KING EDWARD'S HOSPITAL FUND FOR LONDON

Out-Patient Arrangements Committee

PRELIMINARY MEMORANDUM

ON

TIME SAVING METHODS

AT

HOSPITAL OUT-PATIENT DISPENSARIES

For Consideration by Hospitals

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[illegible] of Wales, President of King Edward's Hospital Fund, appointed a Committee of Inquiry, consisting of the Earl of Onslow (Chairman), Sir John Rose Bradford, Bt., Lt.-Gen. Sir George Macdonogh, Dame Helen Gwynne-Vaughan, Sir Ernest Morris, Sir Francis Fremantle, M.P., Sir Isidore Salmon, M.P., and Mr. R. H. P. Orde, to inquire into and report upon out-patient methods as affecting the suitability of the patients and the time of waiting. The Committee reported in December, 1932.*

Lord Onslow's Committee recommended that hospitals should be encouraged to develop the consultative side of their out-patient work and the reference, subject to certain safeguards, of non-urgent minor cases, after first attendance, to suitable agencies which provide general practitioner treatment; and that various time-saving methods of procedure or improvements in accommodation should be studied by hospitals with a view to action where appropriate. These included time-saving methods at the various stages of out-patient procedure, e.g., arrival, registration, examination and treatment, interviews with almoner or inquiry officer, and dispensary.

They also recommended that the King's Fund should consider to what extent it could help to carry out these recommendations by making more detailed information available or by other relevant methods.

In order to carry out this last recommendation His Royal Highness appointed a Committee to be called the Out-Patient Arrangements Committee.†

An Appendix to the Report contained a signed Summary, which has also been published separately.‡

10 Old Jewry, E.C.2.

February, 1935.

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* The Report is published for the King's Fund by Geo. Barber & Son, Limited, Furnival Street, Holborn, E.C.4, price 1s. 6d.; post free, 1s. 9d.

† *See* page 31 below.

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Preliminary Memorandum for consideration by Hospitals.

TIME-SAVING METHODS

AT

HOSPITAL OUT-PATIENT DISPENSARIES

This draft of the memorandum is being circulated to the hospitals for observations and suggestions, in accordance with the terms of reference of the Out-Patient Arrangements Committee, under which they are to act in consultation with the hospitals.

INTRODUCTION

1. **Objects of the Memorandum.**—This memorandum summarises the information collected by the Out-Patient Arrangements Committee on the various methods employed by hospitals in London at the Dispensary Stage of out-patient procedure, with particular reference to their effects on the prevention of unnecessary waiting. Its object is thereby to assist all hospitals to ascertain whether their own waiting time is capable of reduction, and, if so, how to reduce it.*

2. The Committee have begun with the Dispensary Stage partly because changes in procedure at this stage, if found to be desirable, would not usually involve changes at other stages, and partly because the original Out-Patient Committee of 1932 received evidence that with many patients the time of waiting at the dispensary, when they thought they had nearly finished, was one of the chief causes of dissatisfaction.

3. Some waiting is, of course, inevitable. It is liable to occur at a panel chemist's and, indeed, wherever many persons desire

* As this memorandum is being circulated in draft form to the hospitals for discussion, the fact that methods or suggestions are mentioned does not necessarily imply that they are recommended by the Committee. It may only indicate that the practice of hospitals has been found to differ.

the same service at the same time. But the very fact that at a hospital, with large numbers of patients of different kinds, the various stages of procedure are bound to take a long time, renders it all the more necessary to see that the waiting at the final stage is as short as possible.

4. **Method of the Inquiry.**—The information has been obtained partly from questionnaires asking the larger hospitals for details of their procedure, and the smaller ones for information on any special time-saving methods adopted or considered by them; and partly from visits to selected hospitals, whose replies indicated features of special interest.

5. The Committee were assisted in these visits by Miss Sheila Bevington, Ph.D., one of the investigators of the National Institute of Industrial Psychology. They are indebted to Dr. Bevington for reports containing a great deal of information, particularly about the arrangements and procedure inside the dispensaries, and for many of the suggestions mentioned in this memorandum.

6. **Extent and Nature of the Problem.**—The average time taken per patient at the dispensary stage—i.e., between joining the dispensary queue and receiving the medicine—has been reported as ranging from 35 minutes at one hospital and 24 minutes at another down to 10, 5 or $3\frac{1}{2}$ minutes at others.*

7. The available figures suggest—

(i) that at a considerable number of hospital dispensaries there is, under normal conditions, no serious waiting : either the number of patients is comparatively small, owing sometimes to the proximity of other hospitals, or the space and staff are so adequate to the number of patients that no problem arises, or else remedies for waiting have been so thoroughly applied that the problem has been solved ;

(ii) that it is well worth while to discover how far the differences between the short waits at some hospitals and the long waits at others are due to differences in the

* *See* Appendix V. In all counts or estimates of waiting it is essential to include both the time before the prescription is handed in and the time during which it is being made up. A very small reduction in the average for the latter will have a cumulative effect on the average for the former, especially for the patients who are not near the head of the queue.

adequacy of the premises or how far they may be partly caused by avoidable differences in procedure.*

8. Such an inquiry would include the following questions :—

(*a*) Whether there is any avoidable peak load pressure at rush hours sufficient to cause long waiting on the part of large numbers of patients.

(*b*) Whether any avoidable delay is caused by complicated prescriptions, not only to the particular patients but also to those behind them.

(*c*) Whether there is anything in the arrangements inside the dispensary, or in the design of the hatches, or in the waiting room accommodation or procedure, as compared with those at other hospitals, which may cause a slight delay to every patient, with a cumulative effect on those who come last.

9. The memorandum therefore summarises under these heads information which may assist hospitals to compare their own arrangements with those of others, and deals particularly with time-saving methods which have been either adopted or suggested.†

PEAK LOADS

10. **Causes of Peak Loads.**—Rush hours may be due to the simultaneous arrival of out-patients from several clinics or several consulting rooms, or to a rapid succession of short-treatment patients, such as minor cases or old cases with repeat prescriptions. Congestion from this cause has sometimes been considerably reduced by special steps either to equalise the flow or to cope with the rush.

11. **Methods of Reducing Peak Loads.**—Methods adopted for equalising the flow of patients have included the following :—

* At some of the hospitals visited the dispensaries are new or recently extended ; at some the best has to be made of premises which have become inadequate but cannot be easily enlarged ; and at some there are schemes for early reconstruction and extension. These last include the hospitals with the average waits of 35 minutes and 24 minutes.

† *See* note on p. 3.

(*a*) Re-arrangements in the general time-table so as to provide, e.g. :

(i) different clinics (e.g., special and general, or medical and surgical) at different times of day or on different days ;

(ii) more than one session (e.g., for general patients) in the same day ;

(iii) special times for sifting out and treating minor cases.*

(*b*) Re-arrangements in the procedure within the same clinic, to avoid early slackness at the dispensary followed by a rush later on, such as :

(i) the treatment of short cases simultaneously with long cases, e.g., of old or minor cases by assistants and new or major cases by consultants, or of teaching cases by one consultant and non-teaching cases by another ;†

(ii) the treatment, by the same consultant, of short cases alternately with long cases ;

(iii) the treatment of old cases first, while the histories of new cases are being taken, and sometimes an earlier time of arrival for old cases, or a different place of registration ;‡

(iv) different times of arrival for male and female patients.§

12. **Methods of Coping with Peak Loads.**— Methods adopted for coping with peak loads have included :

(i) the provision of additional hatches which can be opened during the rush hours ;

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* *See* Report, paragraphs 221 and 327. A few hospitals have separate dispensaries for casualties, or for one or more special departments. One hospital reports special days and times for the dispensing of repeat prescriptions.

† An example of the effect of this is given in the Report, paragraph 295.

‡ *See* Report, paragraphs 281–2.

§ Where these various methods are undesirable or insufficient, it has been suggested that there might be some way, in exceptionally long cases, of drawing the doctor's attention to the time-factor and to the number of patients still to be seen.

(ii) the temporary transfer to out-patient work of dispensers who at other times are dispensing for in-patients, or making up stock mixtures, or manufacturing drugs, or doing other work in the dispensary or its laboratories or storerooms. This involves its complement, viz., the timing of in-patient dispensing and other work so as not to overlap the out-patient rush hours ;*

(iii) the preparation beforehand of supplies of mixtures in anticipation of the probable demands from particular clinics or doctors ; and the placing of such mixtures in small quantities near the hatches, with larger quantities readily accessible elsewhere.†

13. **Considerations affecting these Methods.**—In judging the relative value of these different methods, the following considerations have to be taken into account :—

(i) The possibility of preventing rush hours is limited. Re-arrangements for this purpose might sometimes interfere with other and more important hospital objects, and might sometimes produce waiting at stages other than the dispensary. Nevertheless there is evidence that the amount of waiting at different dispensaries varies with the degree in which clinics are spaced out over the week ;‡ and that a considerable reduction in peak loads has sometimes been effected by some particular re-arrangement in the time-table or in the procedure.

(ii) The possibility of compensating for rush hours is also limited. There may be insufficient space, or the cost of additional staff may be disproportionate. Nevertheless a considerable amount is done in this way at all hospitals, and some have gone further than others in the adoption of particular devices.

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* From this point of view the in-patient department is equivalent to an additional clinic, and its prescriptions sometimes increase rush-hour congestion, e.g., when the general out-patient clinics are held at or soon after the time when the visiting staff make their rounds. A few hospitals have separate dispensaries for in-patients. Some hospitals employ additional part-time dispensers.

† *See* Appendix I.

‡ *See* Appendix VI.

(iii) It is specially important to deal, by one or other method, with peak loads which occur late in the morning during the dispensary lunch hours, or late in the afternoon when both the dispensers and the patients are tired.

PRESCRIPTIONS

14. **Effect of different kinds of Prescription.**—Delay to a whole queue of patients has often been prevented either by reducing the number of exceptionally complicated prescriptions, or by dealing with them separately.

15. From this point of view there are four types of prescription : stock, stock with additions, special, and multiple—i.e., where more than one mixture is ordered for one patient.

16. Different reports have been received of the time taken by special prescriptions. If a stock prescription takes 2 or 3 minutes, the extra time for a special one has been estimated at an additional 8 minutes, 12 minutes or 13 minutes, while occasionally a prescription may take 20 minutes or even an hour.*

17. **Methods of Reducing the Number of Complicated Prescriptions.**—In order to keep down the percentage of special and other complicated prescriptions, it is necessary to secure the willing co-operation of the medical staff, and various ways of doing this have been reported or suggested.†

18. The reported percentages of stock prescriptions, which range from 85 per cent. to 17 per cent., suggest that much has already been done in this direction, but that some hospitals have done more than others, though the differences may be due partly to different definitions of the terms used.‡

19. **Methods of Dealing with Complicated Prescriptions.**—To prevent a prescription which takes a long time from holding

* *See* also Appendix V. Examples taken from counts of 10 sessions at three hospitals showed that out of 1,021 prescriptions, 59 took more than twice the average time for the session, e.g., of 84 prescriptions averaging 4 minutes each, 4 took 7, 8, 10 and 33 minutes respectively. Samples elsewhere included prescriptions taking 4, 15, 20 and 26 minutes and intermediate times.

† *See* Appendix II.

‡ *See* Appendix VI.

up the rest of the queue, the patient may be directed to leave the hatch and wait on a special bench within sight and call while the prescription is made up by an extra dispenser either temporarily or permanently available for the purpose. Sometimes the medicine is handed out at a separate counter.*

20. Some hospitals report that in extreme cases the patient may be given the option of calling again, or that the medicine may be sent by post.

21. **Other Suggestions in connection with Prescriptions.**—It has been suggested (*a*) that, when repeats are ordered, the date of the original prescription should be given. The dispenser would not then have to search through the back pages of the patients' books, with certain loss of time and some risk of mistaking the identity of the items intended; (*b*) that some designs of patients' books can be more quickly handled than others; (*c*) that, if the normal dose is ½ ounce and not 1 ounce, it takes less time to dispense, and neither the dispenser nor the patient has to handle such large bottles.

22. The number of attendances at the dispensary, and consequently the time taken, will depend partly on the number of days' medicine prescribed, and in this the practice at different hospitals differs even with the same type of patient.

23. It has been suggested that hospitals might be able with advantage to make some use of the dispensary procedure of the National Insurance system. This has been considered by the Committee, but is not thought to be desirable.

INTERNAL ORGANISATION

24. **Effect of Arrangements inside the Dispensary.**—Various improvements have been reported or suggested in the arrangements inside different dispensaries, as affecting the time taken, either directly or because of their physical or psychological effects on the health, comfort, and efficiency of the dispensers.

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* *See* also Appendix III, paragraphs ii to v.

25. **Accommodation and Lay-out.**—Different hospitals have solved with different degrees of success the problem of combining all the requirements in the space available. The dispensary must be so planned, for example, as to make it easy for the dispensers to keep an adequate supply near the hatches of the things most likely to be used ; to replenish these from larger supplies during rush hours as well as at other times ; to weigh, measure and mix ingredients both near the hatches and near the stock supplies ; and to move about without getting in each other's way or having to wait for each other, even when the hatches are all open. This applies both to the lay-out of shelves, cupboards, tables, sinks, and other fittings, and to the relative positions of the dispensary proper, the laboratory or pharmacy, the storerooms and the dispensers' office.*

26. Although it is no longer usual for out-patient departments to be in basements, the ideal place for a laboratory is still often considered to be under the dispensary. Against the convenience of this must be set the greater difficulty of communication, the extra cost of ventilation, lighting and drainage, the risk of noises, heat or draughts reaching the dispensary, and the effect of underground work on health and efficiency.

27. **Ventilation and Lighting.** — At some dispensaries modern scientific tests have shown that lighting and ventilation which seem to be satisfactory may nevertheless produce after a time detrimental effects on the efficiency, comfort, or even health of the dispensers. In such cases improvements are often possible.*

28. **Staffing, Hours, and Conditions of Work.**—Although the amount of waiting at one hospital as compared with another will depend very largely on the numbers of dispensers available, it is difficult to provide a general test for this by correlating these numbers with the numbers of out-patients.† The latter vary widely from day to day and even from hour to hour, and the staff have numerous other duties, including dispensing for in-patients.

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* *See* Appendix I. † *See* Appendix VI.

29. The question of hours for dispensers should receive consideration from the hospital authorities at intervals, especially if the number of patients is increasing. Some special points are the effect of peak loads near lunch time or late in the day, the provision of tea without interruption of the out-patient work, and the effect of evening clinics on efficiency next day.

30. Other matters which have been mentioned as affecting the well-being of the dispensers or their speed of work include: (*a*) the provision of wood blocks or bituminous flooring in the dispensary, so as to relieve the muscular fatigue which results from continuous standing or walking on an entirely inelastic or concrete floor; (*b*) the avoidance of too great breadth of counter, so as not to produce fatigue through stretching, especially with women dispensers; (*c*) the adequacy or inadequacy of office or sitting-room accommodation; (*d*) the provision of separate hatches or service counters for nurses and others to prevent their entering the dispensary; (*e*) the mutual visibility and audibility of dispensers and patients*; and (*f*) duties relating to bottle money and other patients' payments.*

HATCHES

31. **Effects of different Types of Hatch.**—Three types have been observed:—

(*a*) The single hatch, where one patient is normally served by one dispenser;

(*b*) The single hatch with a partition, where one patient hands in his prescription, bottles, etc., at one half of the hatch, and receives them back from the same dispenser at the other half, while in the meantime a second patient is getting ready to hand his in at the first half;

(*c*) The double hatch, where two patients are normally served by two dispensers, the hatch being at least equal in breadth to two single ones. The two patients forming the head of

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* *See* Appendix I.

the queue stand side by side, but they are served separately and simultaneously.

Time-saving advantages are claimed for each type.*

32. **Hatches allocated to Special Purposes.**—At some hospitals hatches are reserved for special purposes, e.g., for casualties, for certain special complaints, for some special clinic on the particular day, for urgent cases, for extra long prescriptions, for nurses or staff with urgent in-patient prescriptions.† Sometimes all the hatches are specially labelled, e.g., under the headings Men and Women, or under the names of the different doctors working on the day; all the patients being divided thereby into separate queues, though one dispenser may help another if the pressure proves unequal.

33. The object of these allocations may be to facilitate the dispensing by segregating particular kinds of prescriptions at particular hatches, or it may be to divide the patients automatically into approximately equal queues.‡

QUEUES

34. **Effect of Waiting Arrangements.** — Although the waiting arrangements may not often do much to cause or prevent delay, they may increase or diminish the appearance of congestion or confusion, and the discomfort or dissatisfaction of the patients.

35. **Position and Access.** — Patients sometimes wait in a part of the main out-patient hall facing the dispensary hatches; sometimes in a passage or corridor into which the hatches open; sometimes in a special waiting room attached to the dispensary.

36. The way from the consulting rooms to the dispensary waiting place, both for those who go to the almoner first and for

* For details *see* Appendix III.

† Instead of a separate hatch for the last mentioned, there may be a special service counter just inside the door.

‡ *See* paragraph 40.

those who do not, should be conspicuously sign-posted, even when there is also a porter or other guide to give directions.*

37. **Seating.**—Wherever space permits, it is now usual to provide enough seats for all the patients who are not standing at or near a hatch, so that a larger number does not mean longer standing.

38. The seats may be so arranged as to ensure that the patients for each hatch automatically keep their turns ; though this is often achieved by the mutual goodwill of the patients and a little verbal direction.*

39. **Sub-divisions.**—Where there is more than one hatch, there are different ways of keeping the queues separate, both when seated and when standing at the hatches. There may be sufficient space between them, or there may be railings, or the seats themselves may serve as barriers.*

40. **Equalisation of Waiting in different Queues.**—In order to equalise the waiting in each queue, various methods are adopted, e.g. :

(*a*) in order to avoid unequal length of queues, patients may be left to choose the shortest, with or without assistance from notices or verbal direction ;† or different hatches may be allocated to different classes of patients, though only if the numbers can be proportioned to the demand ;‡

(*b*) in order to correct unequal lengths, patients may be transferred from a longer queue to a shorter, or to a newly-opened additional hatch, by a dispenser if he can see the relative lengths, or by a porter ;

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* *See* Appendix IV.

† For example, in a narrow space approached from one side, the more distant hatches may have to be conspicuously labelled as open.

‡ For example, separate hatches for men and women no longer produce equal queues unless there are more hatches for women than for men. At one hospital it has been estimated that discontinuance of the distinction might sometimes reduce the average waiting from 15 minutes to 10 minutes.

(*c*) in order to compensate for unequal lengths, additional dispensers may be temporarily transferred to the hatch with a long queue, either from another hatch or from some other occupation, if there is enough space at the hatch.*

41. **Exits.**—Where there are two or more hatches side by side, the route to the exits needs consideration. They should be conspicuously labelled "Way Out," so that patients may not hesitate before leaving the hatches.†

CONCLUSIONS

42. **Some General Conclusions.**—The results of the inquiry, so far, suggest the following conclusions :

(*a*) that at many hospitals the time spent at the dispensary stage by most patients is quite short, but that there are differences in the amount of waiting at different hospitals ; and that at some the amount is much above the average, and quite enough to account for the dissatisfaction which has sometimes been expressed ;

(*b*) that, where there is long waiting at the dispensary stage, it is usually either :

(i) because the dispensary premises are too small for dealing with the out-patient work as a whole, or at least for coping with such normal peak loads as are inevitable at a large hospital ; or

(ii) because there are exceptionally heavy peak loads at particular rush hours, especially late in the morning or afternoon.

(*c*) that heavy peak loads are sometimes due to the arrangements either for the times when the different clinics are held, or for the treatment of patients inside the clinics ; and that changes in these have often been possible without detriment to other hospital objects ;

(*d*) that decreases in waiting, sometimes small in amount but

* *See* Appendix III, paragraphs ii to v. † *See* Appendix IV.

cumulative in their effect, have often been produced by changes in the details of the dispensary arrangements, e.g. in methods of prescribing or of dealing with complicated prescriptions, in internal organisation, in hatch design, or in waiting arrangements ;

(*e*) that, at some of the hospitals where the time taken has been reduced, this is because considerable attention has been, or is being, given to the problem of waiting, either by a hospital committee or sub-committee, or by the chief dispenser, or by some officer who is in a position to keep under observation the working of all the out-patient arrangements, such as the hospital secretary or an out-patient sister, supervisor or organiser ;

(*f*) that, at hospitals where there is any problem of dispensary waiting, all these factors should receive consideration, so that, even if there are major causes which cannot be removed, delay due either to these or to minor causes may be reduced to a minimum.

43. On the details of the various alternative methods mentioned in this draft memorandum, the Committee have deferred expressing any opinions until the hospitals have had the opportunity of commenting on them or of making additional suggestions.

For the Out-Patient Arrangements Committee,

JOHN ROSE BRADFORD,
Chairman.

February, 1935.

APPENDICES

APPENDIX I

Dispensary Organisation: Details Reported or Suggested

i. **Examples of Preparation for Rush Hours.**—The following are examples of time-saving methods which have been mentioned, and some of which appear to be used by some hospitals less than by others, possibly for reasons not connected with time-saving: Dispensers anticipating the requirements on particular days, making large quantities and keeping stocks near at hand; common preparations kept packed, corked and labelled, ready for issue; tablets substituted for loose powders where possible; standard prescriptions for ointments made up in advance in parchment mono-cartons; stock mixtures kept in concentrated form unless too potent; chemicals kept in solution to reduce weighing; tablets covering almost all demand for pills; stock mixtures for the day made ready beforehand and dispensary bottles filled the previous evening.

ii. **Some Details of General Lay-out.**—Reduction of cross-movements—e.g., each hatch, or pair of hatches, made a separate dispensing unit by suitable arrangement of shelves, drawers and cupboards, and possibly separate sets of 16-gallon jars; shelves for some purposes either parallel or at right angles to hatch front instead of along walls of dispensary; double bung-holed jars on such shelves accessible from both sides; separate sinks for each dispenser instead of one for the whole dispensary.

iii. **Minor Details of Equipment.**—Shelves one inch from the walls, and walls tiled, to facilitate cleaning; table tops of glass or metal for hygienic reasons, or of wood to reduce noise and breakages; cupboards with sliding doors and adjustable shelves; towels on clips at each hatch; refrigerators in preference to ice-chests; mechanical mixers with low h.p. motors; labels ready gummed, not separately pasted; printed adhesive labels in rolled strips; perforated tins with sponge inside for moistening labels; framed pharmacopœia hung centrally; plan of pharmacy on central desk with symbol letters for different shelves and drugs, for use by house physicians at night; an index for the location of little-used drugs; in-patient stock mixtures kept in wards; chutes for pill boxes.

iv. **Details of Ventilation and Lighting.**—Various suggestions have been made for improving the ventilation or lighting of individual dispensaries, where expert methods of testing have shown that detrimental effects may after a time be produced. These suggestions have included:—

(*a*) fans in certain places—e.g., in the exhaust pipes over the laboratory boiling pans, where it would also expedite the drying of powder mixtures;

(*b*) the swivel type of window in a skylight in preference to the hopper type, since the former exposes a much larger area to the open air, whereas the latter is advantageous only at head level when the cold air needs to be diverted upwards;*

* In factory work the Home Office recommends at least 5 sq. ft. of opening per 100 sq. ft. of floor area.

(*c*) avoidance of draughts through hatches from waiting room into dispensary ;

(*d*) increased ventilation of lint rooms, e.g., by fans, to remove a cause of slow work with loss of dispensers' time later on, while yet keeping the rooms free from moist air and from dust ;*

(*e*) dispersive reflectors, or, with low ceilings, diffusing enclosed fittings, with electric light, instead of conical shades, as being better suited to modern lamps, since they produce less glare, especially with clear bulbs, and give much greater light, thus lessening eye-strain, while requiring fewer points and often reducing current consumption to an extent which would recoup the capital cost in a few years ;†

(*f*) local spot lighting by the same method at hatches or other special points ;‡

(*g*) more frequent cleaning of skylights—e.g., in a Central London area every six weeks instead of every six months ; a white summer wash instead of a green.

v. **Visibility and Audibility.**—On the effect of the mutual visibility of dispensers and patients, conflicting arguments have been used. It has been said to increase the dispensers' speed, to give their work more human interest, to enable them to see how many patients are waiting, and to let the patients see that no time is being wasted. On the other hand, it may increase the entry of distracting noises to the dispensary, such as the laughter and crying of children at irregular intervals. It may also subject the dispensers to a degree of observation which, with some of them, may render concentration more difficult.§

vi. **Bottle Money and other Patients' Payments.**—At some hospitals bottles are sold at a separate stall beforehand to save the dispensers storage space and loss of time handling money, giving change, and making up accounts.

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* One large hospital which has gone very thoroughly into this question finds it more economical to buy cotton-wool, bandages and lint wrapped and cut to size than to cut its own requirements.

† A recent experiment by the National Institute of Industrial Psychology showed that, at an equal distance from the source, the measure of illumination of 100-watt lamps with conical shades was 3·4 foot candles, and with dispersive reflectors 6·25 foot candles.

‡ Examples of inadequate illumination at one dispensary were found by means of the lumeter at the following points : (*a*) at the senior dispenser's desk (5 foot-candles) ; (*b*) besides the scales (2) ; (*c*) at the washing tank (2) ; in the further angle of the in-patient dispensing section (2·5). The installation of dispersive reflectors was therefore recommended at points (*a*), (*b*) and (*c*)—at (*a*) to obviate eye-strain ; at (*b*) and (*c*) to speed up work ; and at (*c*) also to reduce breakages.

§ At one hospital a very noticeable degree of quiet and privacy inside the dispensary is obtained by closing down all the hatches when six prescriptions have been handed in at each, and re-opening them simultaneously when all these prescriptions are ready. Against any speeding-up produced by this there must be set off the risk that, if the method was rigidly applied all the patients except the first in each batch would have to wait longer than they otherwise would, unless several dispensers can work on each set of prescriptions. Another hospital takes in four at a time.

Others hold that, unless the dispenser issues the bottles at the hatch, time is lost through mistakes in the size or type.

vii. Where patients make a small separate payment for medicines, dispensers' time is saved if this is done at a separate office beforehand.

viii. It is sometimes the duty of the dispensers to see that every patient has either a receipt for his contribution towards the general cost of his treatment, or an exemption voucher, or the almoner's stamp on his papers. The patient who has neither may be sent away with all his papers and have to start again at the tail of the queue ; or the dispenser may keep his prescription and have his medicine ready on his return. In such cases time could be saved if patients were warned by some other officer or by printed notices to go to the almoner before first joining the queue, or if the pay office is on the way to the dispensary.

APPENDIX II

Complicated Prescriptions : Some Detailed Suggestions for Reducing the Numbers

i. Various methods of securing a reduction in the number of complicated prescriptions by the co-operation of the medical staff have been reported or suggested.

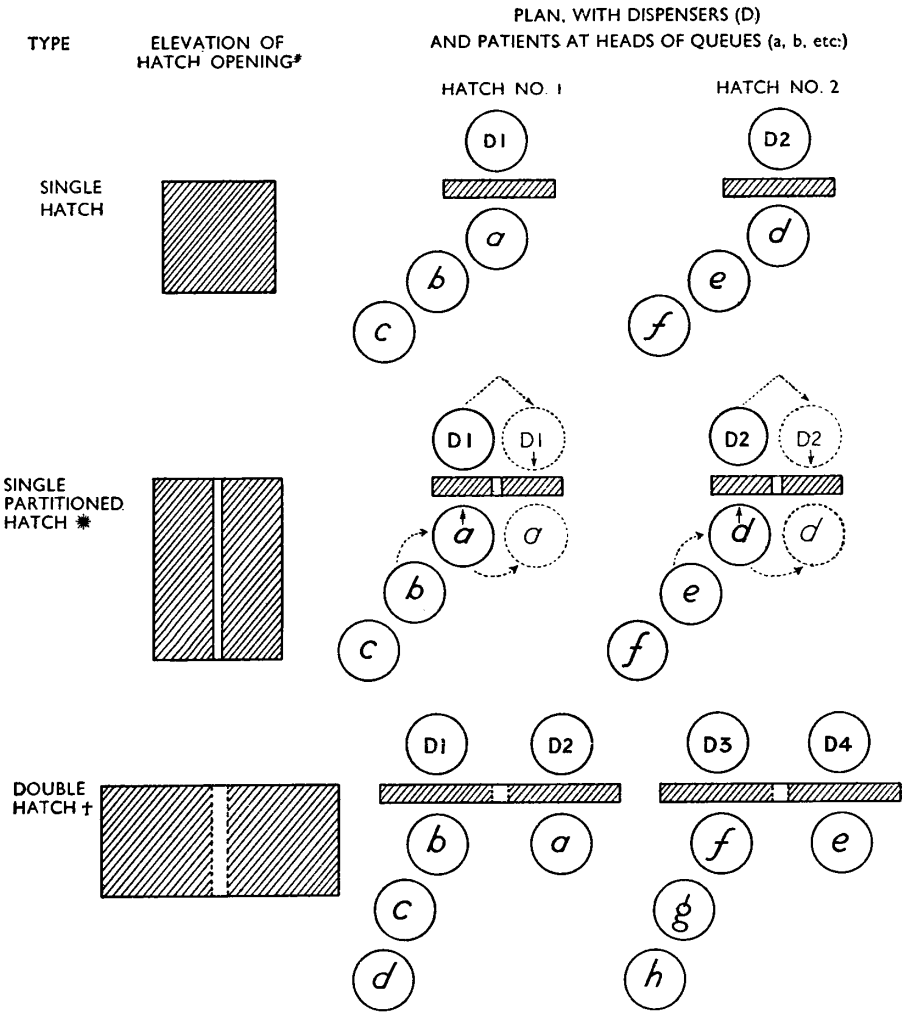
ii. The attention of the residents is often called to the subject, especially if the percentage goes up. They are urged to use stock medicines, so far as this can be done without detriment to the patients, and to keep to the hospital pharmacopœia. It is important that this should be frequently revised in accordance with the progress of medical science ; and at each revision special prescriptions which have come into regular use can be included as stock.

iii. Such warnings are particularly necessary with newly-appointed house surgeons and house physicians, who naturally enough are almost exclusively interested in the immediate problems of treating the individual patient and of increasing their own knowledge, and have but little chance of realising the indirect effects of their actions on the general efficiency of the hospital. A chief pharmacist who lectures to medical students has opportunities of recommending them to practise the use of stock medicines in their own future interests as general practitioners. It has been suggested that every newly-appointed resident should spend half an hour with the chief dispenser in the dispensary and its waiting room during a time of out-patient pressure, and see for himself the effect of the two methods of prescribing. Incidentally, he could at the same time learn to find his way about the dispensary at night.

APPENDIX III

Types of Hatch : Details

i. **The Three main Types.**—The following are diagrams of three types of hatch :—



* In this plan of the single partitioned hatch, No. 1 hatch shows the position when patient *a* hands in his prescription and bottle to the dispenser D 1 at the first half-hatch ; it also shows, by the dotted lines, the position when patient *a* moves to the second half-hatch to receive his medicine from the same dispenser, while patient *b* moves up to the first half-hatch to get his prescription, etc., ready. Hatch No. 2 shows the same successive positions of patients *d* and *e* and dispenser D 2.

† The double hatch may or may not be divided centrally.

ii. **Merits of the different Types.**—For each type special advantages are claimed.

iii. For the single hatch it is claimed that the dispenser can have undisturbed access to the shelves and appliances both right and left of the hatch, and that the mutual visibility of dispensers and patients can be reduced to a minimum. On the other hand, the hatch opening may not be wide enough for two dispensers easily to help one another in times of pressure. Moreover, if the dispenser at one hatch is called off for any reason, his hatch must be closed down : either access to his queue must be first stopped until it has dwindled to nothing, or the patients must wait or join another queue, and his hatch when re-opened must attract a fresh queue. Single hatches are reported at 10 out of the 14 larger hospitals which made detailed returns.

iv. For the single partitioned hatch the additional advantage is claimed that the next patient has everything ready by the time the first one is served, and that this procedure obviates fumbling and saves some seconds on each patient ; and also that there is ample room for a second dispenser to work at the hatch in times of exceptional pressure, or to deal with a complicated prescription. This kind of hatch has been observed at one of the larger hospitals.*

v. For the double hatch it is claimed that if one dispenser is dealing with a complicated prescription, or is called off because pressure relaxes or for any other reason, the service of the queue is halved in speed but is not brought to a stop.† When the second dispenser returns or if the pressure increases, the whole of the hatch is brought into use again and the speed is doubled. Elasticity is thus obtained without any crowding on the dispensers' side of the hatch, and without any transfer of patients from one queue to another.‡ On the other hand, the dispensers cannot so easily reach the shelves to right and left, and mutual visibility of patients and dispensers is at a maximum, especially if there is no central division. Double hatches are reported at 4 out of the 14 hospitals, including both the largest dispensary and the one most recently reconstructed.

vi. **Some General Considerations.**—The following dimensions have been reported as satisfactory, viz. : height from floor to base 3 ft. 6 in., or 3 ft. : size of hatch opening 18 in. by 18 in., with wing flaps set at an angle of about 120 degrees to prevent peering. Some hospitals prefer that the top of the opening should be high enough to enable even tall dispensers and patients to see and hear one another distinctly without stooping.§ The hatches should be near

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* At another hospital there are three separate single hatches, of which one is used for receiving prescriptions and two for handing out medicines.

† Where there is a central division, one-half of the hatch can be closed down.

‡ Care has to be taken that two queues do not form at one double hatch, or most of these benefits will be lost.

§ *Cf.* the elevations on page 21 ; *cf.* also Appendix I, paragraph v.

enough to the dispenser for him to raise and lower them without undue stretching, and to reach patients' bottles easily. They should not be so close to each other, or to parallel shelves, that the dispensers brush shoulders in passing, and they should be conveniently placed in relation to sinks.

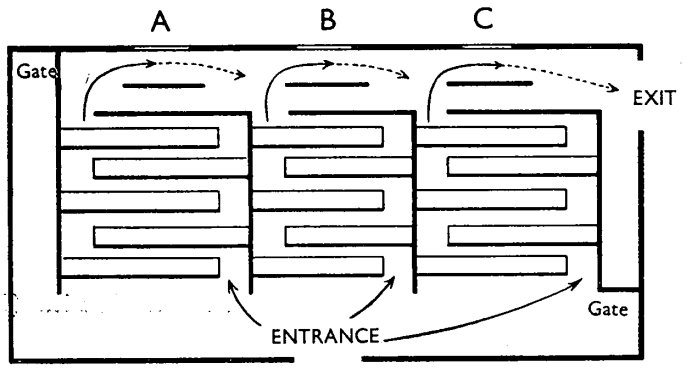
APPENDIX IV

Methods of Seating : Movements of Patients : Sign-posting

i. **Seating and Sub-division.**—The diagrams given below illustrate typical bench arrangements at large hospitals, and ways in which patients are kept in their turn, with or without direction from a porter.*

ii. The benches may be screwed to the floor : they may be easily movable e.g., for cleaning or in order to bring more or fewer into use according to the number of patients : or they may be heavy and fitted with rubber feet, so as to be movable only with difficulty.

iii. DIAGRAM I below illustrates a method whereby the benches and railings are so arranged that patients cannot get out of turn.



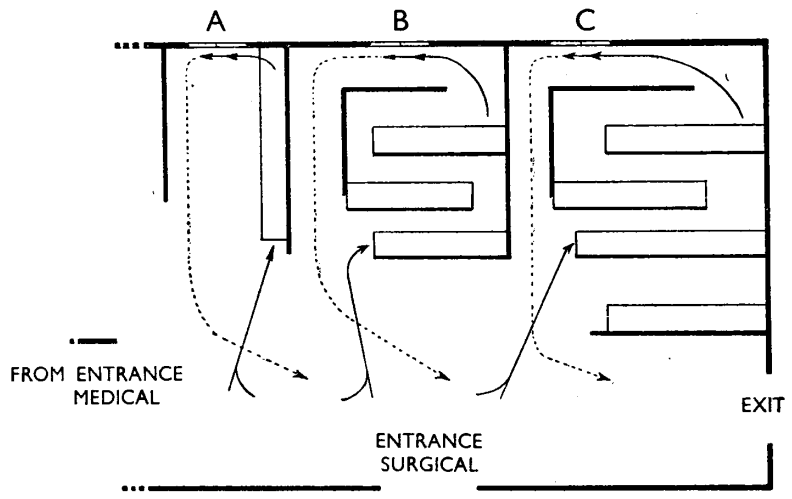
* The diagrams are drawn to scale from the whole or parts of actual dispensary waiting rooms at large London hospitals.

iv. DIAGRAM II below illustrates :

(*a*) a variant of the arrangement in Diagram I, with an exit gangway in each sub-division, so that outgoing patients pass behind the next queue instead of through its head (Hatches B and C) ;

(*b*) a bench at right angles to the hatch front, where also patients must keep their turn (Hatch A) ;

(*c*) double hatches with double frames (*cf.* note † on p. 22).



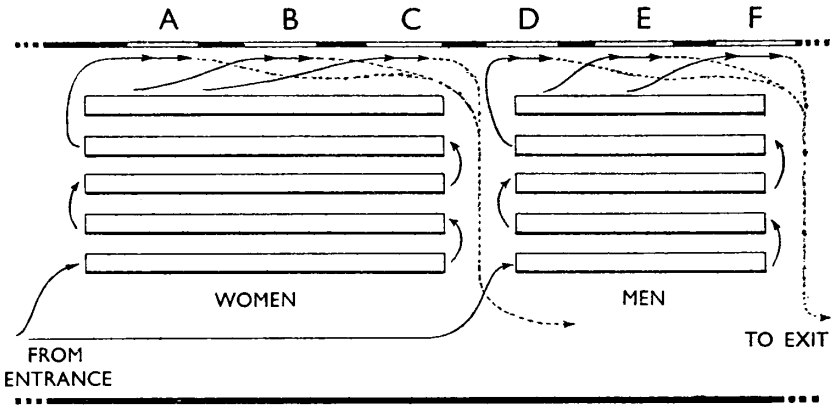
v. DIAGRAM III below illustrates :

(*a*) a similar type to Diagram II, except that, as there are no barriers, the movement of patients along the benches is directed, if necessary, by a porter ;

(*b*) different queues and hatches for different classes of patient (Hatches A to C for women, and D to F for men) ;

(*c*) more than one hatch to one block of benches ;

(*e*) double hatches with single frames.

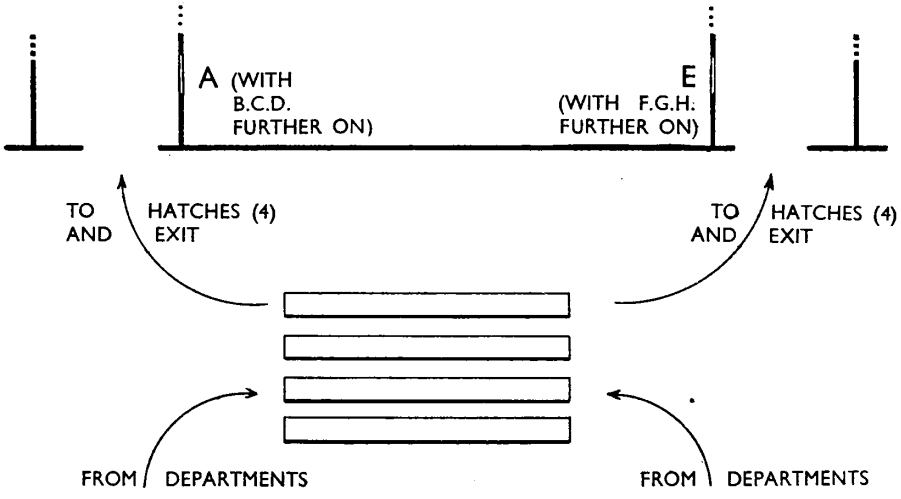


vi. DIAGRAM IV below illustrates :

(*a*) a type where, under the direction of a porter, the whole of each bench is vacated in turn, and is refilled by fresh patients from the entrance, so that no patients move until they go up to the standing queue by the hatch ;*

(*b*) hatches on both sides of the dispensary, with hatch fronts at right angles to the benches (only the nearest Hatches A and E are shown) ;

(*c*) direct access to the hatches past the benches.†



* In Diagrams I, II and III, the objection that, whenever a patient goes to the hatch, every other patient must move up one place, would disappear if the front seat held as many patients as the standing head of the queue and all its patients left it simultaneously when the last standing patient reached the hatch.

† At this hospital, most patients go direct to the hatches, and it is rare for as many as four benches to be occupied.

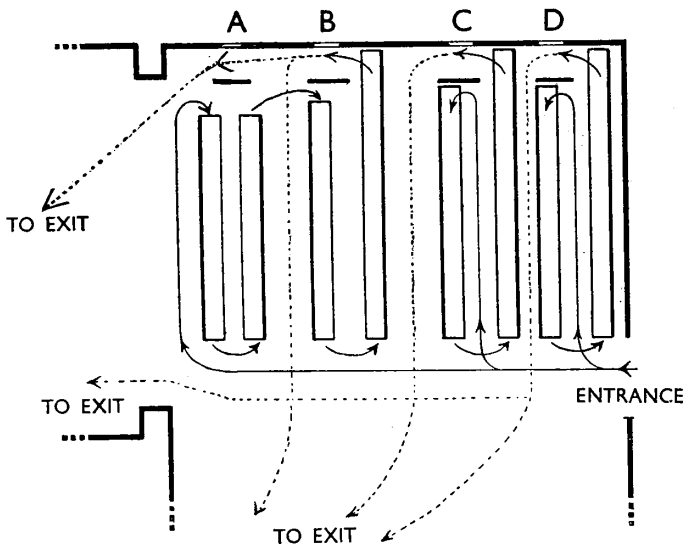
vii. DIAGRAM V below illustrates a type where :

(*a*) the benches are at right angles to the hatch front ;

(*b*) the patients are kept in their turns by the same method as in Diagram III ;

(*c*) one bench in each section forms the barrier between that section and the next ;

(*d*) additional benches, and an additional hatch, are made available when large numbers are present : Hatch A being a spare hatch, and the extra benches opposite Hatches A and B being removable.



viii. **Movements of Patients.**—In planning a dispensary the movements of patients from consulting rooms to exit should be considered, especially if they will have to visit the almoner or other special department on the way. Cross movements cannot always be avoided, but the risk of confusion should be reduced to a minimum. In these diagrams, for instance, congestion is less likely to occur when the route to the exit crosses the back of the queues than when it crosses their front.

ix. **Sign-posting.**—Printed directions help to avoid the wearisome repetition of the same questions and the same answers. The whole series, from consulting room to exit, should be inspected occasionally to see if and where patients hesitate or make false moves. This may happen if all the signs are not set at the best level or the best angle, or are not the best colour for the amount of illumination, or do not indicate all the required directions (e.g., almoner as well as dispensary), or are not repeated at all the doubtful corners or branches. Any notices no longer applicable should be removed;* otherwise patients may be encouraged to disregard all notices. Some hospitals have successfully adopted illuminated signs in different coloured lights, like those on the Underground. Some still prefer oral directions.

APPENDIX V

Time of Waiting

i. Information about time of waiting (i.e., from joining the queue to leaving with medicine) is derived partly from "counts of hours" and partly from estimates.

ii. **Counts of Hours.**—Counts of dispensary times have been made by eight hospitals. Of these counts, one was made during the original out-patient inquiry, two between this and the dispensary inquiry, and five during the latter and in co-operation with the Committee.

iii. In the recent counts the time of waiting before the prescription is handed in is distinguished from the time while the prescription is being made up, i.e., the time is recorded at three stages, viz.: on arrival, on handing in the prescription, and on departure.†

iv. **Method of Making Counts.**—The following method has been agreed upon as the result of experience:—

(i) standard cards are used;

(ii) synchronised hand stamping-clocks are used;

(iii) the count is made as follows:—

(*a*) each patient on arrival at the dispensary queue is given a card stamped with the time of arrival;

(*b*) the dispenser stamps the card when he begins to dispense;

(*c*) the dispenser stamps the card again on the departure of the patient with medicine, and retains the card;

(*d*) the time-stamp at each hatch is distinguished by a different number on the clock-stamp used at that hatch;

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* *Cf.* note ‡ on page 13.

† For the importance of this, *see* note on page 4.

(*e*) the cards from each hatch are kept in order as stamped, and are tied up in separate bundles for tabulation ;*

(iv) counts are preferably made on at least two whole days, one normal and one heavy ;

(v) the following additional information is useful :—

(*a*) simple sketch of dispensary showing where clock-stamps were placed and how queues were arranged ;

(*b*) note of numbers of dispensers employed on out-patients, and over which periods, during the count ;

(*c*) list of departments sending patients to the dispensary on the days chosen, with times when each department opened and closed.

v. **Tabulation of Results.**—The following is the easiest method of giving most information :—

(*a*) the cards are arranged in order of arrival ;

(*b*) the intervals between each timing are noted on each card ;

(*c*) the times of arrival and the intervals are tabulated for each hatch separately to show the waiting before and after handing in prescriptions, thus :—

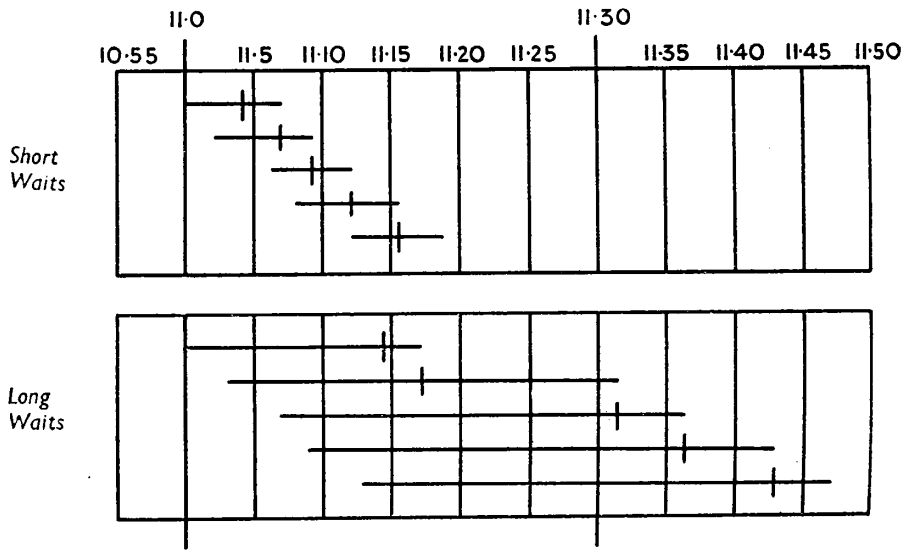
1	2	3	4	5	6	7	8	9	10
Time of Arrival.	Hatch A.			Hatch B.			Hatch C.		
	Minutes wait.			Minutes wait.			Minutes wait.		
	Before.	After.	Total.	Before.	After.	Total.	Before.	After.	Total.
10.54							6	1	7
55	1	1	2						
55							6	1	7
56	1	2	3						
56				8	1	9			
59							3	4	7
11.01	1	3	4						

* The King's Fund has provided the cards, lent the clocks and tabulated the results. The experience gained in these counts would be of use in making counts at stages of out-patient procedure other than the dispensary, or for all stages taken together, as described in the Report, paragraph 383.

vi. The average times are arrived at by counts and totals from the figures in columns 4, 7, 10, and so on.

vii. Such a table will also give a picture of several features, e.g., the effects of long prescriptions on the subsequent patients, the times and effects of a peak load or of the opening or closing of additional hatches, etc.

viii. For this purpose the figures in the tables can be easily charted either all together or for each hatch separately, in which case the effects are clearly shown. The following are two diagrammatic examples, each for one hatch only, the cross line indicating the time when the prescription is handed in :—



APPENDIX VI

Comparative Statistics for comparing Time Taken with various Factors affecting the Time

i. Some of the factors mentioned as affecting the time taken could be compared statistically at different hospitals, if the information available was sufficient, e.g. :—

A. Distribution of clinics over different days and different times of day ;

B. Number of hatches as compared with number of out-patients ;

C. Ratio of dispensers to patients, in- and out- ;

D. Relative numbers of stock prescriptions, special prescriptions and multiple prescriptions : effect of numbers and time taken as shown by counts of hours ;

E. Estimates or counts of time taken.

ii. Sample tables based on the available particulars of these, with a note on the additional information which would be desirable, have been prepared in typescript. The King's Fund would be pleased to discuss these with hospitals, with a view to the preparation of a Statistical Appendix. Copies of the typescript will be supplied for this purpose on application.

Out-Patient Arrangements Committee

His Royal Highness the President, in order to carry out the final recommendation of the Report of the Out-Patient Committee of 1932,* appointed a Committee with the above title, to consider, in consultation with the hospitals, what steps it would be practicable and advisable for the King's Fund to take; and to take such steps as the General Council or the Management Committee should approve. The Committee consists of Sir John Rose Bradford, Bt. (Chairman), Dame Rachel Crowdy, Sir Ernest Morris, Sir Isidore Salmon, M.P., Dr. Morley Fletcher, Mr. Eric Pearce Gould, Lt.-Col. A. P. Irwin, Mr. R. H. P. Orde, and Lt.-Col. W. Parkes.

In addition to the present preliminary memorandum on Time Saving Methods at Hospital Out-patient Dispensaries, the Out-patient Arrangements Committee have also published memoranda† on the following subjects mentioned in the Report:—

Standard Forms for Doctors' Letters and Hospital Replies

Hospital Out-patient Time-Tables.

District Nurses and their work in Relief of Hospital Out-patient Departments.

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* *See* page 2 above.

† These may be obtained from Messrs. Geo. Barber & Son Ltd., Furnival Street, London, E.C.4, free of charge.