous accounting control.

Uniformity.

102. It is often stated that there are so many differences between hospitals and hospital groups that uniformity of accounting and costs is impracticable. It is true that each hospital is peculiar in certain features, and it is as well perhaps that this is so. But peculiarities and differences imply a comparison or contrast with other hospitals and these, and their cost, are revealed most effectively through the use of a uniform system of departmental accounting, and the use of common yardsticks of comparison or measurement derived from the accounting system.

103. Functionally, however, hospitals are very much alike and from an accounting point of view, are subject to the same basic accounting principles; variation in size and organisation involve only variation in the classification of accounts and the sub-division of tasks performed by employees. Provided the principles and basic plan of departmental accounting are thoroughly understood and intelligently applied, the modifications and adjustments necessitated by these variations do not in any way weaken the advantages of uniformity.

104. Based on our long and intimate experience with the Revised Uniform System of Hospital Accounts, we are of opinion that uniformity is both practicable and desirable, and that the proper method to achieve it in greatest measure is by means

of agreement on principles leaving the organisation and detailed procedures of the accounting system to the discretion of the finance officers. In other words, uniformity of principle with flexibility of application. Prescribed forms for the submission of accounts and returns, etc., to central authorities are essential, but prescribed routine forms for accounting purposes should not be enforced on the hospitals. Uniformity should proceed along the lines of agreement on:

(1) aims and principles;
(2) definition and interpretation of terms;
(3) schedule of departmental accounts;
(4) classification of expenditure;
(5) units of cost;
(6) distribution of general services costs; and
(7) final accounting and statistical returns.

Hospitals Compared with Business Concerns.

105. Few hospital authorities would admit that their problems of management to-day are less complex than those of a good size commercial undertaking. It has been said that where the profit-earning motive is absent, as in State services, accounting is of little use as an instrument of control; also that a business has to make things pay but a government has to get things done. We submit that there is no difference in substance between these two points of view. The idea of specific performance underlies both. In business it is found desirable to instal effective accounting methods as an instrument of control over expenditure, and we consider it equally desirable to set up a similar system to control the expenditure of public funds. To hesitate to do so is tantamount to saying that as public work cannot be interpreted in the form of profit or loss, it does not matter how it is done, or what it costs.

Quantity Statistics.

106. We are concerned that more use is not made of quantity statistics, i.e., statistics of commodities, man-hours, etc. Rarely does the preparation and submission of returns of quantities form part of a hospital accounting system. If prepared at all, they are merely memoranda statistics covering only a few selected items, and quite often they are retained in the department producing them. Often such information is more valuable than financial information for locating excessive consumption or waste of labour, because, whether of materials or man-hours (the latter a particularly useful statistic), quantities are basic.

107. Cost alone will not necessarily reveal extravagance and waste. For example, in times of fluctuating prices, salary and wage increases, etc., comparisons of financial statistics alone do not afford sufficient information upon which to form reliable conclusions. If the price of a commodity is reduced and the quantity consumed, measured in terms of value, remains the same, it is obvious that an increase in consumption has taken place. This fact, however, would not be disclosed by the financial statistics, and it is possible for these statistics to show a reduction in cost in spite of the fact that consumption has increased. Again, a hospital may buy a commodity so advantageously that the cost per pound works out at a very low figure, possibly much lower than that of any other hospital, but the consumption of that commodity at this hospital

may be much higher than that of any other hospital and grossly extravagant. The low purchase price may give a low cost per head in spite of excessive consumption. Quantity statistics form an integral part of the departmental accounting system.

Forms and Summaries.

108. An important feature of an accounting system is the number and type of forms used, a phase of office work to which insufficient attention seems to have been given in some hospitals. Old forms and procedures are often continued to a point involving a considerable waste of time, energy, etc., as will be evident if a survey is carried out of the time spent on their preparation and completion. The cost of printing a form is a comparatively minor item when measured against the cost incurred in preparing information for its completion.

109. The preparation of 'flow' charts will be of great assistance in such a survey. By studying the flow of essential work, and the forms which are used in connection with it, much useful information will be obtained which will, it is suggested, enable a hospital to: (1) eliminate many of the forms now in use; (2) eliminate unnecessary details in others; (3) combine details where practicable; (4) re-arrange for better sequence; (5) simplify all necessary details; (6) find the most economical size for all forms retained; (7) improve the design of forms; and (8) improve procedures.

110. One of the major defects of present day hospital financial routine is the preparation of intermediate summaries. First daily, then weekly, followed by monthly and quarterly summaries are prepared. The great majority of these are never reviewed, the only purpose of their preparation being to carry the record in total form to a further stage, e.g., posting to accounts, provision of cumulative figures, and even for the mere passing of information to another department. In some cases intermediate summaries have their uses but they are very limited. By making greater use of primary documents with their extreme flexibility, and of simple mechanical appliances, e.g., the peg bar, the number of such summaries may be reduced considerably and, in the great majority of cases, eliminated altogether. Intermediate summaries should only be prepared when essential for purposes of review as distinct from those now prepared only for the purpose of arriving at total figures.

Modern Methods.

111. Modern methods of recording and accounting cover a wide field and we comment here only on a few matters which have arisen during the course of our investigation. This included hospitals using both mechanical and manual methods, and in some cases accounting machines were used in conjunction with other expensive mechanical devices, e.g., addressing equipment.

112. Contrary to popular belief, we do not consider that the introduction of the departmental system need involve any radical departure from the present methods used to record data. The majority of existing systems can be adapted to meet the

proposed requirements and, with these adaptations, the departmental system may well prove even less onerous than the subjective system of accounts. Nor does it necessarily require the introduction of machine accounting.

113. On the whole, the manual systems examined have stood up to the test as well as others, but there is still scope in some hospitals for an appreciable reduction in the sum total of the accounting, recording and statistical work at present being carried out. The association of this work with technical officers—catering officers, engineers, linen supervisors, laundry managers, pharmacists and other departmental heads—relatively unskilled in clerical or accounting work leads directly to pedestrian methods and the production of poor results at high cost. It also deters the departmental chief from maintaining those statistics which provide the management with a satisfactory insight into the work of his department.

114. We have already commented on the subject of forms and of methods which may be adopted to eliminate the preparation of numerous intermediate summaries. Other features of modern methods, such as the use of duplicate and slip systems, and the proper application of inexpensive office machinery of the adding or calculating type, might all be thoroughly considered before full office mechanisation is introduced. By 'full office mechanisation' is meant the performance of a major part of the recording work on multi-register accounting or punched card machines. More specific job analyses and detailed time studies are necessary before a definite opinion may be expressed as to the relative values of manual and mechanised methods. Many factors combine in any assessment of the value of office machinery, but it is doubted whether the average-size hospital group can use major equipment to full advantage. Experience of punched card methods throughout the investigation was limited, but examination of their use warrants the opinion that the reproduction of details of transactions on to a punched card can rarely be justified if the card is to be used once or twice only.

Speed and Accuracy.

115. In all accounting methods there is ever present the question: at what point does it cease to be profitable to further subdivide and differentiate expenses in an attempt to secure maximum precision? It is probable that no system of accounting ever devised is the last word on the matter of precision and accuracy; it is always possible to go a step further in hair-splitting, and the substitution of differential charges for averages. In the end, however, it is always a matter of opinion or personal judgment whether the complex result is indeed more accurate than the simple. But modern hospital management cannot afford to wait an indefinite time for the results of its activities, neither can it afford the extravagance of a system installed merely to arrive at figures which although a fraction or decimal point more exact, are not one iota more significant. It is necessary, therefore, as a matter of sound business expediency and in the interests of economic management, to effect a compromise between the rival claims of accuracy and responsiveness on the one hand and of speed and economy on the other. The value of financial statements, particularly those used for the purpose of control

of expenditure, is considerably reduced by delay in their presentation due to a desire to secure 100 per cent completeness or accuracy.

Standard Costs.

116. The introduction of a departmental system of accounting will enable significant unit costs to be calculated for each department of the hospital, the unit of cost in each case being determined by the nature of the work or service performed. Such costs represent, in our opinion, a considerable advance on the present 'per occupied bed' cost, calculated merely on subjective headings of expenditure. We have considered whether the advantages attaching to these new unit costs would be increased if they could be compared with figures showing what these costs should have been. These latter data are known as pre-determined or 'standard' costs, providing objectives at which to aim, and standards by which to assess the efficiency of performance.

117. Control of expenditure by standard costs has been defined as 'management by exception' for the reason that where the results coincide with or approximate to the 'standards' no action by the management is necessary as investigation has already taken place to arrive at the standards. Costs which vary appreciably from the standards create the 'exceptions', and indicate where investigation is necessary. The variations between actual and standard may be due to a number of factors, some of which may be attributable to external circumstances and some to internal causes, e.g., change in volume of work, labour conditions, prices of materials, etc.

118. As a result of our experiments with standard costs, which incidentally, were carried out by officers with considerable knowledge and experience of this special type of cost accounting in a number of industrial concerns, we are of opinion that in the present stage of the development of hospital accounting standard costs have only a limited application. Standard costs as we understand them imply a 'blueprint' precision which is obviously impossible of attainment in the treatment of patients which, indeed, could only be attained on the emergence of the 'standard patient'. Given appropriate conditions, such costs have an application to certain departments of a hospital where material objects are concerned, e.g., kitchen, laundry, etc. It must first be ascertained, however, that the standards set are sufficiently reliable to induce confidence that if results march in step with the standards, all is well. To show an 'exception' against a reliable standard is one thing; to show it against a standard which is not based on adequate data is worthless. Reliable standards for a standard cost system can be formulated most effectively only by having available a wealth of historical data in considerable detail, combined with painstaking study of conditions and, usually, after time and motion studies have been undertaken. Secondly, cognizance must be taken of existing staff in the hospitals, very few of whom have the requisite knowledge and experience necessary to introduce such a method. We feel that any attempt to do so at this stage in the development of hospital accounting would be extremely unwise; it would conceivably lead to more misleading comparisons than the present system.

119. We consider it far more important first to secure the ready and willing co-operation of all concerned in the initial stages of development of a simple and flexible departmental system. When this has been done, and sufficient experience of departmental accounting gained to allow of reliable historical costs on a departmental basis to be made available as a guide, further consideration may well be given to the question of the introduction of standard costs. The principles of the departmental system outlined in this report will remain intact, and no alteration will be necessary in the form of accounts to allow of the introduction of standard costs. For the time being, we recommend the reduction of the departmental budget figures of expenditure to units of cost, and the use of these as 'yardsticks' for comparison with actual units of cost.

APPENDIX B

ADVANTAGES OF THE DEPARTMENTAL SYSTEM OF HOSPITAL ACCOUNTS.

120. (1) The management will be provided with means to secure more effective control of expenditure as actual expenditure and unit costs can be compared with:

(*a*) previously approved departmental budgets;

(*b*) suitable yardsticks where such are found to be applicable;

(*c*) the cost of similar activities previously carried out;

(*d*) the cost of similar activities carried out at other comparable hospitals, thus enabling the relative efficiency of different conditions, methods and procedures to be assessed.

Where an unfavourable position is disclosed under any one or more of these headings, remedial action may be taken immediately. It is not merely a question of ascertaining whether a cost has increased or decreased, but of ascertaining whether the cost reflects efficient or inefficient service. The essence of costing is to draw out the relationship between productivity and expenditure. The fact that a hospital is keeping within its budget—the present test of efficiency—is of little or no significance in this connection.

(2) With units of cost available for the more important departments of a hospital, allocation of funds to boards of governors and regional hospital boards may be made on a more equitable basis and for a longer term than is now possible with figures only of total expenditure under subjective headings.

(3) The departmental unit costs obtained will be more relevant as they will be determined by the nature of the service rendered in return for the expenditure incurred. Such costs will enable comparisons to be made between hospitals on a like with like basis—the only effective basis of comparison.

(4) The usage of material is controlled both in quantity and value, through stores accounts maintained as an integral part of the accounting system.

(5) It will assist the management in its decisions on broad policy by indicating the type of work best suited to the existing organisation(s), personnel, and facilities available, and lead to more advantageous use of these facilities and to a greater degree of delegation of authority.

(6) It will disclose inefficiencies and waste and who is responsible therefor; potential economies; cost of variations in lay-out, mechanical and manual methods, types of equipment, and in types of labour employed; cost of direct labour works for comparison with outside prices; and the cost of different methods and procedures, etc. On the question of 'contracting out', the hospital's view that 'we can do the job ourselves' may be very commendable but it can also be very costly in the long run. Again, equipment and staff may be far in excess of requirements for everyday repair and maintenance work.

(7) It will permit of more accurate budgets being prepared. It is difficult at best to pre-determine the expenditure of a hospital, or group of hospitals for a year in advance on a subjective basis. Such estimating can better be done if it is based on departments, with the costs and records of work of each department for preceding periods available as a guide. Departmental allocation and control would also tend to curb the present tendency to 'spend up to the budget'.

(8) As in a properly organised hospital every department is subject in some degree to independent control, responsibility for increases and decreases of expenditure (and the latter may be of equal importance to the former) are automatically revealed and may quickly be brought to the notice of the officers responsible.

(9) Any change in the scope or volume of work of any department or service is reflected in the expenditure and unit cost of that department or service; hence, from the standpoint of control and future planning, the financial effect of any such change is clearly revealed.

(10) It opens the way to possible experiments in freeing the hospital service from restrictive regulations while at the same time, maintaining, or even extending, the proper right of the State of ensuring that value for money is obtained.

APPENDIX C.

METHODS OF DETERMINING UNITS OF WORK AND COST FOR CERTAIN (a) SPECIAL SERVICES, AND (b) GENERAL SERVICES.

(*a*) Special Services.

(1) *Laboratories.*

121. A variety of services to patients are performed in these departments, and they vary in degree both as to time and cost. Where separate departments exist for (*a*) pathology; (*b*) bio-chemistry; (*c*) bacteriology; (*d*) histology, etc., and it is practicable to maintain separate records and accounts, then a separate unit of cost should be calculated for each, e.g., per test or per examination ('weighted' where possible), as the case may be. The 'units' set out in Ministry of Health Circular 2861 for the Emergency Hospital Service were intended for pricing work performed, and they are not necessarily correct for the use to which they have been put experimentally, but they do appear to provide a more reliable basis than : (*i*) number of patient attendances, or (*ii*) number of specimens examined.

(2) *Operating Theatres.*

122. On account of the wide variety of operations that may be performed, and the fact that there are variations in even one type of operation, the ascertainment of a surgical service unit of cost is a difficult problem. The classification laid down in Statutory Instrument No. 1490 was for use as a table of charges to be paid by private patients and it is, therefore, not applicable for costing purposes. All operations are not of equal severity or complexity, nor require the same number of man-hours or number of hours use of the operating theatre, and the amount of materials and supplies used may vary only slightly from a simple operation to a serious one. For these and many other reasons the units of (*a*) per operation; (*b*) per operating hour; and (*c*) per man-hour are not sufficiently reliable for conclusive comparisons to be made. It is suggested that a practical solution of the problem may be found by means of special studies with the object of classifying operations into groups, depending on the estimated amount of materials and supplies used, the instruments used, the length of time during which the theatre is actually in use for the particular operation, and the number of staff of each kind engaged. From this study it should be possible to establish the group into which any particular operation falls.

123. Alternatively, a number of surgeons could be invited to estimate independently of one another the average time taken to perform various operations ("to perform" to be defined). The mean of the sum of such average times would provide reasonably accurate figures without the expense of long and extensive time studies. A simple alternative is to divide the number of general surgical operations into three main groups only—(1) minor, (2) intermediate and (3) major, each group being 'weighted' on a time basis. It will produce more satisfactory results than cost per operation until such time as

further studies enable more precise units to be introduced. The same comment applies to many other similar departments, e.g., X-ray, laboratories, physio-therapy, etc.

124. The figures given in Tables I, II and III of Appendix F are the result of time studies of operations performed on different days, some at a large general hospital and others at a small general hospital. Some of the variables noted are as follows: —

(*a*) Skill of the anaesthetist.

(*b*) Difficulty or extra care required in inducing anaesthesia due to peculiarity of the patient.

(*c*) The technique of the surgeon.

(*d*) Peculiarity of the patient, i.e., placement of veins, arteries, organs, etc.

(*e*) Condition of the patient, i.e., weak heart, enfeebled condition generally, age, etc.

(*f*) State of disease, i.e., chronic, advanced with necessity for removal of larger section or even of a smaller section, but difficult of access.

(*g*) Previous history of the patient, i.e., possibly earlier operation in same area or in a different area but affecting the present disease, unsatisfactory metabolic rate, etc.

(*h*) Experience of surgical officers assisting.

(*i*) Experience of theatre sister and nursing staff.

(*j*) Degree of accuracy of diagnosis of complaint.

125. These examples are exemplified by reference to the four thyroidectomies; the shortest time being 58 minutes and the longest 1 hour 56 minutes.

126. The theatre staff is mainly concerned with a patient from the time anaesthesia is given to the time the patient is removed from the theatre. The time the patient enters the suite until the anaesthetist attends to him and the time of removal from the theatre to await escort to the ward usually takes up negligible theatre-staff time and may be ignored for the purpose of these studies. This is the reason why it is not shown in tables II and III.

(3) *Physio-therapy.*

127. This department also performs a variety of services direct to patients ranging from ultra-violet and heat treatments to services including massage, diathermy and, in some cases, hydro-therapy. Wherever practicable, the expenditure on these various services should be kept separate and a separate unit of cost—per 'weighted' treatment—calculated for each. Where this is not practicable, the total expenditure will be reduced to the unit—per treatment. The results of a time study into the work of this department are given in Table IV of Appendix F.

(4) *X-Ray Department.*

128. This department presents similar difficulties. The number of films used, the number of examinations made or the number of patient attendances, all have obvious defects as indices for cost comparisons between hospitals. The services provided by

this department vary considerably. It may be diagnostic only, or it may include also the application of superficial and deep X-ray and radium treatments. These different types vary considerably as to cost and, therefore, where more than one service is rendered the expenditure on each should, wherever practicable, be kept separate. In respect of superficial and deep X-ray and radium treatments, we suggest the unit cost, per 'weighted' treatment.

129. The unit of cost in respect of the diagnostic service is not necessarily 'per examination', as this unit does not take into account the variations in the size of films used. The main weakness of this unit, however, is that a radiological examination of a finger has the same value as an examination of the abdomen. A points system has been used for experiments and possibly such a system offers the most effective basis.

(*b*) General Services.

(1) *Boiler and/or Power House.*

130. The function of this department varies considerably according to the size of the hospital. In a small hospital it will be limited to the supply of hot water. In a medium size hospital it may produce steam for both heating and hot water, while in a large hospital its functions may be extended to embrace: (*a*) the production of steam for power and heating, hot water, cooking and sterilizing; (*b*) the generation of electricity; and (*c*) the maintenance of a central refrigerating plant.

131. Wherever practicable, a separate unit of cost should be calculated for at least (*i*) production of steam, and (*ii*) generation of electricity. For the production of steam the unit of cost will be the cost per 1,000 lbs. of steam produced. This unit of cost multiplied by the number of lbs. of steam supplied to each department, as shown by record meters, will provide the amount of charge to be made. Where meters are not installed the charge to each department will be based on an estimate prepared by the hospital's engineer. For the generation of electricity, the unit suggested is cost per kilowatt generated.

(2) *Dispensary Service (excluding Drugs and Dressings).*

132. A most convenient unit of cost for this service is 'per item issued', the cost being calculated by dividing the cost of maintaining the dispensary by the total number of items on requisitions and prescriptions. It is appreciated that this unit of cost takes into account numbers only, and ignores the differences in values, but it may be assumed that no more work is necessarily involved in the dispensary in issuing a prescription costing 2/- as against one costing 10/-. Numbers therefore afford a more suitable basis than values.

(3) *Kitchen.*

133. Two units of cost will arise from this service, irrespective of whether the whole of the cost of the raw food is allocated as a direct expense to the patients' and staff accounts, or whether the raw food for the kitchen is first charged to the kitchen account.

(*a*) *Food Cost*—cost per person fed per day. This unit cost may be arrived at by averaging (weighted where

necessary), or calculated from priced menus. By these means variations in the cost of provisions for the several categories may be ascertained, e.g., for (*a*) patients on ordinary diet; (*b*) patients on special diet; (*c*) nurses; (*d*) medical officers; (*e*) domestics, etc.

(*b*) *Kitchen and Service Cost*—cost per meal supplied.

134. Kitchen cost refers to the cost of maintaining the kitchen department, including the cost of transport to ward and dining rooms, but excluding the cost of the raw food. It will be appreciated that this cost is not the total cost of meal service as it excludes the cost of a proportion of the time of the nursing staff serving meals in the wards, etc. Where, for some special reason, it is desired to ascertain the full cost, the time of the nursing staff may be estimated following a study in the wards. This would seem, however, to be an unnecessary refinement for all general purposes.

135. Other factors may need to be taken into consideration. For example, owing to the great variations in methods of transporting food, the cost of transport could be kept separate from the kitchen cost in large and scattered hospitals. Again, the cost of special diets, so far as labour is concerned, is appreciably more than in the case of normal diets. On the other hand diabetics show a lower labour cost.

136. Distribution on the above lines takes into account the relative differences in the service cost of meals supplied, a factor which would be ignored if a single unit cost were calculated solely on the number of meals supplied.

(4) *Laundry* (*by direct labour*).

137. The unit of cost for the laundry may be either (*a*) cost per 100 articles laundered, or (*b*) cost per 100 lb. dry weight of articles laundered. Neither of these units of cost, however, is completely satisfactory. Probably the most satisfactory method is to make a time study of laundry operations under actual working conditions and from this study to work out a system of 'weighting'. This will also assist in making proper comparisons with contract laundry charges, although it should be noted that some laundries are prepared to charge at a fixed rate per 100 articles.

(5) *Stores.*

138. The Stores Department(s) is charged with all expenses connected with the receiving, storing and issue of supplies. It is not charged with the value of the supplies themselves as these will already have been dealt with through the Stores Accounts. It lends itself to the calculation of two units of cost: (*a*) cost per item issued, calculated by dividing the total expenditure of the Stores Department by the number of items requisitioned and ignoring the quantity and value of the items issued: and (*b*) cost per £10 of commodities supplied. It is suggested that the first method is the better of the two.

SCHEDULE OF UNITS OF COST.

GROUP I. PATIENTS' DEPARTMENTS.

Department	*Unit of Cost*
IN-PATIENTS	
General and Special Wards	(*a*) Per in-patient day (*b*) Per patient treated to a conclusion.
OUT-PATIENTS	
Out-Patient Clinics (including Casualty)	(*a*) Per clinic attendance (*b*) Per new out-patient.

GROUP II. SPECIAL SERVICES DEPARTMENTS.

Department	*Unit of Cost*
Electro-cardiography	(*a*) Per examination (*b*) Per 'weighted' examination
Electro-therapy	(*a*) Per treatment (*b*) Per 'weighted' treatment (*c*) Per treatment hour
Laboratories	(*a*) Per specimen examined (*b*) Per 'weighted' specimen examined
Occupational Therapy	Per attendance
Operating Theatres	(*a*) Per operation (*b*) Per operating hour (*c*) Per man hour (*d*) Per 'weighted' unit per type of operation
Physio-therapy	(*a*) Per treatment (*b*) Per 'weighted' treatment (*c*) Per treatment hour
Radio-therapy	(*a*) Per treatment (*b*) Per 'weighted' treatment (*c*) Per treatment hour
Radium	(*a*) Per treatment (*b*) Per 'weighted' treatment (*c*) Per treatment hour
X-ray	(*a*) Per examination (*b*) Per 'weighted' examination.

GROUP III. GENERAL SERVICES.

Department	*Unit of Cost*
Section (A)	
Boiler and/or Power House	Per 1,000 lb. steam raised
Laundry	(*a*) Per 100 articles (*b*) Per 100 lb. dry weight
Kitchen (*a*) Food	Per person fed per day
(*b*) Kitchen Service	Per meal supplied
Residential Staff Services	Per resident day (nursing, medical, or domestic)
Bakery	(*a*) Per 100 loaves (*b*) Per (standard) cost per type of product

GROUP III. GENERAL SERVICES—*continued*

Department	*Unit of Cost*
Section (B)	
Admissions	Per New In-patient
Ambulance and Transport	Per mile run
Appointments and Registration	Per Out-patient Attendance
Central Sterilising	Per drum
Disinfector	Per article
Dispensary	Per total of number of items on prescriptions and requisitions
Medical Records	Per record prepared
Photography	Per plate or film exposed
Social Service (including Almoners)	Per case
Stores	Per item issued (irrespective of quantity)
Training	Per student day

Note: It should be borne in mind that unit costs in respect of those services included in section (B) above are based on direct expenses only and their use for comparisons between hospitals with differing organisations is correspondingly limited.

139. It will be seen that we show alternative units. The results of certain experiments, more particularly in connection with Special Service departments (see Appendix F) are sufficiently indicative of the difficulties involved to justify caution in the calculation and use of precise units of costs until more experience is gained. Even then it is essential that a sense of proportion be maintained in this as in other branches of hospital finance and accounting, and that " the best " is not allowed to become the enemy of " the good." The time and expense involved in arriving at ultra refined units of cost is a factor which cannot be ignored in any consideration of their extension.

Primary Statistics.

140. The accuracy and reliability of units of cost depend in large measure on the accuracy and completeness of the units of work or service, which in turn depends upon an organised system of statistics of performance. These latter may also be of value in other directions, e.g., the average number of visits per out-patient per clinic would indicate whether sessions are being unduly inflated so as to maintain the session in existence.

APPENDIX D.

METHODS AND BASES OF DISTRIBUTION OF GENERAL SERVICES EXPENSES.

141. Generally, Group III General Services expenses, and those of Groups I and II will be under the control of heads of departments who will, after budget approval, be responsible for keeping within their respective budgets. Initially, all expenses which can be specifically related to departments in each group will be charged " direct " to the departments concerned. After this process of direct charging has been carried out it is necessary to assess the extent to which Group III services have been used by Groups I and II, and by different departments within Group III itself. When this assessment has been made, the due proportions in each case are transferred, and the amounts so transferred become " indirect " charges to the departments receiving them.

142. The purpose of analysis of expenditure into Group III is so that: (*a*) departmental responsibility may be identified with the provision of the particular service; (*b*) it may be shown to what degree total cost is influenced by the number and extent of the various departments that exist in hospitals; and (*c*) re-distribution of costs may be made according to the extent to which each serves the others.

143. The actual recording of the items of General Services expenses presents no difficulty. It is in the measurement of this expenditure in relation to the various services that problems arise. Obviously the expenditure should bear some relationship to each of the services and, therefore, before deciding the proportions in which the distribution is to be made, careful consideration needs to be given to the varying conditions pertaining to each service. The methods must not only be equitable; they must also be practicable and they must not, therefore, be too rigid. There is no particular method which is either logical or approximately correct for all items; the apportionment must be made on the basis of the actual facts ascertained by careful analysis. There are certain obvious limits beyond which distribution cannot be carried, and a line beyond which it would not be worth while to go.

144. The methods which may be adopted for making the distribution of these expenses are as follows:—

(*a*) all General Services expenses are distributed direct to the Patients' and Special Service accounts concerned;

(*b*) before such distribution is made to the Patients' and Special Service accounts concerned, the General Services expenses are first apportioned, where appropriate, within themselves, according to the amount or volume of service rendered by one to the other. Under this method, the cost of that service which renders service to the greatest number of others while receiving the benefits from the least number is distributed first, and so on until each General Services expenses account is closed by a final distribution to the Patients' and Special Services accounts concerned. This is the non-reciprocal or priority method;

(*c*) all General Services expenses are first distributed within these services themselves, but on a reciprocal basis.

145. The question arises whether the complicated adjustments indicated in method (*c*) are necessary. It is well known that there are important inter-relationships among General Service departments. The kitchen service, for example, prepares, cooks and furnishes meals directly or indirectly to practically every department of the hospital. In turn it receives certain services from other departments, e.g., steam from the boiler house, laundry work, etc., for which charges should be made to the kitchen account. The stores department supplies the kitchen with provisions, and the kitchen account should, therefore, also be charged with a proportion of the cost of maintaining the stores department. But the total cost of the boiler house, the laundry, and the stores cannot be ascertained until the cost of the meals supplied to the employees employed in these departments is known and charged. From a study of the results of tests we have made on this subject we are of opinion that the accuracy of costs is not seriously affected by disregarding certain of these inter-relationships when distributing the General Services expenses. This is primarily due to the fact that most of the larger transfers of expenses that would be made if this method were adopted are distributed to the Patients' and Special Service accounts in practically the same proportions, whether they are first distributed to the other General Services and then distributed, or the distribution is made as in method (*b*). This latter method is simple and relatively easy of introduction by a staff untrained in this special branch of accounting. Should further experience prove the necessity, the complete reciprocal method may be introduced.

146. The footnote on page 15 sets out the method we recommend for the re-distribution of General Services expenses, and it will be seen that the non-reciprocal method has been applied to those services included in Group III (A) the nature of which warrants the fuller treatment, the remaining general services in Group III (B) having previously been distributed to Group III (A) and Groups I and II on the simplest basis of all.

147. The secret of a proper calculation and distribution of General Services expenses is the maintenance of adequate records of work performed and of quantities of commodities consumed.

148. Some hospital officers have queried the necessity of spreading the expenditure on these services to patients' accounts, but if any system of accounting is to be used for the purpose of controlling expenditure, such expenditure must be charged ultimately to the area of responsibility generating it. A further reason for the distribution is that it enables a cost to be ascertained for each treatment so that if it were translated into a charge, the whole of the expenditure of the hospital would be recovered, as is essential in the case of paying patients, and other patients for whom payment is made. Moreover, without this re-distribution no reliable comparisons can be made between hospitals.

149. The distribution of General Service expenses may be made at any convenient interval. As, however, it entails an appreciable amount of work we suggest that, initially, it be made quarterly. If, in the larger hospitals it is desired to distribute these expenses at monthly intervals, we suggest the use of the calendar month. We have considered the method adopted in industrial cost accounting of using 13 weeks to the quarter, made up generally of sub-periods of 4, 4, and 5 weeks. It is said that this arrangement facilitates comparison of the results of one period with another, but the influence of Bank and annual holidays, undue sickness, and changes in labour rates and prices of materials, have a considerable bearing on the usefulness or otherwise of such comparisons. Having regard to these unavoidable variances, we do not see that any real advantage would be gained by the adoption of the industrial method.

Bases of Distribution.

150. In the many instances in which it is possible to ascertain a unit of cost for the work of a General Service department, it is usually possible to arrive directly at a satisfactory distribution of General Service expenditure by reference to the number of units of work carried out for each of the chargeable departments, e.g., laundry costs in proportion to the number of articles (converted to weight) despatched from each ward or department; kitchen costs according to the meals supplied to the various categories of patients, resident and non-resident staff; admissions office cost according to the number of admissions to each ward or group of wards; appointments office by reference to the attendances at each clinic, etc. This basis of ascertained user will also be generally applicable to departments such as the dispensary, bakery, central sterilising, transport, disinfector, photography, stores and social services. In a few cases it may be desirable to modify this basis of allocation, e.g., for staff services, a distribution in proportion to salaries may be used to give effect to variations in cost between the grades concerned. For medical records, the number of admissions and the number of new out-patients provide a ready means of allocating the departmental cost; for the net cost of training schools, by reference to the numbers of the relative categories employed in each department; and nursing administration in proportion to numbers of nurses and locations for duty.

151. Where no unit of cost is appropriate to the activity of a department a less direct basis must be adopted, e.g., corridors, stairs, lifts, etc., are adjuncts of the accommodation and, as such, a just basis is that of floor area within the chargeable departments (see also para. 156). The number of in-patient days is considered to be the most suitable means of apportioning chapel (including chaplain's fees), and library costs. But special study is necessary for other General Services which take a significant part of the expenditure, e.g., group administration, porterage, works administration, dispensary laboratory, etc. Methods for apportioning the cost of these services are suggested as follows: —

(1) *Group Administration.*

152. The cost of administration serving a group of hospitals, e.g., secretarial, finance, supplies, engineering, etc., will need to be distributed to the hospitals within the group if the total cost of maintaining each is to be ascertained and used for

purposes of comparison. This distribution may be made on the basis of: (*i*) the cost of salaries and wages of the hospital; (*ii*) the number of staff employed; (*iii*) the total expenditure of the hospital. None of these is completely satisfactory. When the salaries and wages expense method is used, distortion is apt to occur especially in such hospitals where certain services are carried out by contract, e.g., laundry, maintenance works, etc., and the salaries and wages form a relatively small proportion. On the other hand, if either (*ii*) or (*iii*) method is used, a greater charge than the benefits received may result. Probably the most satisfactory method is to analyse the activities of the personnel of each group administration in terms of the hospitals that receive benefit from the group administration and to express each allocation as a percentage of the total administrative expense. This method alone will make the proper allowance for the varying degrees in which the unit hospitals rely on the central administration.

153. The question has been asked—" Why allocate this item at all. If there were no other hospitals the group hospital would still remain. All expenses come out of one pocket? " The answer is, in our opinion, that the true cost of any of the other hospitals cannot be ascertained unless it is charged with its proper proportion of group expenses. In some groups the amount may not be large, e.g.. where decentralised accounting and possibly also, purchasing, is in operation; in others, the amount may be appreciable. Again, if work was not done by the central hospital, extra staff would have to be employed at some hospitals to carry out administrative work and the cost would be a charge on these hospitals. The principle is the same when this work is carried out by the central hospital and/or group headquarters.

154. It may be argued also that the cost of administration of regional hospital boards should be distributed to the central hospital or headquarters of each group within their regions. Certainly this must be done if it is desired to make comparisons between teaching hospitals and non-teaching hospitals on the cost of administration, for the reason that the former carry the whole cost of their administration. In any case, the cost of specific work carried out by regional hospitals boards for hospital management groups, e.g., punch card accounting, should be charged to the group concerned.

(2) *Porterage.*

155. Where porters are directly associated with particular departments, e.g., dispensary, kitchen, operating theatre, etc., their wages may be charged direct to those departments. There is, in addition, however, a number of porters whose wages and various other incidental expenses, e.g., equipment, accommodation, etc., cannot be charged direct, and which can be divided broadly into two groups: —

(*a*) halls and gates. These costs may be distributed on the basis of floor area;

(*b*) general porters. These perform a variety of tasks and the most satisfactory basis would be time sheets. Probably a special study over a few weeks would show sufficient stability to allow of the adoption of a fixed time allocation.

(3) *Works Department.*

156. The expenditure here represents the cost of maintaining the works or general maintenance department (as distinct from the cost of labour and materials on work carried out in specific departments which will be charged direct), and this cost should be reduced to a percentage of the total value of the work carried out in each department. Building services in general will contain various items of expense which are not directly allocable to any particular department, e.g., repairs and decoration of the external fabric, roofs, entrances, basements, repairs to heating and electrical installation, etc., and so far as wards and departments are concerned it may be assumed that benefit is obtained in direct proportion to the amount of internal space occupied by each department. It may also be considered that other expenses of general upkeep, e.g., lifts; gardens and lawns; corridors and stairs, etc., may be allocated on the basis of space. The factor of actual situation may be ignored in making these allocations.

(4) *Dispensary Laboratory.*

157. The work involved in maintaining manufacturing accounts for a dispensary laboratory may be considerable. If, however, manufacturing within the hospital on a large scale is justified then it would seem necessary to instal a system of records and accounts which will show clearly the quantities of all commodities manufactured, and the cost in each case. The commodities manufactured would be taken into stores and then dealt with in the same way as other stores. Failing adequate records and accounts, the cost of this department may conveniently be charged out on the basis of the number of " issues " as in the case of the dispensary itself.

Allocation of Certain "Direct" Expenses.

158. There are also a number of items of " direct " expense which it may not be possible to allocate immediately. Allocations of many of these are necessarily estimates, but if care is taken in their preparation, and frequent tests are made, it will be found that the estimates are sufficiently accurate for all practical purposes. At first glance it may seem that the work of making these allocations is complicated. It is not so provided the principle is understood, and that steps are taken to see that all the basic information required is available before the time arrives for the actual work of allocations to be done. Once the bases have been determined, their application, periodically, for charging purposes is a simple matter. In working out the estimates co-operation is essential between the finance officer and heads of departments.

159. The more usual bases upon which such expenses may be allocated to the departmental accounts, some of which we have used in our experiments, are given below.

SUGGESTED BASES OF ALLOCATION.

(*a*) Rates and Taxes	...	per square foot.
(*b*) Rent		per square foot (unless chargeable direct, e.g., residential quarters).

(*c*) Reserve for Depreciation: (See Section VII, page 21)		
Buildings	per square foot.	
Plant and Equipment	according to the value and life of the plant and equipment in each department.	
(*d*) Reserve for Renewals and Repairs of Buildings	per square foot.	
(*e*) Provisions	(See para. 133)	
(*f*) Drugs	(*i*) The total cost of "made-up" prescriptions may be apportioned *pro rata* to numbers issued. (Other supplies, e.g., as requisitioned for ward or theatre baskets, for casualty trolleys, or prescribed for individual patients and not requiring "making-up," will be valued and charged out on the usual stores basis).	
	(*ii*) Alternatively the method of grouping all issues within price ranges may be adopted. (This has proved a satisfactory method in the investigation).	

160. No hard and fast rule can be laid down and the actual method of allocation to be adopted in respect of each item must be determined by the special circumstances attaching to each case. It will be appreciated that in certain cases expense is reflected in height as well as in horizontal dimensions.

161. It should be noted that heating, lighting, gas, water and similar items are "direct" expenses, and where meters are installed to measure the supply to major departments, the cost of consumption may be calculated and treated immediately as direct charges to these departments. Generally, however, owing to the absence of an adequate number of meters, they cannot be so charged and in such cases must necessarily be apportioned. The importance of these items in total cost will probably justify the installation of sub-meters in major departments so that as direct an allocation as possible may be made.

APPENDIX E.

STATEMENTS SHOWING RESULTS OF MAINTAINING EXPERIMENTAL SYSTEMS OF DEPARTMENTAL ACCOUNTING.

162. Two types of statement are set out in this Appendix: —

(1) Summary of Expenditure, Units of Work, and Unit Costs;

(2) Income and Expenditure Account.

The figures in these statements are the results arising from the operation of the departmental system of accounts at both a teaching and a hospital management committee group hospital, for the three months ended March 31, 1952. Nos. 1 and 2 refer to the teaching hospital, and Nos. 1*a* and 2*a* to the group hospital. As will be seen from the suggestions given below, the arrangements of these statements are not necessarily those in which information may best be submitted to committees; they are adopted here to illustrate certain features of the departmental system. A grand summary form would be required in any case, showing total figures in respect of each hospital within a group.

163. Statement No. 1 (1*a*) is composed of three parts—I, II and III. Cols. 2 and 3 show the division of total expenditure into "Direct" and "Transfers," the latter representing the cost to the Patients and Special Service departments of the General Service departments and activities. It will be seen that the proportion of " transfers " is appreciable, and that such transfers are therefore essential if the total cost of each Patient and Special Service department is to be ascertained for the purpose of making like with like comparisons between hospitals. The same comment applies to the five accounts (A) in Part II.

164. Once the principle of this type of statement is thoroughly understood it may be modified in a number of ways, e.g., Cols. 2 and 3 may be omitted and only the amount of total expenditure shown. Even this could be omitted and, with advantage, the space used to show the amount by which actual expenditure is + or — the budgeted expenditure in respect of each department. Again, once the unit of work in respect of each department is well known, Col. 5 could be omitted. Col. 7 could be used to show the amount by which actual unit costs are + or — the budgeted unit costs in each case. If desired, the statement could be expanded to show figures for the corresponding period of the previous year, but having regard to fluctuations in salary and wage rates (including also numbers and grading), prices of materials, etc., there would not seem to be much advantage in such a column at the present day.

165. Part II of Statement No. 1 shows separately the "Transfers" to the five departments in (A) from the services (B) immediately below, thus making up the total cost of these five departments.

166. Part III provides a " breakdown " of the all-in unit cost of 13/9d. shown against General Clinics on the first sheet of Statement No. 1. The importance of this breakdown will be realised when regard is had to the wide range of cost of the various clinics shown in Col. 6 of Part III. This type of statement could be applied to other activities, e.g., details of individual wards or theatres.

167. Statement No. 2 (2*a*) shows how the departmental cost accounts automatically form an Income and Expenditure Account.* The statement shows in detail the subjective headings, and the transfers from the General Service accounts making up the total expenditure of each Patient and Special Service. It also shows the detailed expenditure of the General Service departments. The total unit costs shown in Col. 7 of Statement No. 1 are repeated in Col. 6, and of Statement No. 2(*a*) in Col. 5, together with detailed unit costs based upon the elements making up the departmental totals. In practice they would not necessarily be shown in this account. Had the departmental system of budgeting been in operation it would have been possible to compare the total unit cost in respect of each department with its budgeted total unit cost and, in addition, each constituent element of this cost in both cases. Alternatively, the figures in Col. 7 could be the amounts by which actual results are + or — budget figures.

* Although the figures shown in these statements are for a period of three months, the normal period for an Income and Expenditure Account is annual.

APPENDIX E

SUMMARY OF EXPENDITURE, UNITS OF WORK, AND UNIT COSTS.

STATEMENT NO. 1
3 months to 31 March 1952

PART I. PATIENTS, SPECIAL SERVICES, AND TRADING DEPARTMENTS.

DEPARTMENT	EXPENDITURE			UNITS OF WORK		*Unit Costs
	Direct	Transfers General Services	Total	Description	Number	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	£	£	£			£ s. d.
PATIENTS						
In-patients:						
General Wards—				In-Patient		
Medical	12,777	11,490	24,267	Day	8,412	2 17 8
Surgical	18,192	13,575	31,767	,,	9,990	3 3 7
(Sub-totals)	30,969	25,065	56,034	,,	18,402	3 0 10
Special Wards—				In-Patient		
Accident	5,067	4,093	9,160	Day	3,165	2 17 10
Gynaecology	3,259	2,607	5,866	,,	1,943	3 0 5
Maternity	5,931	4,410	10,341	,,	1,988	5 4 0
(Sub-totals)	14,257	11,110	25,367	—	—	—
Other Wards—				In-Patient		
Private	1,350	1,198	2,548	Day	534	4 15 5
Nurses	545	526	1,071	,,	353	3 0 8
(Sub-totals)	1,895	1,724	3,619	—	—	—
Totals—In-Patients	47,121	37,899	85,020	—	—	—
Out-Patients:						
General Clinics	12,667	8,139	20,806	Out-Patient Attendance	30,265	13 9†
Casualty	2,864	1,942	4,806	,,	11,918	8 1
Psychiatric Clinic	5,736	324	6,060	,,	3,026	2 0 1
Totals—Out-Patients	21,267	10,405	31,672	,,	45,209	14 0
SPECIAL SERVICES						
Operating Theatres	7,136	4,015	11,151	Per Operation	1,167	9 11 1
Other:—Electro-Cardiography	438	97	535	,, Examination	517	1 0 8
Laboratories	7,105	21	7,126	,, Examination	19,967	7 2
Physio-therapy	1,861	587	2,448	,, Treatment	17,645	2 9
Occupational-therapy	216	4	220	,, Attendance	561	7 10
X-ray	6,990	1,453	8,443	,, Examination	6,099	1 7 8
Radio-therapy	2,369	499	2,868	,, Treatment	1,815	1 11 7
Totals—Special Services	26,115	6,676	32,791	—	—	—
TRADING & MISCELLANEOUS						
Canteens	2,039	—	2,039	—	—	—
Shops	845	—	845	—	—	—
Burials	38	—	38	—	—	—
Travelling Expenses of Patients	45	—	45	—	—	—
Printing Department	1,562	—	1,562	—	—	—
(Sub-totals)	4,529	—	4,529	—	—	—
LESS: Direct Credits—						
Canteens	1,082	—	1,082	—	—	—
Shops	811	—	811	—	—	—
Printing Department	1,562	—	1,562	—	—	—
(Sub-totals)	3,455	—	3,455	—	—	—
Totals—Miscellaneous	1,074	—	1,074	—	—	—
TOTAL EXPENDITURE	95,577	54,980	150,557			

* For details of these Unit Costs see Statement No. 2 (Col. 6).

† For individual Clinic Costs see Part III (Col. 6).

STATEMENT NO. 1 (Contd.)
3 months to 31 March 1952

PART II. GENERAL SERVICES EXPENDITURE, UNITS OF WORK, AND UNIT COSTS.

DEPARTMENT	EXPENDITURE			UNITS OF WORK		
	Direct	Transfers from Other General Services	Inclusive Cost	Description	Number	Unit Costs
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	£	£	£			£ s. d.
(A) Boiler House	6,124	361	6,485	Per 1,000 lbs. Steam	8,467	15 4
Laundry	5,854	246	6,100	,, 100 Articles	3,476	1 15 1
Kitchens: Main	3,984	1,146	5,130	,, Meal supplied	128,240	10
Diet	900	210	1,110	,, ,, ,,	23,136	11
Dispensary	3,841	501	4,342	,, Requisition and Prescription	43,000	2 0
Staff Services—Resident	25,670	6,496	32,166	,, Resident Day	37,019	17 4
Non-Resident	2,377	901	3,278	—	—	—
	48,750	9,861	58,611			
(B) Ambulance and Transport	254		254	,, Mile	5,043	1 0
Admissions	527		527	,, Admission	1,857	5 8
Appointments & Registration	1,420		1,420	,, Clinic Attdce.	45,209	7½
Chapel: Library, etc.	487		487	—	—	—
Central Sterilizer	232		232	,, Container	9,520	6
Linen Room	1,557		1,557	—	—	—
Medical Records, etc.	1,206		1,206	,, New Record	9,073	2 8
,, Photography	376		376	,, Attendance	167	2 5 0
Porters	3,392		3,392	—	—	—
Mortuary	197		197	—	—	—
Lifts	190		190	—	—	—
Social Service	1,486		1,486	—	—	—
Administration:						
Group	8,770		8,770	—	—	—
Telephones	849		849	—	—	—
Works (and Stores)	1,614		1,614	—	—	—
General Stores	1,636		1,636	—	—	—
Catering (and Stores)	1,174		1,174	—	—	—
Nursing Tuition	1,630		1,630	—	—	—
TOTAL—GENERAL SERVICES	75,747	9,861	85,608			
Deduct:		£				
Direct Credits:—Staff Services:						
Residential		9,244				
Non-Residential		616	9,860			
			75,748			
Transfers:						
(i) To Other Hospitals		10,907				
(ii) To Other General Services (as above)		9,861	20,768			
NET EXPENDITURE TRANSFERRED TO PART I (COL. 3)			£54,980			

PART III. STATEMENT OF COST OF INDIVIDUAL CLINICS.

CLINIC	Direct Expenditure	Indirect Services	Total Expenditure	OUT-PATIENT ATTENDANCES		NEW OUT-PATIENTS	
				Number	Unit Cost	Number	Unit Cost
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	£	£	£		£ s. d.		£ s. d.
Anaemia	355	198	553	542	1 0 5	33	16 15 2
Ante-Natal	347	256	603	1,337	9 0	130	4 12 9
Cardiology	217	94	311	202	1 10 9	46	6 15 2
Chest	442	246	688	678	1 0 4	94	7 6 5
Chiropody	166	60	226	339	13 4	46	4 18 3
Dental	748	517	1,265	1,451	17 5	473	2 13 6
Dermatology	1,173	855	2,028	2,829	14 4	472	4 5 11
Diabetic	777	291	1,068	976	1 1 11	40	26 14 0
Dietetic	230	119	349	1,126	6 2	205	1 14 1
Ear, Nose and Throat	471	282	753	1,104	13 8	448	1 13 7
Fracture	409	272	681	916	14 10	170	4 0 1
General Medical	1,684	1,208	2,892	3,826	15 1	825	3 10 1
General Surgical	1,128	971	2,099	2,690	15 7	1,049	2 0 0
Genito Urinary	283	187	470	547	17 2	108	4 7 0
Gynaecology	305	188	493	437	1 2 7	215	2 5 10
Hands (Septic)	598	486	1,084	1,213	17 10	299	3 12 6
Neurology	458	280	738	666	1 2 2	220	3 7 1
Ophthalmic	1,129	455	1,584	1,595	19 10	308	5 2 10
Orthopaedic	429	306	735	2,096	7 0	701	1 1 0
Plastic Surgery	114	65	179	117	1 10 7	36	4 19 5
Proctology	232	90	322	348	18 6	118	2 14 7
Physical Medicine	42	87	129	1,212	2 2	363	7 1
Radio-therapy	128	75	203	1,681	2 5	120	1 13 10
V.D.	657	464	1,121	2,171	10 4	325	3 8 11
Post-Natal	145	87	232	166	1 7 11	144	1 12 3
TOTALS	£12,667	£8,139	£20,806	30,265	Av. 13 9	6,988	Av. 2 19 7

STATEMENT NO. 2
3 months to 31 March 1952

INCOME AND EXPENDITURE ACCOUNT.

Dr. EXPENDITURE.

Previous Year	ACCOUNT	Detail	Sub-Totals	Department Totals and Aggregate	Unit Cost
(1)	(2)	(3)	(4)	(5)	(6)
£	(I) PATIENTS' DEPARTMENTS	£	£	£	£ s. d.
	(a) IN-PATIENTS				Per In-Patient Day
	GENERAL MEDICAL				
	Salaries: Medical	2,631			6 3
	Nursing	4,518			10 9
	Domestic	1,100			2 7
	Provisions	2,018			4 10
	Drugs, Dressings and Instruments	1,255			3 0
	Ward Accommodation: Fuel, Repairs, Rates, etc.	638			1 6
	Domestic—Furniture, Linen, etc.	402			11
	Other Expenses: Postage and Stationery, Miscellaneous	215			6
			12,777		1 10 4
	General Services:				
	Central Boiler Plant	687			1 8
	Kitchens	1,263			3 0
	Laundry	427			1 0
	Staff Services—net cost	5,321			12 8
	Dispensary	1,144			2 9
	Other—Medical Records, Administration, etc.	2,648			6 3
			11,490		1 7 4
				24,267	2 17 8
	GENERAL SURGICAL				
	Salaries: Medical (Surgical including Operating)	5,140			10 4
	Nursing	5,791			11 7
	Domestic	1,649			3 3
	Provisions	2,355			4 9
	Drugs, Dressings and Instruments	1,559			3 1
	Ward Accommodation: Fuel, Repairs, Rates, etc.	959			1 11
	Domestic—Furniture, Linen, etc.	459			11
	Other Expenses: Postages and Stationery, Miscellaneous	280			7
			18,192		1 16 5
	General Services:				
	Central Boiler Plant	775			1 7
	Kitchens	1,333			2 8
	Laundry	504			1 0
	Staff Services—net cost	6,675			13 4
	Dispensary	575			1 2
	Other—Medical Records, Administration, etc.	3,713			7 5
			13,575		1 7 2
				31,767	3 3 7
	ACCIDENT AND FRACTURE				
	Salaries: Medical	591			3 9
	Nursing	1,653			10 5
	Domestic	458			2 11
	Provisions	722			4 7
	Drugs, Dressings and Instruments	723			4 7
	Ward Accommodation: Fuel, Repairs, Rates, etc.	595			3 9
	Domestic—Furniture, Linen, etc.	251			1 7
	Other Expenses: Printing and Stationery, Miscellaneous, etc.	74			5
			5,067		1 12 0
	General Services:				
	Central Boiler Plant	248			1 7
	Kitchens	392			2 5
	Laundry	194			1 3
	Staff Services—net cost	1,911			12 1
	Dispensary	220			1 5
	Other—Medical Records, Administration, etc.	1,128			7 1
			4,093		1 5 10
				9,160	2 17 10
	Carried forward			65,194	

STATEMENT NO. 2 (Contd.)

INCOME AND EXPENDITURE ACCOUNT

Dr. **EXPENDITURE.**

Previous Year	ACCOUNT	Detail	Sub-Totals	Department Totals and Aggregate	Unit Cost
(1)	(2)	(3)	(4)	(5)	(6)
£		£	£	£	£ s. d.
	IN-PATIENTS (contd.)				Per In-Patient Day
	Brought forward			65,194	
	GYNÆCOLOGY				
	Salaries: Medical	652			6 7
	Nursing	1,274			13 1
	Domestic	295			3 4
	Provisions	452			4 7
	Drugs, Dressings and Instruments	321			3 4
	Ward Accommodation:				
	Fuel, Repairs, Rates, etc.	149			1 6
	Domestic—Furniture, Linen, etc.	75			9
	Other Expenses: Printing and Stationery, Miscellaneous	41			5
			3,259		1 13 7
	General Services:				
	Central Boiler Plant	117			1 3
	Kitchens	238			2 5
	Laundry	87			11
	Staff Services—net cost	1,418			14 7
	Dispensary	83			10
	Other—Medical Records, Administration, etc.	664			6 10
			2,607		1 6 10
				5,866	3 0 5
	MATERNITY				
	Salaries: Medical	1,098			11 1
	Midwifery and Nursing	2,281			1 2 11
	Domestic and Clerical	499			5 0
	Provisions	476			4 10
	Drugs, Dressings and Instruments	416			4 2
	Ward Accommodation:				
	Fuel, Repairs, Rates, etc.	563			5 8
	Domestic—Furniture, Linen, etc.	377			3 9
	Other Expenses:				
	Printing and Stationery, Patients Clothing and Miscellaneous	171			1 9
	Contract Laundry	50			6
			5,931		2 19 8
	General Services:				
	Central Boiler Plant	685			6 10
	Kitchens	239			2 5
	Laundry	204			2 1
	Staff Services—net cost	1,965			19 9
	Dispensary	100			1 0
	Other—Medical Records, Administration, etc.	1,217			12 3
			4,410		2 4 4
				10,341	5 4 0
	NURSING STAFF				
	Salaries: Medical	144			8 2
	Nursing	162			9 2
	Other	10			7
	Provisions	78			4 5
	Drugs, Dressings and Instruments	34			
	Other Expenses—Accommodation, Domestic, etc.	117			8 7
			545		1 10 11
	General Services:				
	Boiler Plant, Kitchens, Laundry, etc.		526		1 9 9
				1,071	3 0 8
	Carried forward			82,472	

STATEMENT NO. 2 (Contd.)

INCOME AND EXPENDITURE ACCOUNT

Dr. **EXPENDITURE.**

Previous Year (1)	ACCOUNT (2)	Detail (3)	Sub-Totals (4)	Department Totals and Aggregate (5)	Unit Cost (6)
£		£	£	£	£ s. d.
	Brought forward			82,472	Per In-Patient Day
	IN-PATIENTS (Contd.)				
	PRIVATE PATIENTS				
	Salaries: Nursing	669			1 5 1
	Other	181			6 10
	Provisions	155			5 10
	Drugs, Dressings and Instruments	96			3 7
	Ward Accommodation:				
	Fuel, Repairs, Rates, etc.	163			6 1
	Domestic—Furniture, Linen, etc.	49			1 10
	Other Expenses:				
	Sundries including Printing and Stationery, etc.	37			1 4
			1,350		2 10 7
	General Services:				
	Central Boiler Plant	111			4 2
	Kitchens	75			2 10
	Laundry	39			1 5
	Staff Services—net cost	645			1 4 2
	Other—Administration, etc.	328			12 3
			1,198		2 4 10
				2,548	4 15 5
					Per Out-Patient Attendance
	(b) OUT-PATIENTS				
	GENERAL CLINICS				
	Salaries: Medical	6,428			4 3
	Nursing	1,608			1 1
	Domestic and Other	1,087			8
	Drugs, Dressings, Instruments and Appliances	2,385			1 7
	Clinic Accommodation:				
	Fuel, Repairs and Domestic Items, etc.	836			7
	Other Expenses:				
	Sundries including Printing and Stationery, etc.	323			3
			12,667		8 5
	General Services:				
	Central Boiler Plant	698			6
	Laundry	136			1
	Staff Services—net cost	1,760			1 2
	Dispensary	1,387			11
	Other—Appointments and Registration	1,065			8
	Medical Records, Administration, etc.	3,093			2 0
			8,139		5 4
				20,806	13 9
	CASUALTY				
	Salaries: Medical	222			4
	Nursing	1,194			2 0
	Domestic	18			1
	Drugs, Dressings, Instruments and Appliances	1,282			2 2
	Clinic Accommodation: Fuel Repairs, etc.	105			2
	Other Expenses	43			1
			2,864		4 10
	General Services:				
	Central Boiler Plant	65			1
	Staff Services—net cost	605			1 0
	Dispensary	121			3
	Other General Services	1,151			1 11
			1,942		3 3
				4,806	8 1
	Carried forward			110,632	

STATEMENT NO. 2 (Contd.)

INCOME AND EXPENDITURE ACCOUNT

Dr. **EXPENDITURE.**

Previous Year (1)	ACCOUNT (2)	Detail (3)	Sub-Totals (4)	Department Totals and Aggregate (5)	Unit Cost (6)
£		£	£	£	£ s. d.
	Brought forward			110,632	Per Out-Patient Attendance
	PSYCHIATRIC CLINIC				
	Salaries: Medical	2,950			19 6
	Professional and Technical	1,830			12 1
	Domestic and Other	372			2 5
	Drugs, Dressings and Instruments	96			8
	Clinic Accommodation:				
	Fuel, Repairs, Domestic Items, etc.	231			1 6
	Rent and Rates	150			1 0
	Other Expenses:				
	Printing and Stationery, etc., and Sundries	107			9
			5,736		1 17 11
	General Services: Administration, etc.		324		2 2
				6,060	2 0 1
	(II) SPECIAL SERVICES				Per Operation
	THEATRES				
	Salaries: Medical (Anaesthetists)	1,572			1 6 11
	Nursing	1,519			1 6 0
	Domestic and Other	1,277			1 1 10
	Drugs, Dressings and Instruments	1,908			1 12 8
	Accommodation: Fuel, Repairs, Rates, etc.	509			8 9
	Domestic—Uniforms, Furniture, etc.	292			5 0
	Other Expenses	59			1 1
			7,136		6 2 3
	General Services:				
	Central Boiler Plant	718			12 4
	Laundry	417			7 2
	Staff Services—net cost	1,703			1 9 2
	Dispensary and Other General Services	1,177			1 0 2
			4,015		3 8 10
				11,151	9 11 1
	LABORATORIES				Per Examination
	Salaries: Medical (part paid by Board)	1,064			1 1
	Contract Laboratory Services	5,774			5 9
	Blood Transfusion Section:				
	Salaries	139			2
	Other Expenses	128			2
	General Services	21			—
				7,126	7 2
	X-RAY DIAGNOSTIC				
	Salaries: Medical	1,666			5 6
	Radiographers	1,318			4 4
	Clerical	565			1 10
	Domestic and Other	488			1 7
	X-Ray Films	1,997			6 6
	Drugs, Dressings and Equipment	382			1 3
	Accommodation:				
	Fuel, Repairs, Rates, etc.	387			1 3
	Domestic—Linen, etc.	48			2
	Other Expenses:				
	Printing and Stationery and Miscellaneous	139			6
			6,990		1 2 11
	General Services:				
	Central Boiler Plant	196			8
	Laundry	58			2
	Staff Services—net cost	280			11
	Dispensary	50			2
	Other—Porters, Administration, etc.	869			2 10
			1,453		4 9
				8,443	1 7 8
	Carried forward			143,412	

STATEMENT NO. 2 (Contd.)

INCOME AND EXPENDITURE ACCOUNT

Dr. **EXPENDITURE.**

Previous Year (1)	ACCOUNT (2)	Detail (3)	Sub-Totals (4)	Department Totals and Aggregate (5)	Unit Cost (6)
£		£	£	£	£ s. d.
	Brought forward			143,412	
					Per Treatment
	RADIO-THERAPY				
	Salaries: Medical	331			3 7
	Radiotherapists and Physicist	1,073			11 10
	Clerical, Domestic, etc.	304			3 4
	Instruments and Equipment, etc.	436			4 10
	Accommodation: Fuel, Repairs, Domestic Items, etc.	213			2 4
	Other Expenses:				
	Printing and Stationery and Miscellaneous	12			2
			2,369		1 6 1
	General Services:				
	Central Boiler Plant	111			1 3
	Staff Services—net cost	113			1 3
	Other—Laundry, Porters, Administration, etc.	275			3 0
			499		5 6
				2,868	1 11 7
	PHYSIO-THERAPY				
	Salaries: Medical	238			3
	Physio-Therapists	1,158			1 4
	Clerical, Domestic, etc.	105			1
	Drugs, Dressings and Equipment	67			1
	Accommodation: Fuel, Repairs, Domestic Items, etc.	250			3
	Other Expenses:				
	Printing and Stationery, Uniforms and Miscellaneous	43			1
			1,861		2 1
	General Services:				
	Central Boiler Plant	130			2
	Other—Porters	254			3
	Sundry—Administration, Laundry, etc.	203			3
			587		8
				2,448	2 9
	OCCUPATIONAL THERAPY				
	Salaries	200			7 2
	Materials	26			11
	Other Expenses and General Services	15			6
		241			8 7
	Less: Income from sales	21			9
				220	7 10
					Per Attendance
	ELECTRO-CARDIOGRAPHY				
	Salaries: Technician and Other	178			6 10
	Equipment, etc.	157			6 1
	Accommodation: Fuel, Repairs, Domestic Items, etc.	64			2 6
	Other Expenses:				
	Printing and Stationery and Miscellaneous	39			1 6
			438		16 11
	General Services:				
	Porters, Administration, etc., services		97		3 9
				535	1 0 8
	Carried forward			149,483	

STATEMENT NO. 2 (Contd.)

INCOME AND EXPENDITURE ACCOUNT

Dr. **EXPENDITURE.**

Previous Year (1)	ACCOUNT (2)	Detail (3)	Sub-Totals (4)	Department Totals and Aggregate (5)	Unit Cost (6)
£		£	£	£	£ s. d.
	Brought forward			149,483	
					Per 1,000 lbs. Steam
	(III) (A) GENERAL SERVICES				
	CENTRAL BOILER PLANT				
	Stokers	548			1 3
	Fuel	3,014			7 2
	Maintenance of Steam Plant	2,562			6 1
			6,124		14 6
	General Services:				
	General and Works Administration		361		10
	Charged to Patients' and other Departments		6,485		15 4
					Per 100 meals
	MAIN HOSPITAL KITCHEN				
	Chefs and Kitchen Staff, etc.	2,909			1 5 5
	Staff Uniform and Clothing	43			8
	Fuel, Light, Power and Water	430			6 8
	Maintenance of Kitchen and Equipment	456			7 1
	Domestic Renewals	127			2 0
	Other Expenses	19			4
			3,984		3 2 2
	General Services:				
	Central Boiler Plant	783			12 2
	Porters, Administration, etc.	363			5 8
			1,146		17 10
	Charged to Patients and Staff Departments		5,130		4 0 0
					Per 100 meals
	SPECIAL DIET KITCHEN				
	Salaries: Dietitian and Kitchen Staffs, etc.	367			1 11 9
	Nursing	342			1 9 7
	Fuel, Light, Power and Water	59			5 1
	Maintenance of Kitchen and Equipment	47			4 1
	Domestic Renewals, and Other Expenses	85			7 3
			900		3 17 9
	General Services: Central Boiler Plant	130			11 3
	Other General Services	80			6 11
			210		18 2
	Charged to Patients' Departments		1,110		4 15 11
					Per 100 Articles
	LAUNDRY				
	Salaries: Laundry operatives	3,471			19 11
	Clerical	97			7
	Laundering Materials	361			2 1
	Fuel, Light, Power and Water	635			3 8
	Plant and Equipment	299			1 9
	Building Maintenance and Repairs, Rates, etc.	374			2 2
	Domestic Renewals and Other Expenses	119			8
	Laundry Van: Drivers and Assistants	250			1 5
	Running Expenses	248			1 5
			5,854		1 13 8
	General Services:				
	Works and General Administration		246		1 5
			6,100		1 15 1
	Less: Charged to Other Hospitals		2,300		
	Charged to Patients' and Other Departments		3,800		
	Carried forward			149,483	

STATEMENT NO. 2 (Contd.)

INCOME AND EXPENDITURE ACCOUNT

Dr. **EXPENDITURE.**

Previous Year (1)	ACCOUNT (2)	Detail (3)	Sub-Totals (4)	Department Totals and Aggregate (5)	Unit Cost (6)
£		£	£	£	£ s. d.
	Brought forward			149,483	
					Per Issue
	DISPENSARY AND LABORATORY*				
	Salaries: Pharmacists and Dispensers	1,694			10
	Storesmen, Porters and Cleaners	616			4
	Clerical	304			2
	Materials and Equipment	580			3
	Fuel, Light, Power and Water	59			—
	Maintenance Buildings and Plant	391			2
	Domestic Renewals	46			—
	Other Expenses:				
	Printing and Stationery and Miscellaneous	151			1
			3,841		1 10
	General Services: Central Boiler Plant	267			1
	Administration and Other General Services	234			1
			501		
			4,342		2 0
	Less: Charged to Other Hospitals		435		
	Charged to Patients' Departments		3,907		
					Per Resident Day
	RESIDENT STAFF SERVICES (at Hospital and various Homes)				
	Salaries: Homes Administration	430			3
	Catering Staffs	1,075			7
	Dining Rooms	2,743			1 6
	Domestic Staff	4,256			2 3
	Provisions	8,257			4 6
	Uniforms	1,541			10
	Accommodation: Fuel, Light, Power and Water	1,495			9
	Maintenance of Buildings and Plant	2,795			1 6
	Rents and Rates	894			6
	Domestic Renewals and Repairs	1,666			11
	Other Expenses: Travelling, Printing and Stationery, etc.	518			3
			25,670		13 10
	General Services:				
	Central Boiler Plant	665			4
	Main Kitchen Costs	2,002			1 1
	Laundry	1,578			10
	Other—General Administration	948			6
	Works and Catering, etc.	888			6
	Linen Room and Other Services	415			3
			6,496		3 6
			32,166		17 4
	Less: Payments made by Resident Staff		9,244		(5s. 0d.)
	Less: Proportion charged to Other Hospitals		22,922 2,888		
	Charged to Patients' Departments		20,034		
	NON-RESIDENT MEALS				
	Provisions	2,377			
	General Services:				
	Main Kitchen and Other Services	901			
			3,278		
	Less: Payments made for Meals		616		
	Charged to Patients' Departments		2,662		
	Carried forward			149,483	

STATEMENT NO. 2 (Contd.)

INCOME AND EXPENDITURE ACCOUNT

Dr. **EXPENDITURE.**

Previous Year (1)	ACCOUNT (2)	Detail: Salaries (3a)	Detail: Supplies, etc., and Services (3b)	Totals (4)	Department Totals and Aggregate (5)	Unit Cost (6)
£		£	£	£	£	s. d.
	Brought forward				149,483	
	(III) (B) GENERAL SERVICES					
	Ambulance and Other Transport	186	68	254		1 0 (*a*)
	Admissions Office	475	52	527		5 8 (*b*)
	Appointments and Registration	1,213	207	1,420		7½ (*c*)
	Central Sterilizer	208	24	232		6 (*d*)
	Chapel (including Chaplain)	211	85	296		—
	Hairdressing	108	—	108		—
	Libraries: Patients	—	20	20		—
	Medical	—	63	63		—
	Lifts	178	12	190		—
	Linen Room	1,127	430	1,557		—
	Medical Records	1,066	140	1,206		2 8 (*e*)
	Mortuary	123	74	197		—
	Medical Photography	141	235	376		45 0 (*f*)
	Porters	2,910	482	3,392		—
	Social Service	1,318	168	1,486		—
	Stores and Offices: Works	1,464	150	1,614		—
	General Supplies	1,420	216	1,636		—
	Catering	971	203	1,174		4 (*g*)
	Training School: Nurses	748	882	1,630		8 4 (*h*)
	Administration: Secretarial	2,302	405	2,707		—
	Finance	3,272	760	4,032		—
	Nursing	1,089	942	2,031		—
	Switch Board, Telephone	412	437	849		—
	Total—General Services (III) (B)	20,942	6,055	26,997		
	Less: Charged to Other Hospitals:					
	Transport		79			
	Linen Room		25			
	Works Administration		316			
	General Supplies		580			
	Nurses Training		326			
	Group Administration		3,958			
				5,284		
	Charged to Patients' and Other Departments			21,713		
	TOTAL EXPENDITURE INCLUDED IN COSTS: Carried forward				149,483	

*NOTE: The dispensary includes manufacturing and sterile laboratories, and renders services to other hospitals in the Group. It is therefore charged with a share of the cost of the general services, both to arrive at an inclusive manufacturing cost and also to effect a more equitable charge to other Hospitals.

(*a*) Per Mile. (*b*) Per Admission. (*c*) Per Attendance. (*d*) Per Container. (*e*) Per New Record. (*f*) Per Attendance (*g*) Per Person Fed per Day. (*h*) Per Student Day.

STATEMENT NO. 2 (Contd.)

INCOME AND EXPENDITURE ACCOUNT

Dr. EXPENDITURE.

Previous Year (1)	ACCOUNT (2)	Detail (3)	Sub-Totals (4)	Department Totals and Aggregate (5)	Unit Cost (6)
£		£	£	£	
	Brought forward			149,483	
	QUASI-TRADING AND MISCELLANEOUS ITEMS:				
	Canteens: Salaries	504			
	Provisions	883			
	Fuel and Power, Repairs, Rents and Rates	295			
	Equipment and Domestic Items	357			
			2,039		
	Less: Receipts		1,082		
				957	
	Shops: Salaries	63			
	Supplies for Re-sale	768			
	Other Expenses	14			
			845		
	Less: Receipts		811		
				34	
	Burials (See Note b, page 15)			38	
	Travelling Expenses of Patients (See Note b, page 15)			45	
	Printing Section: Salaries	164			
	Materials	1,352			
	Other Expenses	46			
			1,562		
	Charges made and Balance forward		1,562		
	TOTAL EXPENDITURE:			£150,557	

Cr. INCOME

	£	£	£
Private Patients	1,792		
Road Traffic Acts	235		
Supply and Repair of Appliances	268		
Cash Discounts	303		
Sale of Swill and Waste	88		
Sundries	144		
TOTAL INCOME:		2,830	
EXCESS OF EXPENDITURE OVER INCOME		147,727	£150,557

STATEMENT NO. 1(a)
3 months to 31 March 1952

SUMMARY OF EXPENDITURE, UNITS OF WORK AND UNIT COSTS

PART I. PATIENTS, SPECIAL SERVICES, AND TRADING DEPARTMENTS

DEPARTMENT	EXPENDITURE			UNITS OF WORK		*Unit Costs
	Direct	Transfers General Services	Total	Description	Number	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
	£	£	£			£ s. d.
PATIENTS						
IN-PATIENTS:						
General Wards—				In-Patient		
Medical (Male)	3,913	2,577	6,490	Day	5,195	1 5 1
Medical (Female)	3,905	2,585	6,490	,,	5,147	1 5 2
Surgical (Male)	6,459	4,069	10,528	,,	7,796	1 7 0
Surgical (Female)	5,851	3,838	9,689	,,	6,972	1 7 10
Children	4,315	2,648	6,963	,,	4,347	1 12 0
Medical & Surgical (M)	2,554	1,320	3,874	,,	2,497	1 11 0
Medical & Surgical (F)	1,844	1,126	2,970	,,	1,873	1 11 8
(Sub-totals)	28,841	18,163	47,004	,,	33,827	1 7 9
Special Wards—				In-Patient		
Ante-Natal	2,054	1,273	3,327	Day	2,465	1 7 0
Geriatric (Female)	2,283	1,312	3,595	,,	2,549	1 8 2
Gynaecology	2,109	1,332	3,441	,,	2,462	1 7 11
Infants	1,853	891	2,744	,,	1,159	2 7 4
Cubicles (Unclassified)	2,285	1,284	3,569	,,	1,932	1 16 11
Maternity	10,806	5,222	16,028	,,	6,745	2 7 6
Premature Babies	1,796	766	2,562	,,	770	3 6 7
Tuberculosis	4,597	2,830	7,427	,,	5,158	1 8 10
(Sub-totals)	27,783	14,910	42,693	—	—	—
Totals In-Patients	56,624	33,073	89,697	—	—	—
OUT-PATIENTS:						
				Out-Patient		
General Clinics	3,085	2,486	5,571	Attendance	19,960	5 7
Ante-Natal & Post-Natal Clinics	571	580	1,151	,,	4,311	5 4
Casualty & V.D. Clinics	2,392	1,257	3,649	,,	8,599	8 6
Chest Clinics	986	456	1,442	,,	4,585	6 4
Totals Out-Patients	7,034	4,779	11,813	,,	37,455	6 4
SPECIAL SERVICES:						
Operating Theatres	6,556	1,598	8,154	Per Operation	1,476	5 10 6
Laboratories—Pathology etc.	2,383	556	2,939	,, Examination	11,337	5 2
Physio-therapy	3,147	759	3,906	,, Treatment	39,674	2 0
X-ray	4,072	675	4,747	,, Examination	7,888	12 0
Occupational Therapy	703	83	786	,, Attendance	3,111	5 0
Totals Special Services	16,861	3,671	20,532	—	—	—
TRADING & MISCELLANEOUS:						
Canteens	2,106		2,106	—	—	—
Burials	37		37	—	—	—
Travelling Expenses of Patients & Escorts	28		28	—	—	—
(Sub-totals)	2,171		2,171	—	—	—
LESS:						
Direct Credits—Canteens	1,507		1,507	—	—	—
Total-Trading and Miscellaneous	664		664	—	—	—
TOTAL EXPENDITURE	81,183	41,523	122,706	—	—	—

*For details of these Unit Costs see Statement No. 2(a) (Col. 5)

STATEMENT No. 1(a) (Contd.)
3 months to 31 March, 1952

PART II. GENERAL SERVICES EXPENDITURE, UNITS OF WORK AND UNIT COST.

DEPARTMENT (1)	Direct Expenditure (2)	Transfers From Other General Services (3)	Inclusive Cost (4)	UNITS OF WORK Description (5)	UNITS OF WORK Number (6)	Unit Costs (7)
GENERAL SERVICES	£	£	£			£ s. d.
(A)						
Boiler House	7,505	886	8,391	Per 1,000 lb. Steam	22,193	7 7
Main Kitchen	8,819	1,379	10,198	,, Patient Day	57,067	3 7
Staff Services—Nurses	11,381	4,782	16,163	,, Resident Day	26,936	12 0
—Doctors	903	468	1,371	,, ,, ,,	2,093	13 1
—Domestic	1,922	1,729	3,651	,, ,, ,,	6,097	12 0
	30,530	9,244	39,774			
(B)						
Transport	153		153	,, Mile	3,132	1 0
Admissions, Appointments and Registration	188		188	,, Admission	3,008	1 3
Central Sterilizer	233		233	,, Container	13,350	4
Chapel	61		61	—		
Corridors, stairs, lifts	91		91	—		
Dispensary	1,185		1,185	,, Prescription	10,885	2 2
Gardens and Lawns	201		201	—		
Laundry—sorting room	366		366	—		
Library	101		101	—		
Sewing room	713		713	—		
Medical Records	1,809		1,809	,, New Record	14,098	2 7
Porters—General	6,224		6,224			
Social Service	1,583		1,583	,, Case	508	3 2 4
Stores, central	1,300		1,300	—		
Switchboard	480		480	—		
Works and Buildings	965		965	—		
Administration:						
Unit Hospital	2,130		2,130			
Group	8,483		8,483			
Training—Nurses	2,152		2,152			
—Midwives	254		254			
Totals-General Services	59,202	9,244	68,446			

	£	£
DEDUCT:		
Direct Credits:—Staff Services		
Nurses	8,332	
Doctors	387	
Domestics	1,478	10,197
		58,249
Transfers:-		
(i) To other Hospitals	4,967	
(ii) Other General Services (as above)	9,244	14,211
		44,038
Training Schools Expenditure not included in costs	2,406	
Other Trading Receipts from Sales	109	2,515
NET EXPENDITURE TRANSFERRED TO PART I (COL. 3)		£41,523

STATEMENT NO. 2 (a)
3 months to 31 March 1952.

Dr. INCOME & EXPENDITURE ACCOUNT.

EXPENDITURE

ACCOUNT (1)	Detail (2)	Sub-Totals (3)	Department Totals and Aggregate (4)	Unit Cost (5)
(I) PATIENTS' DEPARTMENTS	£	£	£	£ s. d. Per In-Patient Day
(a) IN-PATIENTS				
General Medical—Male:				
Salaries: Medical (excluding salaries paid by R.H.B.)	173			8
Nursing	1,592			6 1
Others	796			3 1
Provisions (Direct to Wards)	342			1 4
Drugs, Dressings & Instruments, etc.	428			1 8
Electricity, Water, Gas.	82			4
Rates	150			7
Hardware, Cleaning, Linen, etc.	62			3
Other expenses: Printing & Stationery, Furniture and Fittings, Uniforms, etc.	40			2
Contract Laundry	248			11
		3,913		15 1
General Services:				
Boiler House	284			1 1
Main Kitchen	870			3 4
Staff Services—net cost	683			2 8
Other General Services	740			2 11
		2,577		10 0
Total General Medical Wards—Male			6,490	1 5 1
General Medical—Female				
Salaries: Medical (excluding salaries paid by R.H.B.)	169			8
Nursing	1,558			6 0
Others	823			3 2
Provisions (Direct to Wards)	264			1 0
Drugs, Dressings, & Instruments, etc.	480			1 11
Electricity, Water & Gas	82			4
Rates	150			7
Hardware, Cleaning, Linen, etc.	63			3
Other Expenses: Postages & Stationery, Furniture & Fittings, Uniforms, etc.	62			3
Contract Laundry	254			1 0
		3,905		15 2
General Services:				
Boiler House	284			1 1
Main Kitchen	862			3 4
Staff Services—net Cost	698			2 8
Other General Services	741			2 11
		2,585		10 0
Total General Medical Wards—Female			6,490	1 5 2
General Surgical—Male				
Salaries: Medical (excluding salaries paid by R.H.B.)	69			2
Nursing	2,524			6 6
Others	1,380			3 7
Provisions (Direct to Wards)	460			1 2
Drugs, Dressings, Instruments, etc.	1,006			2 7
Electricity, Water, Gas	123			3
Rates	233			7
Hardware, Cleaning, Linen, etc.	102			3
Other expenses: Postages & Stationery, Furniture & Fittings, Uniforms, etc.	85			3
Contract Laundry	477			1 3
Carried Forward		6,459	12,980	16 7

STATEMENT NO. 2 (a) (Contd.)

Dr. **INCOME AND EXPENDITURE ACCOUNT**
EXPENDITURE

ACCOUNT (1)	Detail (2)	Sub-Totals (3)	Department Totals and Aggregate (4)	Unit Cost (5)
	£	£	£	£ s. d. Per In-Patient Day
Brought Forward		6,459	12,980	16 7
IN-PATIENTS (contd.)				
General Surgical—Male				
General Services:				
Boiler House	439			1 1
Main Kitchen	1,305			3 4
Staff Services—net cost	1,074			2 9
Other General Services	1,251			3 3
		4,069		10 5
Total General Surgical Wards—Male			10,528	1 7 0
General Surgical—Female				
Salaries: Medical (excluding salaries paid by R.H.B.)	63			2
Nursing	2,367			6 10
Others	1,277			3 8
Provisions (Direct to Wards)	346			1 0
Drugs, Dressings, Instruments, etc.	837			2 5
Electricity, Water, Gas	123			4
Rates	233			8
Hardware, Cleaning, Linen, etc., Maintenance	96			3
Other expenses: Postages & Stationery, Furniture & Fittings, Uniforms, etc.	51			2
Contract Laundry	458			1 4
		5,851		16 10
General Services:				
Boiler House	439			1 3
Main Kitchens	1,166			3 4
Staff Services—net cost	1,058			3 0
Other General Services	1,175			3 5
		3,838		11 0
Total General Surgical Wards—Female			9,689	1 7 10
Childrens Wards				
Salaries: Medical (excluding salaries paid by R.H.B.)	154			8
Nursing	1,597			7 4
Others	805			3 8
Provisions (Direct to Wards)	282			1 4
Drugs, Dressings, Instruments, etc.	559			2 7
Electricity, Water & Gas	82			5
Rates	190			10
Hardware, Cleaning, Linen, etc. Maintenance	127			7
Other expenses, Postages & Stationery, Furniture & Fittings, Uniforms, etc.	80			5
Contract Laundry	439			2 0
		4,315		19 10
General Services:				
Boiler House	360			1 8
Main Kitchen	728			3 4
Staff Services—net cost	677			3 1
Other General Services	883			4 1
		2,648		12 2
Total Childrens Wards			6,963	1 12 0
Carried Forward			40,160	

STATEMENT NO. 2 (a) (Contd.)

Dr. **INCOME AND EXPENDITURE ACCOUNT**
EXPENDITURE

ACCOUNT (1)	Detail (2)	Sub-Totals (3)	Department Totals and Aggregate (4)	Unit Cost (5)
	£	£	£	£ s. d. Per In-Patient Day
Brought Forward			40,160	
IN-PATIENTS (contd.)				
Medical and Surgical—Male				
Salaries: Medical (excluding salaries paid by R.H.B.)	92			9
Nursing	1,147			9 2
Others	438			3 6
Provisions (Direct to Wards)	171			1 4
Drugs, Dressings, Instruments, etc.	324			2 7
Electricity, Water, Gas	41			4
Rates	75			7
Hardware, Cleaning, Linen, etc., & Maintenance	58			6
Other expenses, Postages & Stationery, Furniture & Fittings, Uniforms, etc.	43			4
Contract Laundry	165			1 4
		2,554		1 0 5
General Services:				
Boiler House	142			1 2
Main Kitchens	418			3 4
Staff Services—net cost	358			2 11
Other General Services	402			3 2
		1,320		10 7
Total General Medical and Surgical—Male			3,874	1 11 0
Medical and Surgical—Female				
Salaries: Medical (excluding salaries paid by R.H.B.)	20			2
Nursing	780			8 4
Others	429			4 7
Provisions (Direct to Wards)	121			1 4
Drugs, Dressings, Instruments, etc.	191			2 0
Electricity, Water, Gas	41			5
Rates	75			10
Hardware, Cleaning, Linen, etc., & Maintenance	59			7
Other expenses: Postages & Stationery, Furniture & Fittings, Uniforms, etc.	27			4
Contract Laundry	101			1 1
		1,844		19 8
General Services:				
Boiler House	142			1 6
Main Kitchen	314			3 4
Staff Services—net cost	311			3 4
Other General Services	359			3 10
		1,126		12 0
Total General Medical and Surgical—Female			2,970	1 11 8
SPECIAL WARDS				
Ante-Natal				
Salaries: Medical (excluding salaries paid by R.H.B.)	142			1 2
Nursing	822			6 8
Others	428			3 6
Provisions (Direct to Wards)	149			1 2
Drugs, Dressings, Instruments, etc.	145			1 2
Electricity, Water, Gas	41			4
Rates	79			8
Hardware, Cleaning, Linen, etc., & Maintenance	46			4
Other expenses: Postages, & Stationery, Furniture & Fittings, Uniforms, etc.	33			3
Contract Laundry	169			1 5
Carried Forward		2,054	47,004	16 8

STATEMENT NO.2 (a) (Contd.)

Dr. **INCOME AND EXPENDITURE ACCOUNT**
EXPENDITURE

ACCOUNT (1)	Detail (2)	Sub-Totals (3)	Department Totals and Aggregate (4)	Unit Cost (5)
	£	£	£	£ s. d. Per In-Patient Day
Brought Forward		2,054	47,004	16 8
IN-PATIENTS (contd.)				
Ante-Natal (Contd.)				
General Services:				
Boiler House	149			1 2
Main Kitchen	413			3 4
Staff Services—Net cost	325			2 8
Other General Services	386			3 2
		1,273		10 4
Total Ante-Natal Ward			3,327	1 7 0
Geriatric—Female				
Salaries: Medical (excluding Salaries paid by R.H.B.)	85			8
Nursing	874			6 11
Others	568			4 5
Provisions (Direct to Wards)	135			1 1
Drugs, Dressings, Instruments, etc.	239			1 11
Electricity, Water, Gas	41			4
Rates	75			7
Hardware, Cleaning, Linen, etc., & Maintenance	51			5
Other expenses: Postage & Stationery, Furniture & Fittings, Uniforms, etc.	37			3
Contract Laundry	178			1 5
		2,283		17 11
General Services:				
Boiler House	142			1 1
Main Kitchen	427			3 4
Staff Services—net cost	338			2 8
Other General Services	405			3 2
		1,312		10 3
Total Geriatric Ward—Female			3,595	1 8 2
Gynaecology				
Salaries: Medical (excluding salaries paid by R.H.B.)	161			1 4
Nursing	804			6 6
Others	464			3 9
Provisions (Direct to Wards)	124			1 0
Drugs, Dressings, Instruments, etc.	228			1 10
Electricity, Water, Gas	41			4
Rates	79			8
Hardware, Cleaning, Linen, etc., & Maintenance	44			4
Other expenses, Postages & Stationery, Furniture & Fittings, Uniforms, etc.	17			2
Contract Laundry	147			1 2
		2,109		17 1
General Services:				
Boiler House	149			1 3
Main Kitchen	412			3 4
Staff Services—net cost	357			2 11
Other General Services	414			3 4
		1,332		10 10
Total Gynaecology Ward			3,441	1 7 11
Carried Forward			57,367	

STATEMENT NO. 2 (a) (Contd.)

Dr. **INCOME AND EXPENDITURE ACCOUNT**
EXPENDITURE

ACCOUNT (1)	Detail (2)	Sub-Totals (3)	Department Totals and Aggregate (4)	Unit Cost (5)
	£	£	£	£ s. d. Per In-Patient Day
Brought Forward			57,367	
IN-PATIENTS (contd.)				
Infants				
Salaries: Medical (excluding salaries paid by R.H.B.)	45			10
Nursing	943			16 3
Others	286			4 11
Provisions (Direct to Wards)	24			5
Drugs, Dressings, Instruments, etc.	175			3 0
Electricity, Water, Gas	21			4
Rates	48			10
Hardware, Cleaning, Linen, etc., & Maintenance	18			4
Other expenses: Postages & Stationery Furniture & Fittings, Uniforms, etc.	41			9
Contract Laundry	252			4 4
		1,853		1 12 0
General Services:				
Boiler House	90			1 6
Main Kitchen	194			3 4
Staff Services—net cost	319			5 6
Other General Services	288			5 0
		891		15 4
Total Infants Ward			2,744	2 7 4
Cubicles (Unclassified)				
Salaries: Medical (excluding salaries paid by R.H.B.)	54			6
Nursing	793			8 2
Others	464			4 10
Provisions (Direct to Wards)	119			1 3
Drugs, Dressings, Instruments, etc.	518			5 4
Electricity, Water, Gas	41			5
Rates	78			10
Hardware, Cleaning, Linen, etc., & Maintenance	38			5
Other expenses: Postages & Stationery, Furniture & Fittings, Uniforms, etc.	23			3
Contract Laundry	157			1 8
		2,285		1 3 8
General Services:				
Boiler House	147			1 6
Main Kitchen	323			3 4
Staff Services—net cost	347			3 7
Other General Services	467			4 10
		1,284		13 3
Total Unclassified Wards			3,569	1 16 11
Maternity				
Salaries: Medical (excluding salaries paid by R.H.B.)	390			1 2
Nursing	4,903			14 6
Others	2,127			6 4
Provisions (Direct to Wards)	518			1 6
Drugs, Dressings, Instruments, etc.	930			2 9
Electricity, Water, Gas	235			8
Rates	328			1 0
Hardware, Cleaning, Linen, etc., & Maintenance	227			8
Other expenses: Postages & Stationery, Furniture & Fittings, Uniforms, etc.	252			9
Contract Laundry	896			2 8
Carried Forward		10,806	63,680	1 12 0

STATEMENT NO. 2 (a) (Contd.)

Dr. INCOME AND EXPENDITURE ACCOUNT
EXPENDITURE

ACCOUNT (1)	Detail (2)	Sub-Totals (3)	Department Totals and Aggregate (4)	Unit Cost (5)
	£	£	£	£ s. d. Per In-Patient Day
Brought Forward		10,806	63,680	1 12 0
IN-PATIENTS (contd.)				
Maternity (Contd.)				
General Services:				
Boiler House	620			1 10
Main Kitchen	1,129			3 4
Staff Services—net cost	1,732			5 2
Other General Services	1,741			5 2
		5,222		15 6
Total Maternity Wards			16,028	2 7 6
Premature Babies				
Salaries: Medical (excluding salaries paid by R.H.B.)	33			11
Nursing	906			1 3 6
Others	142			3 8
Provisions (Direct to Wards)	37			1 0
Drugs, Dressings, Instruments, etc.	202			5 3
Electricity, Water, Gas	21			7
Rates	48			1 3
Hardware, Cleaning, Linen, etc., & Maintenance	21			7
Other expenses: Postage & Stationery, Furniture & Fittings, Uniforms, etc.	50			1 3
Contract Laundry	336			8 8
		1,796		2 6 8
General Services:				
Boiler House	90			2 4
Main Kitchen	129			3 4
Staff Services—net cost	280			7 3
Other General Services	267			7 0
		766		19 11
Total Premature Babies Ward			2,562	3 6 7
Tuberculosis				
Salaries: Medical (excluding salaries paid by R.H.B.)	106			5
Nursing	1,762			6 10
Others	931			3 7
Provisions (Direct to Wards)	431			1 8
Drugs, Dressings, Instruments, etc.	622			2 5
Electricity, Water, Gas	84			4
Rates	216			10
Hardware, Cleaning, Linen, etc., & Maintenance	111			5
Other expenses: Postages & Stationery, Furniture & Fittings, Uniforms, etc.	80			4
Contract Laundry	254			1 0
		4,597		17 10
General Services:				
Boiler House	410			1 7
Main Kitchen	862			3 4
Staff Services—net cost	641			2 6
Other General Services	917			3 7
		2,830		11 0
Total Tuberculosis Wards			7,427	1 8 10
Carried Forward			89,697	

STATEMENT NO. 2 (a) (Contd.)

Dr. **INCOME AND EXPENDITURE ACCOUNT**
EXPENDITURE

ACCOUNT (1)	Detail (2)	Sub-Totals (3)	Department Totals and Aggregate (4)	Unit Cost (5)
	£	£	£	£ s. d. Per-Out-patient Attendance
Brought Forward			89,697	
(b) OUT-PATIENTS				
General Clinics				
Salaries: Medical (excluding salaries paid by R.H.B.)	6			—
Nursing	815			10
Others	1,063			1 1
Drugs, Dressings, Instruments, etc.	775			9
Electricity, Water, Gas	37			½
Rates	193			2
Hardware, Cleaning, Linen, etc., & Maintenance	43			½
Other expenses: Postages & Stationery, Furniture & Fittings, Uniforms, etc.	91			1
Contract Laundry	62			1
		3,085		3 1
General Services:				
Boiler House	365			4
Staff Services—net cost	341			4
Other General Services	1,780			1 10
		2,486		2 6
Total Out-Patients—General Clinics			5,571	5 7
Ante-Natal and Post-Natal Clinics				
Salaries: Medical (excluding salaries paid by R.H.B.)	2			—
Nursing	241			1 1
Others	178			10
Drugs, Dressings, Instruments, etc.	11			1
Electricity, Water, Gas	35			2
Rates	60			3½
Hardware, Cleaning, Linen, etc., & Maintenance	18			1
Other expenses: Postages & Stationery, Furniture & Fittings, Uniforms, etc.	25			1½
Contract Laundry	1			—
		571		2 8
General Services:				
Boiler House	113			6
Staff Services—net cost	84			5
Other General Services	383			1 9
		580		2 8
Total Ante-Natal and Post-Natal Clinics			1,151	5 4
Casualty and V.D. Clinics				
Salaries: Medical (excluding salaries paid by R.H.B.)	374			11
Nursing	1,025			2 5
Others	163			4
Drugs, Dressings, Instruments, etc.	634			1 6
Electricity, Water, Gas	35			1
Rates	38			1
Hardware, Cleaning, Linen, etc., & Maintenance	15			—
Other expenses: Postages, Stationery, Furniture & Fittings, Uniforms, etc.	12			—
Contract Laundry	96			3
		2,392		5 7
General Services:				
Boiler House	72			2
Staff Services—net cost	318			9
Other General Services	867			2 0
		1,257		2 11
Total Casualty and V.D. Clinics			3,649	8 6
Carried Forward			100,068	

STATEMENT NO. 2(a) (Contd.)

Dr. **INCOME AND EXPENDITURE ACCOUNT**
EXPENDITURE

ACCOUNT (1)	Detail (2)	Sub-Totals (3)	Department Totals and Aggregate (4)	Unit Cost (5)
	£	£	£	£ s. d. Per Out-patient Attendance
Brought Forward			100,068	
OUT-PATIENTS (contd.)				
Chest Clinics				
Salaries: Medical (excluding salaries paid by R.H.B.)	217			11
Others	551			2 5
Drugs, Dressings, Instruments, etc.	5			—
Electricity, Water, Gas	35			2
Rates	30			2
Hardware, Cleaning, Linen, etc., & Maintenance	14			1
Other expenses: Printing & Stationery, Furniture & Fittings, Uniforms, etc.	122			6
Contract Laundry	12			1
		986		4 4
General Services:				
Boiler House	56			3
Staff Services—net cost	27			1
Other General Services	373			1 8
		456		2 0
Total Chest Clinics			1,442	6 4
(II) **SPECIAL SERVICES**				
Theatres				Per Operation.
Salaries: Medical (excluding salaries paid by R.H.B.)	370			5 0
Nursing	2,122			1 8 9
Other	1,038			14 1
Drugs, Dressings, Instruments, etc.	2,071			1 8 1
Electricity, Water, Gas	132			1 9
Rates	73			1 0
Hardware, Cleaning, Linen, etc., & Maintenance	128			1 9
Other expenses: Postages & Stationery, Furniture & Fittings, Uniforms, etc.	275			3 9
Contract Laundry	347			4 8
		6,556		4 8 10
General Services:				
Boiler House	138			1 11
Staff Services—net cost	666			9 0
Other General Services	794			10 9
		1,598		1 1 8
Total Theatres			8,154	5 10 6
Laboratories—Pathology, etc.				Per Examination
Salaries: Medical (excluding salaries paid by R.H.B.)	268			6
Other	1,427			2 6
Drugs, Dressings, Instruments, etc.	339			7
Electricity, Water, Gas	41			1
Rates	96			2
Hardware, Cleaning, Linen, etc., & Maintenance	30			1
Other expenses: Postages & Stationery, Furniture & Fittings, Uniforms, etc.	165			3
Contract Laundry	17			—
		2,383		4 2
General Services:				
Boiler House	181			4
Staff Services—net cost	80			2
Other General Services	295			6
		556		1 0
Total Laboratories			2,939	5 2
Carried Forward			112,603	

STATEMENT NO. 2 (a) (Contd.)

Dr. **INCOME AND EXPENDITURE ACCOUNT**
EXPENDITURE

ACCOUNT (1)	Detail (2)	Sub-Totals (3)	Department Totals and Aggregate (4)	Unit Cost (5)
	£	£	£	£ s. d.
Brought Forward			112,603	
				Per Treatment
Physio-Therapy				
Salaries: Physio-therapists	1,807			11
Other	454			3
Drugs, Dressings, Instruments, etc.	468			3
Electricity, Water, Gas	96			½
Rates	70			½
Hardware, Cleaning, Linen, etc., & Maintenance	22			—
Other expenses: Postages & Stationery, Furniture & Fittings, Uniforms, etc.	14			—
Contract Laundry	216			1
		3,147		1 7
General Services:				
Boiler House	133			1
Staff Services—net cost	171			1
Other General Services	455			3
		759		5
Total Physio-Therapy			3,906	2 0
				Per Examination
X-Ray				
Salaries: Radiographers	1,379			3 6
Others	467			1 2
Drugs, Dressings, Instruments, etc.	395			1 0
X-Ray Films	1,394			3 7
Electricity, Water, Gas	96			3
Rates	64			2
Hardware, Cleaning, Linen, etc., & Maintenance	77			2
Other expenses: Postages & Stationery, Furniture & Fittings, Uniforms, etc.	39			1
Contract Laundry	161			5
		4,072		10 4
General Services:				
Boiler House	121			4
Staff Services—net cost	52			1
Other General Services	502			1 3
		675		1 8
Total X-Ray Department			4,747	12 0
				Per Attendance
Occupational Therapy				
Salaries	589			3 10
Materials	41			3
Drugs, Dressings, Instruments etc.	1			—
Electricity, Water, Gas	35			3
Rates	27			2
Hardware, Cleaning, Linen, etc., & Maintenance	6			—
Other expenses: Postages, & Stationery, Furniture & Fittings, Uniforms, etc.	4			—
Carried Forward		703	121,256	4 6

STATEMENT NO. 2 (a) (Contd.)

Dr. **INCOME AND EXPENDITURE ACCOUNT**
EXPENDITURE

ACCOUNT (1)	Detail (2)	Sub-Totals (3)	Department Totals and Aggregate (4)	Unit Cost (5)
	£	£	£	£ s. d.
Brought Forward		703	121,256	Per Attendance 4 6
General Services:				
Boiler House	52			4
Staff, Services—net cost	51			4
Other General Services	89			7
		192		1 3
		895		5 9
Less Income from Sales		109		9
Total Occupational Therapy			786	5 0
			122,042	
(III) (A) GENERAL SERVICES				
Boiler House				Per 1,000 lb. of steam
Wages: Stokers	858			9
Coal & Fuel	6,120			5 6
Electricity, Water, Gas	69			1
Rates	279			3
Hardware, Cleaning, Linen, etc. & Maintenance	176			2
Other expenses, Postages & Stationery, Furniture & Fittings, Uniforms, etc.	3			—
		7,505		6 9
General Services:		886		10
Charged to Patients and Other Depts.		8,391		7 7
Main Kitchen				Per In-Patient Day
Salaries: Catering	1,131			5
Others	1,852			8
Provisions	5,323			1 10½
Electricity, Water, Gas	134			1
Rates	167			2
Hardware, Cleaning, Linen, etc., & Maintenance	164			1
Other expenses, Postages, & Stationery, Furniture & Fittings, Uniforms, etc	16			—
Contract Laundry	32			—
		8,819		3 1
General Services :				
Boiler House	316			1
Other	1,063			5
		1,379		6
Charged to Patients' and other Departments		10,198		3 7
Resident Staff Services				Per Resident Day
Salaries: Home Administration	556			5
Catering	455			4
Dining Rooms	511			5
Domestic	3,039			2 3
Provisions	4,540			3 4
Electricity, Water, Gas	190			2
Rates	1,183			11
Hardware, Cleaning, Linen, etc., & Maintenance	339			3
Other expenses, Postages & Stationery, Furniture & Fittings, Uniforms, etc.	1			—
Contract Laundry	567			5
		11,381		8 6
General Services :				
Boiler House	2,237			1 8
Other General Services	2,545			1 10
		4,782		3 6
		16,163		12 0
Less Payments made by Resident Staff		8,332		6 2
Charged to Patients' and other departments		7,831		5 10
Carried Forward			122,042	

STATEMENT NO. 2 (a) (Contd.)

Dr. **INCOME AND EXPENDITURE ACCOUNT**
EXPENDITURE

ACCOUNT (1)	Detail (2)	Sub-Totals (3)	Department Totals and Aggregate (4)	Unit Cost (5)
	£	£	£	£ s. d.
Brought Forward			122,042	
Resident Staff Services—Doctors Quarters (Including non-residents meals)				Per Resident Day
Wages: Domestic	471			4 6
Provisions	300			2 11
Electricity, Water, Gas	35			4
Rates	68			8
Hardware, Cleaning, Linen, etc., & Maintenance	26			3
Other expenses: Postages & Stationery, Furniture & Fittings, Uniforms, etc.	1			—
Contract Laundry	2			—
		903		8 8
General Services :				
Boiler House	129			1 3
Other General Services	204			1 11
Main Kitchen	135			1 3
		468		4 5
		1,371		13 1
Less payments made by Resident Staff		387		3 8
Charged to Patients' and other Departments		984		9 5
Resident Staff Services—Domestic Quarters				
Wages: Domestic	512			1 8
Provisions	899			3 0
Electricity, Water, Gas	75			3
Rates	313			1 0
Hardware, Cleaning, Linen, etc., & Maintenance	46			2
Other expenses, Postages & Stationery, Furniture & Fittings, Uniforms etc.	2			—
Contract Laundry	75			3
		1,922		6 4
General Services :				
Boiler House	591			2 0
Other General Services	627			2 0
Main Kitchen	511			1 8
		1,729		5 8
		3,651		12 0
Less payments made by Resident Staff		1,478		4 10
Charged to Patients' and other departments		2,173		7 2
Carried Forward			122,042	

STATEMENT NO. 2 (a) (Contd.)

Dr. **INCOME AND EXPENDITURE ACCOUNT**
EXPENDITURE

ACCOUNT (1)	Details: Salaries (a)	Details: Supplies etc. & Services (b)	Sub-Totals (3)	Department Totals & Aggregate (4)	Unit Cost (5)
	£	£	£	£	£ s. d.
Brought Forward				122,042	
GENERAL SERVICES (contd.)					
Transport	93	60	153		1 0 (*a*)
Admissions, Appointments & Registration	171	17	188		1 3 (*b*)
Central Sterilizer	216	17	233		4 (*c*)
Chapel	54	7	61		—
Corridors, Stairs & Lifts	59	32	91		—
Dispensary	1,160	25	1,185		2 2 (*d*)
Gardens & Lawns	201	—	201		—
Laundry—sorting room	364	2	366		—
Library		101	101		—
Sewing Room	593	120	713		—
Medical Records	1,685	124	1,809		2 7 (*e*)
Porters	6,100	124	6,224		—
Social Service	1,488	95	1,583		3 2 4 (*f*)
Stores—Central	1,198	102	1,300		
Switchboard	410	70	480		
Works & Buildings Dept.	245	720	965		
Training Schools:					
Nursing	2,113	39	2,152		
Midwifery	254	—	254		
Administration:					
Unit Hospital	1,320	810	2,130		
Group:					
Secretarial	1,641	160	1,801		
Finance	2,913	431	3,344		
Supplies	1,595	262	1,857		
Maintenance	558	56	614		
Costing	293	3	296		
Miscellaneous	222	349	571		
Total: General Services:	24,946	3,726	28,672		
Less Charges to other Hospitals:					
Transport		76			
Miscellaneous General Services		650			
Group Administration etc.		4,241			
Training Schools Costs not included		2,406			
			7,373		
Total Charged to Patients and Other Departments			21,299		
Total Expenditure included in Costs: Carried Forward				122.042	

(*a*) Per Mile
(*b*) Per Admission
(*c*) Per Container
(*d*) Per Prescription
(*e*) Per New Record
(*f*) Per Case

STATEMENT NO. 2(a) (Contd.)

Dr. INCOME AND EXPENDITURE ACCOUNT
EXPENDITURE

ACCOUNT (1)	Detail (2)	Sub-Totals (3)	Department Totals and Aggregate (4)	Unit Cost (5)
	£	£	£	£ s. d.
Brought Forward			122,042	
QUASI-TRADING & MISCELLANEOUS ITEMS:				
Canteen & Out-patient Department Tea Bar				
Wages	717			
Provisions	1,307			
Hardware, Cleaning, Linen, etc	30			
Other expenses: Postages & Stationery, Furniture & Fittings, Uniforms	41			
Contract Laundry	11			
		2,106		
Less Receipts		1,507	599	
			122,641	
Burials (See note b. page 15)			37	
Travelling Expenses Patients & Escorts (See Note b. page 15)			28	
TOTAL EXPENDITURE			£122,706	

Cr. INCOME

	£	£	£
Road Traffic Acts	128		
Sundries	514		
		642	
TOTAL INCOME			
EXCESS OF EXPENDITURE OVER INCOME		122,064	
			£122,706

APPENDIX F.

Tables Showing Results of Time Studies.

TABLE I. GENERAL SURGERY. OPERATION TIME STUDY.

Nature of operation	Sex	Age	Classification of operation	Time patient arrived in anaesthetic room	Time first anaesthetic administered	Time operation commenced	Time patient taken from theatre	Time patient taken from theatre suite	Total time in theatre	Time from anaesthetising to removal from theatre
									hrs. mins.	hrs. mins.
Oesophagoscopy and biopsy of gland of neck	F	60	Intermediate	9.15 a.m.	9.40 a.m.	9.47 a.m.	10.22 a.m.	10.24 a.m.	1. 9	– 42
Undescended testicle	M	12	Intermediate	10.0 a.m.	10.27 a.m.	10.35 a.m.	11.16 a.m.	11.18 a.m.	1. 18	– 49
Thyroidectomy	F	60	Major	10.37 a.m.	11.20 a.m.	11.31 a.m.	1.0 p.m.	1.1 p.m.	2. 24	1. 40
,,	M	49	Major	12.20 p.m.	1.2 p.m.	1.8 p.m.	2.15 p.m.	2.19 p.m.	1. 59	1. 13
Right Inguinal Hernia	M	50	Intermediate	—	2.0 p.m.	2.9 p.m.	2.50 p.m.	2.51 p.m.	– 51	– 50
Varicose Veins	F	51	Minor	2.45 p.m.	2.48 p.m.	3.0 p.m.	3.30 p.m.	3.31 p.m.	– 46	– 42
Thyroidectomy	M	25	Major	3.22 p.m.	3.27 p.m.	3.45 p.m.	5.23 p.m.	5.25 p.m.	2. 3	1. 56

TABLE II. GENERAL SURGERY. OPERATION TIME STUDY

Nature of Operation	Sex	Age	Classification	Time Anaesthetic Administered*	Time Operation Commenced	Time Patient Taken from Theatre	Total Theatre Time Hrs.	Total Theatre Time Mins.	Remarks
Gastroscopy	F	66	Minor	—	9.45 a.m.	9.52 a.m.	–	7	Before and after inserting gastroscope surgeon consulted X-ray films and case notes—6 mins.
Gastroscopy	M	58	Minor	—	9.56 a.m.	10.10 a.m.	–	14	–do– 2 mins. Other doctors interested in the case also present.
Biopsy of lump in breast and radical removal	F	41	Major	10.16 a.m.	10.27 a.m.	11.38 a.m.	1	22	The decision to remove breast was made by the surgeon after removal and examination of the lump.
Partial gastrectomy for pyloric obstruction	M	60	Major	11.39 a.m.	12.8 p.m.	1.42 p.m.	2	3	Whole of stomach removed.
Thyroidectomy	F	64	Major	2.18 p.m.	2.28 p.m.	3.16 p.m.	–	58	
Abscess and removal of cyst R. abdomen	F	68	Minor	3.21 p.m.	3.29 p.m.	3.55 p.m.	–	34	This operation was listed as repair Ventral Hernia—the case had been seen and diagnosis agreed by 15 doctors the previous day.
Closure of colostomy	F	77	Major	3.58 p.m.	4.15 p.m.	4.47 p.m.	–	49	
Perineal excision of rectum	F	74	Major	2.6 p.m.	2.25 p.m.	4.0 p.m.	1	54	
Laparotomy & appendicectomy	M	45	Intermediate	4.0 p.m.	4.14 p.m.	4.37 p.m.	–	37	
Simple mastectomy	F	48	Intermediate	5.6 p.m.	5.19 p.m.	5.50 p.m.	–	44	
Left inguinal hernia	M	53	Intermediate	5.46 p.m.	6.5 p.m.	6.55 p.m.	1	9	Recurred hernia
Left inguinal hernia	M	32	Intermediate	6.55 p.m.	7.0 p.m.	7.20 p.m.	–	25	

*Does not include premedication

TABLE III. E.N.T. OPERATIONS TIME STUDY

Nature of Operation	Sex	Age	Provisional Classification	Time Anaesthetic Administered *	Time Operation Commenced	Time Patient Taken from Theatre	Total Time Hrs.	Total Time Mins.	Remarks
Tonsillectomy and Adenoids	M	9	Intermediate	2.5 p.m.	2.20 p.m.	2.40 p.m.		35	Dissection of tonsils
" "	M	7	Intermediate	2.50 p.m.	3.4 p.m.	3.26 p.m.		36	" " "
" "	F	10	Intermediate	3.41 p.m.	4.14 p.m.	4.17 p.m.		36	" " "
" "	F	3	Intermediate	4.17 p.m.	4.25 p.m.	4.42 p.m.		25	" " "
" "	F	14	Intermediate	11.34 a.m.	11.49 a.m.	12.10 p.m.		36	" " "
" "	F	11	Minor	12.42 p.m.	12.52 p.m.	12.56 p.m.		14	Guillotine method used for tonsils
" "	M	3¾	Minor	12.55 p.m.	1.0 p.m.	1.2 p.m.		7	" " " " " (T. & A. extracted in 24 secs.)
" "	M	5	Minor	1.1 p.m.	1.6 p.m.	1.10 p.m.		9	" " " " 22 "
" "	F	8	Minor	1.9 p.m.	1.13 p.m.	1.15 p.m.		6	" " " " 20 "
" "	M	5	Minor	1.14 p.m.	1.20 p.m.	1.22 p.m.		8	" " " " 20 "
" "	Ch.	8	Minor	12.15 p.m.	12.17 p.m.	12.21 p.m.		6	" " " " 19 "
" "	Ch.	8	Minor	12.18 p.m.	12.18 p.m.	12.25 p.m.		7	" " " " 21 "
" "	Ch.	8	Minor	12.25 p.m.	12.26 p.m.	12.29 p.m.		4	" " " " 17 "
" "	Ch.	11	Minor	12.29 p.m.	12.31 p.m.	12.36 p.m.		7	" " " " 30 "
Adenoids	M	9	Minor	2.35 p.m.	2.47 p.m.	2.55 p.m.		20	
"	F	6	Minor	3.30 p.m.	3.40 p.m.	3.50 p.m.		20	
"	F	4½	Minor	3.45 p.m.	3.55 p.m.	3.57 p.m.		12	
"	F	8	Minor	4.20 p.m.	4.30 p.m.	4.34 p.m.		14	
"	M	7	Minor	3.23 p.m.	3.38 p.m.	3.44 p.m.		21	
"	M	29	Minor	—	11.14 a.m.	11.34 a.m.		20	Local anaesthetic administered by surgeon in theatre.
Polypi	M	41	Minor	—	11.35 a.m.	11.51 a.m.		16	" " " "
"	M	29	Minor	10.14 a.m.	10.44 a.m.	11.30 a.m.	1	16	Difficult patient to anaesthetise—ether intolerant.
Right frontal sinusotomy									

*Does not include premedication.

TABLE IV. PHYSIO-THERAPY. EXPERIMENT IN ASSESSMENT OF UNITS OF WORK

TREATMENTS	OUT-PATIENTS								IN-PATIENTS (Mainly patients treated in Wards)							
	HOSPITAL A.				HOSPITAL B.				HOSPITAL A.				HOSPITAL B.			
	No. of Treatments	Mins.	Hrs.	Mins.	No. of Treatments	Mins.	Hrs.	Mins.	No. of Treatments	Mins.	Hrs.	Mins.	No. of Treatments	Mins.	Hrs.	Mins.
Infra Red & Radiant Heat	1032	6	103	12	456	6	45	36	195	12	39	—	29	12	5	48
Shortwave diathermy	552	6	55	12	21	12	4	12								
Ultra Violet light—local	388	4	25	52	23	10	3	50	37	10	6	10				
Ultra Violet light—general		10			46	6	4	36								
Faradism—Constant	288	10	48						22	15	5	30				
Galvanism—Constant	261	10	43	30	70	10	11	40	3	18		54	16	15	4	
Sinusoidal—Constant					14	10	2	20								
Faradism—Interrupted		30			70	20	23	20					16	20	5	20
Galvanism—Interrupted	5	20	1	40	18	20	6									
Muscle Test																
Paraffin Wax*					37	10	6	10					23	10	3	50
Massage	601	8	80	8	219	15	54	45	3	10		30	35	25	14	35
Plaster Work	11	30	5	30					5	30	2	30				
Dressings (Bisgaards)	14	8	1	52												
Class Exercises (I.P.—1982 (O.P.—2605	354	30	177						153	20	51					
Bronchograms	2	12		24					13	12	2	36				
Vital Capacity	22	8	2	56					24	8	3	12				
Individual Exercises (Short	1406	8	167	28	370	30	185		1347	8	179	36	95	30	47	30
(Long	414	20	138						1686	20	562					
General carbon Arc. O.P. 363	40	30	20													
Cautery	5	6		30												
	5395	—	871	14	1344	—	347	29	3488	—	852	58	214	—	81	3
			Hrs.	Mins.												
*Ward orderly work at Hospital A.	429 @ 10		71	30												
Equivalent number of Physio's/Remedial Gymnasts for "directly occupied" work.	7¼ Directly Occupied				2⅜ Directly Occupied				7⅜ Directly Occupied				⅜ Directly Occupied			
"Indirectly occupied" time (approx.)†	167 Hours				64 Hours				252 Hours				20 Hours			

†Based upon 1 hour a day for each Physio-therapist employed in the department to prepare apparatus, etc., and 1½ hours a day for each Physio-therapist employed treating patients in Wards, to proceed to and from Wards, prepare apparatus, etc.

NOTES:

1. The Supt. Physio-therapist spends practically all her time on clinics and in the administration of the department at Hospital A and, at Hospital B, approximately half her time.
2. Total Physio's/Remedial Gymnasts required on Hospital A basis 15 + 3 for "preparation", etc. work.
3. Total Physio's/Remedial Gymnasts required on Hospital B basis 3½ + ½ for "preparation" etc. work.
4. Average number of Physio's/Remedial Gymnasts in post during month of February 15½ Hospital A.
5. Average number of Physio's/Remedial Gymnasts in post during month of February 4 Hospital B.
6. The difference in times shown for treatments in Hospitals A and B are due to different conditions, e.g. Hospital A has a large department, and Hospital B a relatively very small department. Time Studies have been made of some treatments in Hospital A, but none of treatments in Hospital B.
7. The term "Directly Occupied time" is used above to indicate the time the physio-therapist is actually employed upon a particular patient or patients. "Indirectly Occupied time" is the period when the physio-therapist is not so employed. Examples are: the preparation of pads and apparatus; travelling from department to wards; moving apparatus from one cubicle to another, etc.

APPENDIX G.

Factors Which Influence Costs.

168. One of the most important factors influencing costs is the relationship between the number of beds normally available and the average number occupied. A comparison of percentages of occupation and an understanding of the reasons for and effect of variation in them is therefore essential if costs are to be judged correctly.

169. With the exception of provisions for patients, and drugs and dressings, practically all major items of expenditure depend on the number of beds available and not on the number occupied, but as the cost per occupied bed is arrived at by dividing total " maintenance expenditure " on in-patients by the number of beds occupied, the influence of percentage occupation on this cost is obvious. Again, the percentage of beds occupied in special wards is much lower than that in the hospital as a whole, and this comparatively low occupation rate of beds in these wards obviously has an adverse effect on that of the hospital as a whole. This factor is a significant reason why the cost of special wards should be separately ascertained.

170. Some of the causes of variation in percentage occupation are:

(1) closing of wards for alteration, cleaning or quarantine; degree of segregation of patients according to sex, age and disease; proportion of beds in special wards. These beds are not available for normal admissions and it is difficult to run these units without a reasonable margin of available beds;

(2) situation of the hospital as regards locality, accessibility, and proximity of other hospitals;

(3) length of stay and change over of beds. This is probably the most important cause, and it depends on many factors which are not equally applicable to all hospitals. Some of these are:—

(*a*) proportion of beds reserved for special types of cases such as chronic sick; T.B. cases; plastic surgery; etc., the number of beds normally occupied by maternity, surgical or medical cases; number of beds allocated for short stay cases, e.g., tonsils and adenoids for operation;

(*b*) facilities for transferring chronic sick easily and regularly from an acute hospital to an appropriate chronic hospital;

(*c*) facilities for transferring patients as soon as possible from acute to convalescent hospitals;

(*d*) facilities available in the district for home nursing of minor ailments. In poor areas the number of admissions of such cases is greater than in better class areas, and the average length of stay is shorter;

(*e*) whether an out-patient department is provided and the use made of it;

(*f*) efficiency of hospital admission and discharge arrangements: —

(*i*) number of discharge days and the strictness with which every patient who may be fit for discharge is examined and discharged;

(*ii*) practice of making the day of admission of surgical patients, other than emergency cases, fit in with operating days.

171. The figures relating to the average length of stay become of paramount importance when the object is to ascertain, not the daily or weekly cost of treatment per patient, but the average cost of treating patients to completion. It is clear, for example, that the cost of treating each individual patient to completion at a hospital where the average length of stay is considerably above the general average though the daily or weekly cost is comparatively low, may be substantially greater than at a hospital where the average length of stay is low, but the daily or weekly cost high.

172. Salaries and wages accounts for between 60 and 65 per cent of the " maintenance " expenditure of a hospital. This is an item which will justify a much more detailed inquiry than it has been possible for us to make in the time available. It is influenced by at least two factors: —

(*a*) the number of staff in proportion to the number of patients and the proportion of student nurses and juniors to senior nursing and other staff. The number of staff depends on: —

(*i*) the type of work to be performed, and the functional organisation of the hospital;

(*ii*) the management of wards and of the hospital generally as regards convenience and ease of working;

(*iii*) to some extent to the standard set up or tradition of the hospital;

(*b*) number and the rates of pay of the various grades of the staff.

173. We are concerned with the great proportion of low grade to high grade officers. This not only results in a loss of efficiency but it increases the cost. Much unnecessary work is being done more particularly in administrative activities. This is due to the lack of an adequate well thought out system of organisation, of method, of experience, of knowledge, of up-to-date methods and labour saving devices, and to a tendency to place administrative staff under the immediate direction of technical staff with little or no understanding of how best clerical work may be carried out.

174. The remuneration of the senior medical staff should be included in any comparative statement of cost even though in the case of management committees the payment of fees is made by regional boards. Should the system of calculating these fees be simplified we consider that there would be substantial advantages in making the committees responsible for payment.

175. We attach great importance to the improvement of managerial supervision. At present this leaves much to be desired. The efficiency of a hospital must depend largely on the quality of its management and its directing staff. In the past there has been too little effort to provide organised training to supply this need. If the hospital is to play its part adequately in the future, and as an important part of a comprehensive scheme of social service, those who direct its activities must be equipped with knowledge far removed from that of 'secretarial routine', practically the only requisite for such an appointment to-day. It was with this thought in mind that we established the Administrative Staff College for providing higher education in the managerial aspects of hospital service.

176. Engineering and works services amount to approximately 14 per cent of the maintenance expenditure. Included in this item are the cost of heating, lighting, maintenance of buildings, etc., which depend to a great extent on the lay-out, the situation and surroundings of the hospital, the age of the fabric, and the character and efficiency of the plant. The 'works' figure depends on the amount of alterations and improvements undertaken. It may be considerable, particularly where direct labour schemes apply. Again, the service may be staffed to meet peak conditions.

177. Provisions, drugs and dressings concern the patient more directly than any other items. While substantial, however, the amount is smaller than might be expected. On food, excluding cooking and service, it is about 12 per cent. Drugs and dressings amount to about 5 per cent of the total.

178. One feature of hospital expenditure which is completely obscured by the existing system of accounts, is the proportion which is devoted to residential services. The cost of these services may have a considerable influence on unit costs, being dependent both on the ratio of resident to non-resident staff, and also upon the number of residences and their situation in relation to the hospital.

APPENDIX H.

179. NAMES OF INVESTIGATING TEAM.

TEACHING HOSPITALS

King's College Hospital	Mr. G. L. Cramp, A.I.M.T.A.
St. George's Hospital	Mr. E. H. Keyte, A.S.A.A., A.I.M.T.A., A.C.I.S.

HOSPITAL MANAGEMENT COMMITTEE HOSPITALS

Colchester (N.E. Met. Region)	Mr. C. H. Barney, A.S.A.A.
St. Helier (S.W. Met. Region)	Mr. J. V. Young, F.C.W.A.
Tottenham (N.E. Met. Region)	Mr. G. L. Cramp, A.I.M.T.A.
Tunbridge Wells (S.E. Met. Region)	Mr. R. E. Hawley, F.C.W.A., A.C.I.S.
West Herts (N.W. Met. Region)	Mr. I. A. Davies, F.C.W.A., A.A.C.C.A., A.M.I.I.A.

DIRECTOR OF THE INVESTIGATION.

Capt. J. E. Stone, C.B.E., M.C., F.S.A.A.,
Director of Division of Hospital Facilities and
Consultant on Hospital Finance,
King Edward's Hospital Fund for London.

APPENDIX I

COSTING INVESTIGATION FOR THE MINISTRY OF HEALTH JOINT STATEMENT

by

King Edward's Hospital Fund for London, and
The Nuffield Provincial Hospitals Trust

1. We have exchanged and discussed copies of our reports with a view to interlocking them to form a joint report. By independent methods we have arrived at the same principal recommendations. Due to the difference in our approach to the investigation our respective reports discuss many matters that are not common to both. Consequently, we submit separate reports together with this joint statement which forms part of, and should be read in conjunction with the report.

2. We are in complete agreement on the following points and recommend: —

   (*a*) that the existing accounting system based on subjective analysis of expenditure as prescribed in Statutory Instrument, No. 1414, be discontinued;

   (*b*) that an accounting system based on the departments and services of the hospital be substituted, modified where necessary for small hospitals;

   (*c*) that the expenditure of departments be reduced, where appropriate, to costs per unit of work performed;

   (*d*) that the budget and budgeted unit costs for each hospital follow the accounting pattern referred to in (*b*) and (*c*) above;

   (*e*) that normal accounting principles be introduced including the preparation of an income and expenditure account and a balance sheet.

3. We regard the adoption and carrying into effect of these recommendations as an essential step towards the effective development of hospital accounting as an integral part of hospital administration, and a reliable method of budgeting for, and control of, hospital expenditure. The defects of the present system and the advantages of the departmental system are discussed in our respective reports.

4. The matters upon which we are not in complete agreement concern more particularly; (*a*) the stages by which the departmental system should be introduced; and (*b*) the nature and complexity of the units of cost to be introduced. Our respective views on these points are as follows: —

Stages by which the Departmental System of Hospital Accounts should be introduced.

(i) King Edward's Hospital Fund.

5. Although, as the results show, the complete system recommended in its report has been worked successfully in the seven hospital groups co-operating in the investigation, the King's Fund is of opinion that the most effective method of introduction of the system is by progressive self-contained stages, with gradually deepening objectives, which will ultimately result in the comprehensive scheme outlined in Stage III. Some finance officers of the larger hospitals co-operating in the investigation have suggested that the full scheme may be introduced almost immediately. The King's Fund welcomes this confidence in its scheme, but it cannot fail to have regard to the fact that these and other hospitals co-operating in the investigation have had the great advantage of the expert help and advice of investigators especially qualified in departmental accounting, costing and time studies, who have worked in daily contact with finance officers and their staff and who, in addition, have helped materially in securing the co-operation of heads of departments, professional and other officers in the carrying out of the system. This advantage will necessarily be denied to the great majority of hospitals on the introduction of a departmental system of accounts. The recommendation that the system be developed in stages does not lessen the effectiveness of its control over expenditure as each stage will develop the financial responsibility of heads of departments—an important factor in the system—and, through suitable and practical yardsticks, control the expenditure by comparisons of actual results with these yardsticks.

6. The King's Fund is further of the opinion that a distinct separation should be made between patients' accounts (wards, X-ray, operating theatres, etc.) and those of the general service departments which provide service of a lay or domestic character to the patients' accounts (laundry, boiler house, Kitchen, etc.) and provision is made for this separation. But after prime costs have been obtained for each account, provision is further made for the distribution of these general service expenses to the patients' accounts in order that the total cost of each of these may be ascertained as part of the normal routine accounting procedure. The King's Fund prefers this method as opposed to the numerous additional *ad hoc* investigations which are rendered necessary when such complete costs are not automatically available. Moreover, effective comparisons between hospitals are only possible if the compared services include their proper share of the general service expenses which they incur. Without this, the results obtained from any system will depend more upon the accidents of organisation than upon the degree of operating efficiency of the various departments.

(ii) The Nuffield Provincial Hospitals Trust.

7. The Trust, with the co-operation of the finance officers, and after a preliminary survey of each group, introduced departmental costing on a uniform basis as part of the accounting

system from 1st April, 1951, thus affording in some 40 hospitals of all kinds a full year's experience of the system used.

8. The Trust is of opinion that the system outlined in its report is sufficiently simple for it to be introduced into hospitals without the necessity for a preliminary stage.

9. The system envisaged by the Trust does not go further than Stage II of the system outlined by the Fund. The Trust holds that Stage III should not be obligatory, and that the production of detailed costs of wards and clinics should be optional, and that in most cases it would be sufficient to examine the expenditure of individual wards and clinics by quantity statistics and special studies.

10. The Trust evolved a system of departmental accounting which has been working for twelve months in seven hospital groups and it feels that in the national interest a start should be made on the basis of what has been found workable and has, to some extent, been proven. It is of opinion that as the result of watching the introduction and working of the system in the seven hospital groups, the hospital authorities and their finance officers possess the requisite knowledge and experience to allow of this being done.

11. The Trust regards the production of departmental cost on a prime cost basis as the first essential. If the pattern of the costing system follows the pattern of the administration of a hospital, a separation of expenditure on patient departments from general service departments is automatically made, and each responsible member of the staff is made aware of expenditure incurred by him for his department and of variations in that expenditure which can be controlled by him. Cost over which he has no control is excluded. The spread of expenditure on any one department over all other departments served by it is of lesser importance, and in fact only necessary for special purposes, and for the calculation of the total cost of an in-patient and out-patient at the end of each financial year.

Nature and Complexity of Units of Cost.

(*i*) *King Edward's Hospital Fund.*

12. The selection of units of cost is one of the most difficult tasks emanating from a system of departmental accounts. Unless these units of cost are suitable and practicable they will not be accepted and the time spent in their calculation is wasted. With a view to the selection of appropriate units, the King's Fund has carried out a number of time and motion studies and from the results of these it has experimented with various units of cost. In addition, it has also carried out an experiment in "specialty" costing with a view to ascertaining unit costs of treating patients suffering from certain types of diseases, etc. A list of units is given in the Fund's report, with the advantages and disadvantages of each of the more important ones. Following a consideration of all the factors involved, the King's Fund is not, at this stage, prepared to accept any of the more elaborate units of cost as being of greater value than the most simple ones, either for the con-

trol of expenditure, within a hospital, or for comparisons between hospitals. The King's Fund is of opinion that until considerably more experience is gained the most suitable units of cost to be used as yardsticks are the most simple ones suggested in its report. Standard costs have been given full consideration but these imply a blue print precision which is obviously impossible of attainment in the treatment of patients which, indeed, could only be obtained on the emergence of the standard patient. The King's Fund, therefore, recommends that the yardsticks, both for purposes of national finance and for controlling hospital expenditure, should be the budgeted units of cost for each department, against which the actual costs will be compared. Allocation of funds to hospitals may be made on the same basis.

(ii) The Nuffield Provincial Hospitals Trust.

13. The Trust, not without past practical experience of unit costing, from the outset on 1st April, 1951, used units of cost arrived at after three months' previous study and discussion with those concerned in the experiment. This means that units of cost had been defined and were applied at the beginning of the experimental year. During this year definitions were constantly under examination, discussed with various groups of experts in the hospital field (e.g., pathology and radiology), modified and applied in new form. As finally agreed, these definitions are contained in the Trust's report and are accepted by those taking part in the experiment as suitable and practicable.

14. The Trust, therefore, feels that the units of cost in use at the end of the experimental year as set out in its report are simple enough and would serve as a basis for the introduction of departmental costing. If, as the result of time and motion studies or other techniques, more appropriate units of cost are found, the Trust would agree that any necessary changes in the units it proposes should be made.

15. The Trust is of opinion that the yardsticks to be used will be devised through, ultimately, the introduction of standard costs, adjusted to meet local conditions. This would provide the best basis upon which to build up the national hospital budget, and on which to allocate equitably national funds and would at the same time provide a method for the effective control of those funds. It would agree with the Fund that much more experience of departmental costs and much further study of the factors which affect cost is necessary before any attempt to introduce standards could be made successfully. The Trust is continuing the experiment with the groups who are already co-operating with it with a view to attempting to determine standards for certain departments. In the interim it would agree with the Fund that budgeted units of cost should provide the initial yardsticks.

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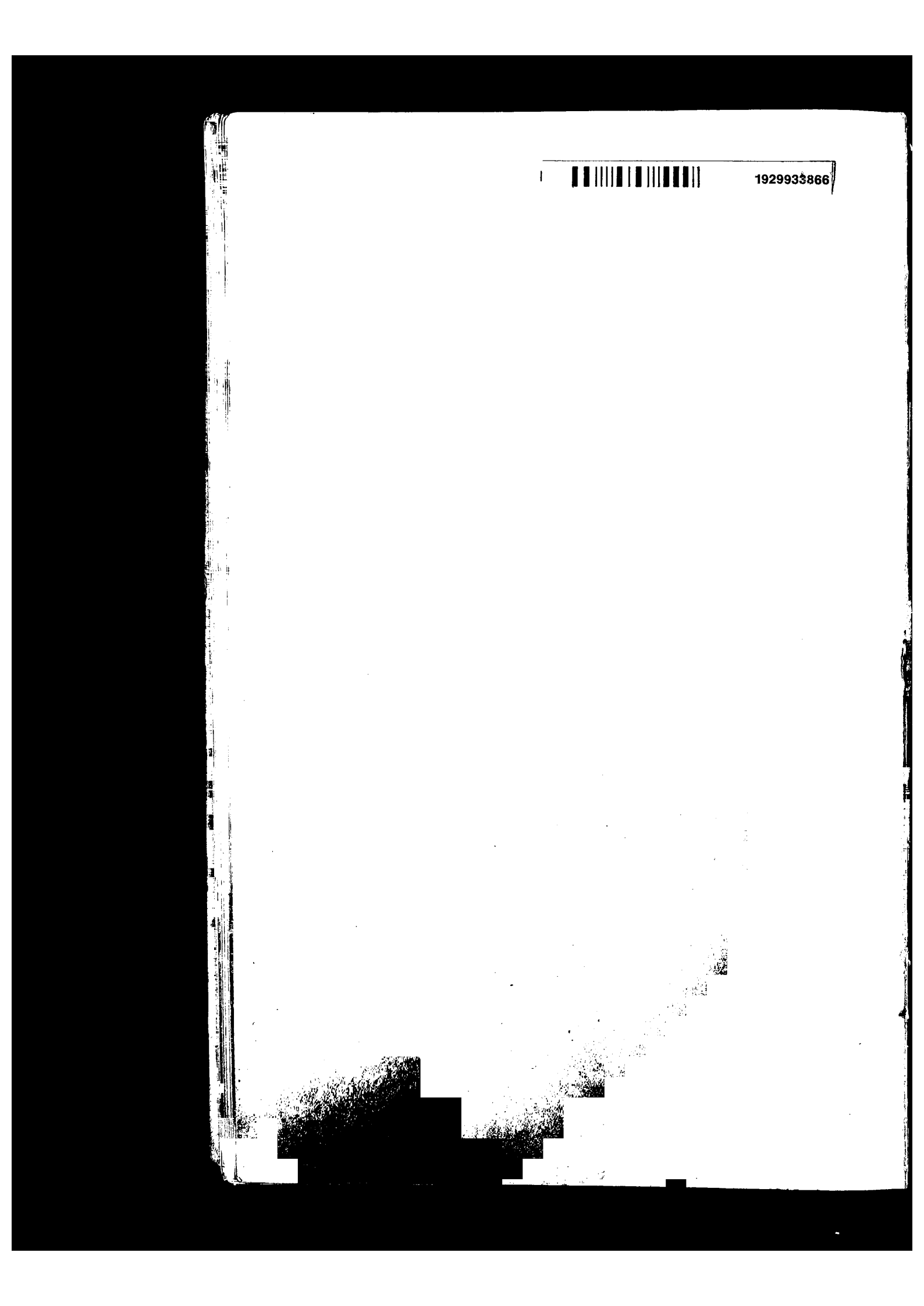
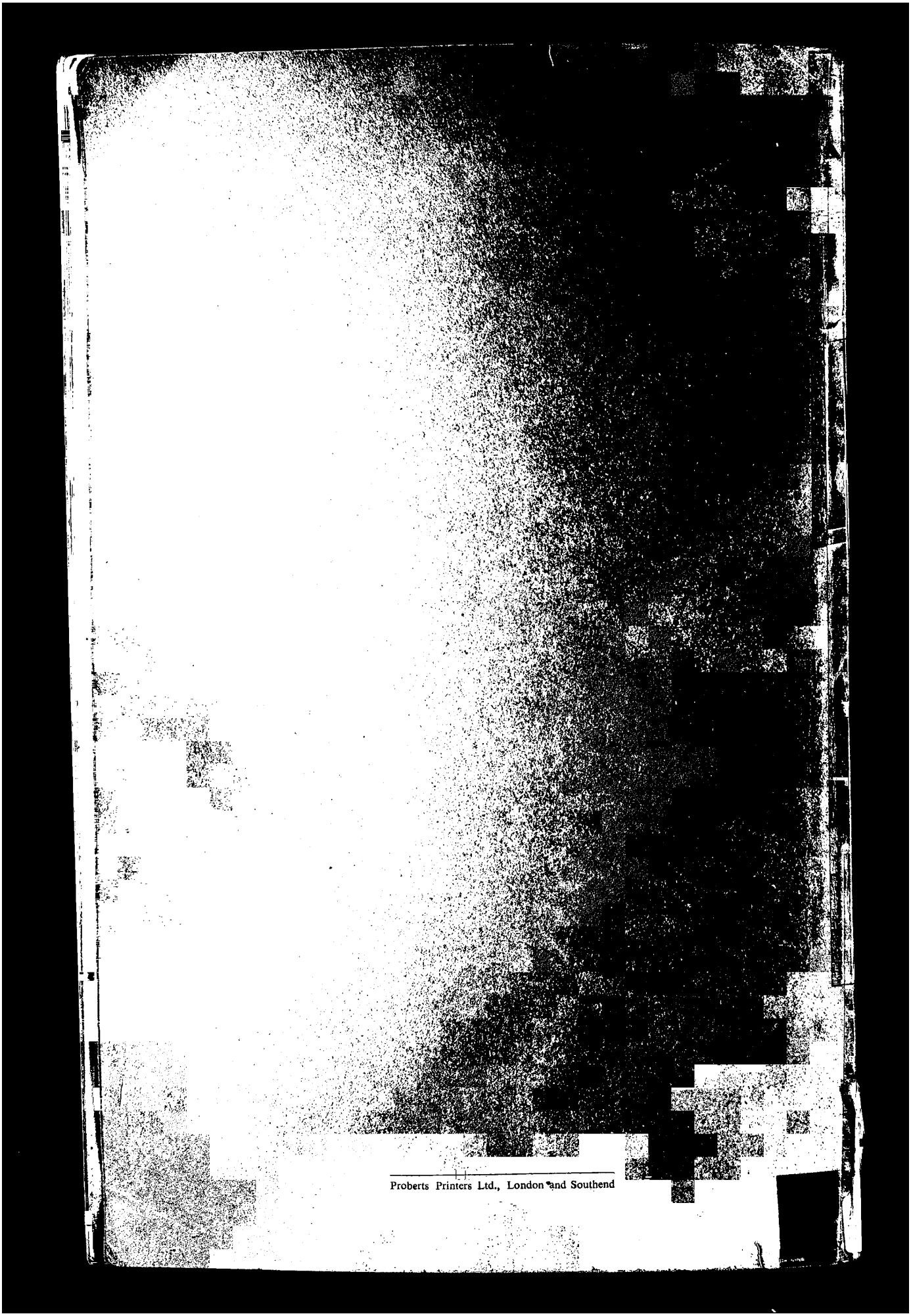
(Except where otherwise stated the numbers refer to paragraphs)





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