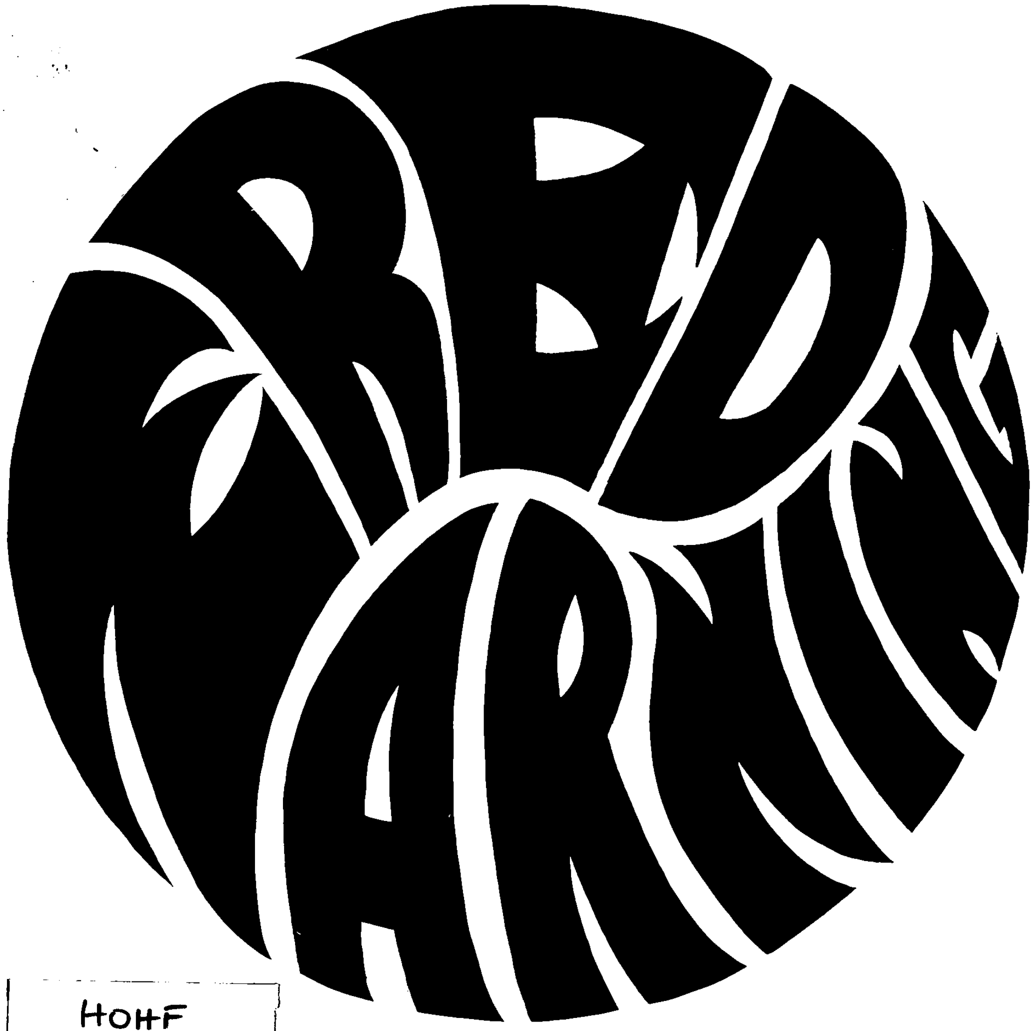
RED WARNING The report of a King's Fund Working Party set up to study the 1967/8 influenza epidemic and its effect on the London hospitals and to make recommendations for the future



RED WARNING

The report of a King's Fund Working Party set up to study the 1967/8 influenza epidemic and its effect on the London hospitals and to make recommendations for the future

King Edward's Hospital Fund for London 1968

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* Mr Peers died on 27 May, 1968

CHAIRMAN'S FOREWORD

Every winter there is a considerable increase in the number of admissions to medical wards of patients with acute or chronic bronchitis, or patients with heart failure precipitated by respiratory infection. Many of these patients require intensive oxygen therapy, nursing care and antibiotics and this may make the difference between life and death; these patients have a very clear-cut claim on our hospital services.

The number of such admissions soars whenever there is an influenza epidemic and particularly when this coincides with a sharp cold spell. Winter after winter many hospitals find themselves in difficulties dealing with the extra pressure. This is particularly shown up when a major crisis such as a severe influenza epidemic hits the country. These difficulties are specially apparent to the King's Fund Emergency Bed Service which is responsible for arranging the admission of many seriously ill patients to hospital. For this reason the Fund set up a working party to study the problem and to make recommendations.

Our study shows that 20-30 per cent of emergency admissions had to be 'refereed' into hospital after repeated refusals to admit although one-fifth of all hospital beds were in fact empty.

Once a problem has been defined, it is half way towards being solved and we believe that relatively few medical administrative changes would make a tremendous difference to the ability of hospitals to deal with these recurring crises. We hope that every hospital will study this report and review its own arrangements. We urge that this should be done before mid-December as an influenza epidemic is again predicted for the coming winter.

In preparing this report and collecting all the data, the working party is particularly grateful to Mrs Winifred Raphael, Dr H M C Macaulay and Mr A G Keep, as without their help the study could not have been made.

Mr.R E Peers, Secretary of the King's Fund and Director of the Emergency Bed Service, died while this study was in progress. He had been in charge of the EBS ever since it was started thirty years ago and its success was very largely due to the inspiration and enthusiasm which he provided and which once again showed itself in the organisation of this working party. We submit our report, not only as a contribution to the hospital world, but also as a tribute to the memory of Roger Peers.

September 1968 F Avery Jones

CONTENTS

APPENDICES

MAIN POINTS IN THE REPORT

1. During the influenza epidemic of December 1967/January 1968 the Emergency Bed Service (EBS) encountered serious difficulties in securing admission to hospital for many acutely ill patients. Although a Red Warning had been issued at the onset of the epidemic many hospitals were obviously experiencing considerable administrative problems in dealing with the greatly increased number of medical emergency admissions.

2. Five years had elapsed since the previous Red Warning and the King's Fund decided it would be appropriate in the light of these experiences to appoint a working party to investigate the effect of the coloured warnings on hospitals in the London area.

3. Although gaining admission was often difficult, with between 20 and 30 per cent being refused admission until 'refereed' into hospital, there were large numbers of empty beds.

4. The main reasons for this situation are thought to be:
   - i. lack of planning for such an emergency;
   - ii. the implications of the EBS coloured warning not being fully understood;
   - iii. the increased rate of sickness amongst hospital staff and very little use of voluntary or relief services;
   - iv. a genuine fear of blocking acute beds by the admission of long stay medical patients;
   - v. reluctance to admit patients from outside the hospital's delegated or assumed area of ultimate responsibility for admissions.

5. A number of detailed recommendations are put forward.

RECOMMENDATIONS

Hospitals

1. That hospitals should immediately draw up a detailed plan for dealing with winter epidemics. This should take into account the following proposals.

1.1 The appointment of a senior member of staff to be in authoritative control of the hospital's beds during the period of the coloured warnings.

1.2 The possibility of switching designated beds or wards temporarily to meet the needs of the epidemic.

1.3 The need to involve senior nursing and administrative as well as medical staff in the preparation and implementation of the hospital's plan.

1.4 The establishment of methods for ensuring that junior medical staff, and any other staff likely to be involved in dealing with the emergency situation, all know exactly what is expected of them and are kept informed of developments throughout the period of any crisis.

1.5 The importance of discussing the plan with local geriatric services so that agreement can be reached on how they can be involved with the admission of patients with serious medico-social problems.

2. That the emergency plan should be reviewed annually. The following points are specifically recommended.

2.1 A standing item should be placed on the agenda for each October meeting of the hospital medical committee: 'To review arrangements for dealing with winter epidemics and other emergencies'.

2.2 At the same time, the senior nursing staff should revise lists of local nurses, nursing auxiliaries and voluntary organisations that are able to help in an emergency.

2.3 Maintenance programmes should be examined to ensure that wards will not be closed for renovation during the period from mid-December to mid-March.

3. That boards of governors and hospital management committees encourage the introduction of local medical 'referee' systems within their groups as a means of ensuring an even distribution of pressure from admissions between the constituent hospitals.

4. That only in most exceptional circumstances should a hospital decline to admit an ex-patient in urgent need of further hospital treatment for the same condition.

Regional Hospital Boards

5. That regional hospital boards and general teaching hospitals designate a senior member of their medical staff to be responsible for all matters relating to emergency admissions and Emergency Bed Service activities. This officer should be specifically concerned to liaise with the Ministry of Health and the Secretary of the EBS at times of impending epidemic. In this way hospitals, including teaching hospitals, in his regional area can be given as long a period of warning as possible when an emergency situation is building up.

6. That instructions issued to hospitals should be uniform between

regions and with current Ministry of Health instructions on coloured warnings.

Ministry of Health

7. That consideration be given to reviewing annually instructions to hospitals, based on the experience of the preceding year. To allow the necessary action to be taken before the winter season, an October circulation would be needed.

8. That the present Ministry of Health recommendation to put up extra beds in medical wards be reconsidered. The aim should be to mobilise some of the many empty beds in other wards.

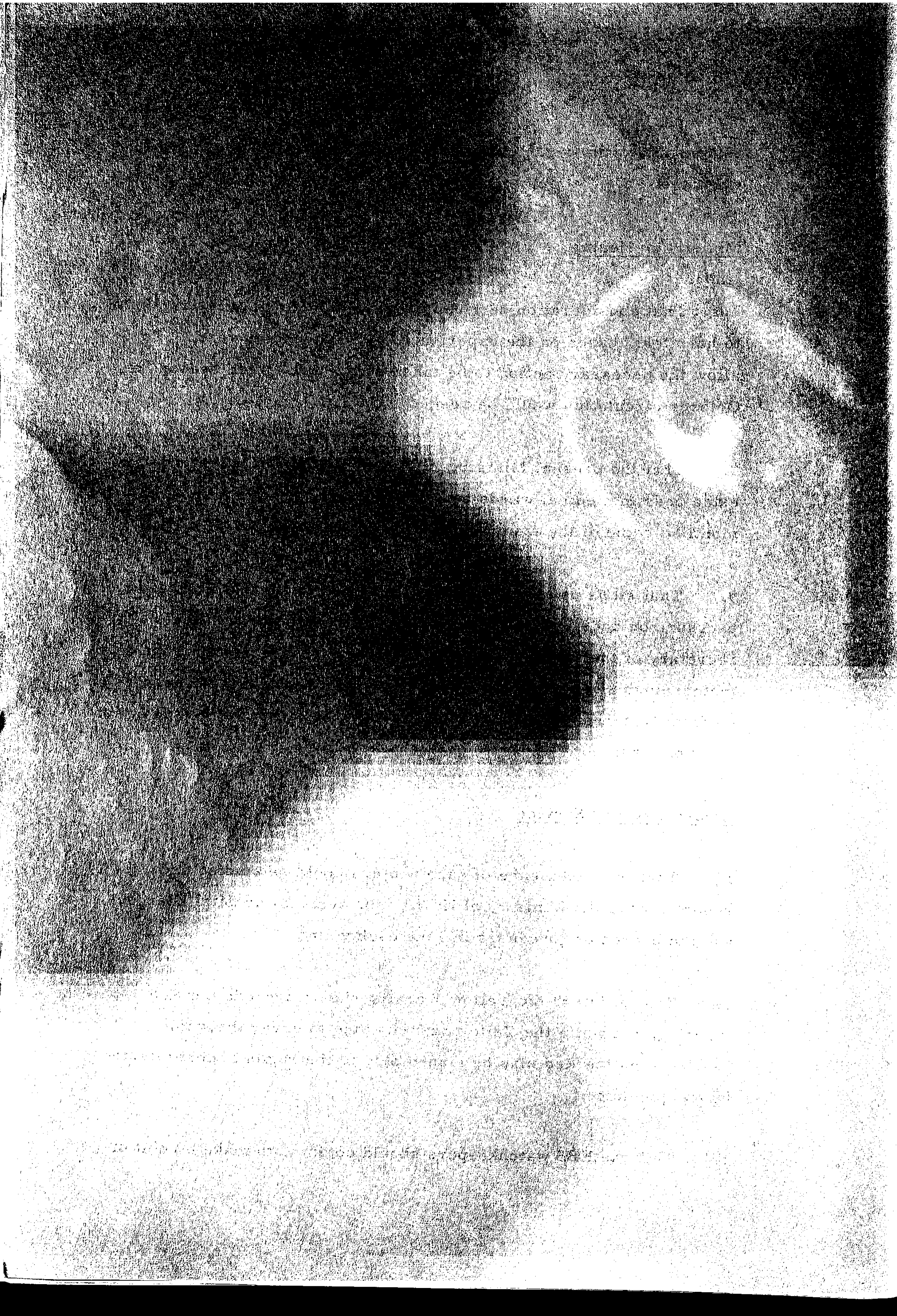
9. That steps be taken to facilitate the forecasting of increased pressure on beds by a close working relationship between the Secretary of the EBS and the regional boards. The combination of a meteorological warning of severe wintry conditions and a rising medical 'referee' rate at the EBS are warning signals on which action must be taken.

Emergency Bed Service

10. That the experience of each winter should be studied and a report sent to the Ministry of Health, the regional hospital boards and the boards of governors in June each year.

11. That in future the Yellow Warning should precede the Red Warning, but while the Yellow will continue to cover the whole London area the Red may be issued only to the regions most affected by an epidemic.

12. That the EBS watchkeepers should continue to make a point of



enquiring of any doctor seeking the admission of a patient whether he has already applied to his local hospital and whether the patient has recently received treatment at any hospital in the neighbourhood. If so, the question of medically 'refereeing' him to that hospital should be considered. The importance is stressed of getting full information about social circumstances.

BACKGROUND TO THE ENQUIRY

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1. Influenza epidemics seem to have become a part of national life and every few years in the winter months the country is hit by an outbreak. These epidemics may sometimes start in the far east and then gradually work their way across Asia and Europe before reaching Britain. The severity of each outbreak depends in part on the virulence of the virus and in part on the extent of the immunity amongst the population to the particular infection. Once an epidemic occurs the more vulnerable people, particularly those who are elderly or who have some pre-existing respiratory disease, are liable to become seriously ill and in need of admission to hospital.

2. In dealing with these recurring crises the Emergency Bed Service plays a key part. The service was formed by the King's Fund following a proposal put forward by the Voluntary Hospitals Committee for London in 1937. Its aim is to assist general practitioners in finding suitable accommodation for patients in need of urgent admission to a hospital bed. In times of epidemic the facilities it provides can be of the greatest value.

3. The EBS came into operation on 21 June, 1938. On the first day only seven doctors used the new service, but by the end of the first year 7,000 admissions had been arranged. Early records refer to the warm welcome given to the service by general practitioners. Thirty years later the enquiry described in this report confidently suggests that the EBS has continued to have a successful working relationship both with family doctors and hospitals in the London area. Admissions dealt with have now reached 50,000 each year. Perhaps the major milestone in reaching the present scale of activity came in 1948 with the inception of the National Health Service. From being a purely voluntary organisation without any powers to

enforce admission, the EBS changed to take over the responsibility for the admission to hospital of any urgent case within the areas of the newly formed metropolitan regional hospital boards. To provide the necessary authority to carry out this more demanding function the medical 'referee' system was introduced. This meant that at all times there would be available a regional medical admissions officer (the medical 'referee') employed jointly by the boards and empowered to ensure the admission of any patient in urgent need of hospital attention.

4. The coloured warning system with which this report is concerned was introduced in 1951. The aim was to alert hospitals in advance of any exceptional increase in demand for admissions and in its earliest form it was in three stages.

White Warning - a precautionary signal indicating that the EBS was hard pressed and serious difficulties might be anticipated in the immediate future.

Yellow Warning - indicating a deterioration in the situation.

Red Warning - a state of emergency.

5. The system was reviewed in 1956. It was decided to discontinue the White Warning and the scheme that is in use today came into effect from that time.

Yellow Warning - an alert to hospitals when applications to the EBS for admissions reach 1,500 per week and at the same time the patients admitted through the medical 'referee' system exceed 12.5 per cent of all admissions. Action to be taken by hospitals on the issue of this warning includes:

i. reduce substantially admissions from waiting list (these are almost entirely non-acute surgical patients);

ii. as far as medical considerations permit, admit patients to any vacant beds, regardless of specialty;

iii. discharge, or transfer to convalescent units, as many patients as possible.

Red Warning - to be issued if the Yellow Warning and the activity that it brings into play has failed to prevent further deterioration in the situation. The Red Warning denotes the need for the following action by hospital authorities:

- i. stop all but very urgent admissions;
- ii. call in relief nursing personnel;
- iii. put up as many extra beds as possible within the capacity of the available nursing staff.

6. The warnings continue until an improved general situation justifies cancellation - normally of the Red first and then of the Yellow. In the past, the issue of warnings has always been preceded by close consultation between the officers of the Fund and the Ministry of Health.

7. In Appendix I will be found a copy of the current Ministry of Health instructions to hospital authorities on the action recommended as a preparation for epidemics when warning signals are given.

8. Since the 1956 revision of the warning system there have been eight Red Warnings and ten Yellow Warnings.

9. Generally the Yellow has been issued first, to be followed as the situation dictated, by the Red. On three occasions the Yellow Warning has been used without recourse to a Red. On three other occasions the situation has been such that a Red Warning has been considered appropriate without preliminary adoption of the Yellow.

10. The last serious influenza epidemic hit London over the 1967 Christmas holidays and developed so quickly that a Red Warning was issued by the EBS after consultation with the Ministry of Health on 27 December, without prior issue of the precautionary Yellow Warning. The wisdom of this action became apparent a few days later when the applications for admission from the EBS increased

by 800 over the average weekly figures for that time of year. The total was 1,984 in the seven days from 30 December to 5 January. These figures represent only a minority of all emergency admissions. The increase indicates a considerable extra pressure on London hospitals, though not quite as great as in the influenza epidemic of 1959, or the severe 'smog' of 1952. Then there were respectively 2,419 and 2,536 applications in corresponding periods, but they occurred at the height of a more prolonged period of pressure.

11. When the experience at EBS headquarters during the 1967/8 epidemic was added to the many comments which flowed in from hospitals, and the reports of the press and broadcasting services, it indicated the existence of considerable administrative problems in many London hospitals. The previous Red Warning had been issued five years earlier and it was clear that the time had come for a careful review of the arrangements needed to meet such sudden increases in medical emergencies. The larger London hospitals are well organised to cope with any major catastrophy such as a rail or air disaster, necessitating many admissions to surgical wards. Unfortunately the same is not true of the arrangements which have to be put into action at very short notice for dealing with the far greater numbers involved in an influenza epidemic.

12. Facing this situation, the King's Fund decided that a working party should be established to review the experience derived from the 1967/8 epidemic and to make recommendations for the future. These recommendations are directed towards hospital groups, regional hospital boards, the Ministry of Health and the Emergency Bed Service.

METHOD OF ENQUIRY

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13. The working party first met on 29 January, 1968, less than a fortnight after removal of the Yellow Warning, when it was agreed that the enquiry should take the following form.

i. A questionnaire would be sent to all general hospitals within the area normally served by the EBS seeking information as to the effect of the recent epidemic. Mrs Winifred Raphael, an occupational psychologist, was invited to conduct this aspect of the survey.

ii. Based on the data collected by means of the questionnaire, follow-up visits would be made to selected hospitals to examine some of their experiences in greater detail. Dr H M C Macaulay, formerly Senior Administrative Medical Officer of the North West Metropolitan Regional Hospital Board, was asked to undertake this on behalf of the working party.

iii. At the same time, the views and opinions of general medical practitioners would be obtained.

iv. The procedures in operation at the EBS would be critically reviewed.

14. A copy of the questionnaire is reproduced in Appendix II. It was designed to obtain information on the bed situation in hospitals with more than fifty beds and normally admitting general medical patients. Six Wednesdays were chosen as representative, the first being 15 November, 1967, to serve as a base-line, three during the period of the Red and Yellow Warnings, 27 December, 1967, 3 January and 10 January, 1968, and two after the removal of the warnings, 17 January and 31 January, 1968. The questionnaire was sent to 138 hospitals and a 95 per cent response was achieved. Some of the replies, however, arrived after the requested dead-line which means that the analyses recorded in Appendices III to V are based on 90 per cent of the replies. Only hospitals with seventy beds or more have been included. There is, however, no reason to believe that a slightly larger sample would have significantly modified the findings.

15. Twenty-one hospitals were visited. Three were teaching hospitals; six were in the North West Metropolitan Regional Hospital Board area; six in the North East; three in the South East and three in the South West. The visits were arranged through the respective house governor or group secretary who, in all instances, made it possible to discuss the warning system with a wide range of hospital personnel so that a comprehensive view was obtained of their experience. Those interviewed included senior and junior medical staff, in many instances those actually involved in dealing with the EBS and admitting patients during the epidemic; nursing staff, again representative of a wide range of responsibilities; administrators and medical records officers. They all showed considerable interest in the enquiry and much valuable material was collected at the meetings. Some examples of medical administrative practice of proved value are quoted in the report, but it is appreciated that similar examples are likely to exist elsewhere in hospitals which were not visited.

16. The advice and opinions of general practitioners were sought through the Inner London Local Medical Committee, with the assistance of the Secretary, Dr Denis R Cook. Finally, in consultation with Mr K S Morfey, Secretary of the EBS, and his senior colleagues, the procedure followed at the EBS headquarters during epidemics was systematically reviewed.

OBSERVATIONS ON THE 1967/8 EPIDEMIC

Too Few and Yet Too Many Beds

17. A paradoxical situation arose in that, at the height of the epidemic, the London hospitals had substantially fewer patients than normal and a correspondingly greater number of empty beds. However, most of these empty beds were surgical; medical wards were overflowing. A very considerable number of patients were being refused admission until 'refereed' to the hospital by the EBS.

18. On Wednesday, 3 January, 1968, at the height of the emergency period, there were 1,453 fewer patients in London acute general hospitals than on Wednesday, 15 November, 1967, the day taken as the base-line date for normal occupancy. The increase in medical patients was 1,097 (or 10 per cent), but this was more than balanced by the decrease in surgical patients of 2,550 (19 per cent). In all four metropolitan regions the net decrease in patients was either 5 per cent or 6 per cent and in teaching hospitals it was 8 per cent. Against this, no less than 60 patients were refused admission to London hospitals on that day and had to be forced in under the 'referee' system. Hospitals replying to the questionnaire had a total of 4,247 empty beds.

19. While recognising that this situation may have been due to staff illness, the impression gained by the working party is that inflexibility of bed usage between different departments in hospitals accounted for a very considerable proportion of the unused beds. It was, therefore, this inflexibility that was leading to the appreciable delay and difficulty in getting patients into hospital. Clearly with these numbers of empty beds there was no justification for putting up extra beds in already hard-pressed medical wards. Surgical beds needed to be brought into medical use.

Lack of Understanding of Warning System

20. It became clear, during the epidemic and the subsequent hospital visits, that there was considerable lack of understanding of the exact significance of the Yellow and Red warnings. The last Red Warning had been issued five years earlier and with the considerable change in junior appointments, a great many registrars and housemen had had no previous experience. The guidance issued by the Ministry of Health (see Appendix I) had been circulated in December, 1963, and a great many staff had never seen it. Some of the regional boards had sent renewed instructions to the hospitals, but again these may not always have been seen by those responsible for the admission of patients. There is certainly scope for establishing a recognised chain of command for keeping doctors informed. On this particular occasion there was undoubtedly added confusion because the Red Warning was suddenly imposed without the preliminary Yellow Warning. This was due to circumstances which had not previously occurred, with the epidemic hitting London at a moment when beds were about to be filled after the Christmas holiday.

Fear of Blocking Beds

21. Discussions in hospitals clearly brought out the anxiety felt by many of the younger registrars and house officers who were very unsure of their scope with the increased demands for the admission of elderly patients. Statistically there was no shortage of empty beds in hospitals, but nevertheless over 20 per cent of patients had to be 'refereed' to hospitals who had initially refused to take them. The reason for this uncertainty amongst junior medical officers, and also among their superiors, came from the often justified fear that acute beds might be blocked for many months by elderly patients admitted to the hospital in crisis of respiratory illness, but whose social conditions might mean that they were quite unable to leave hospital. This is a very well-known problem which in a large hospital

is usually dealt with by the geriatric department. The geriatricians can normally be called on to assess the priority of the admission or discuss some interim arrangements with the patient's doctor. At the time of an epidemic, however, these arrangements break down and difficult socio-medical situations arise that can lead to the blocking of acute medical beds. The situation can be complicated still further because many geriatric departments work on a very strict boundary basis which is often quite appreciably different from the normal admitting area of the hospital. If a patient is admitted from outside this boundary, the geriatric department may refuse to accept responsibility. An elderly patient with a stroke admitted from the wrong side of the street can give rise to considerable administrative problems and engender internal frictions.

22. The great majority of general practitioners work closely and fairly with the hospital staff, but unhappily there is a very small proportion who appear to mislead the hospital, and this is another situation which can give rise to ill feeling. Some hospitals felt that during the epidemic the opportunity had sometimes been taken to send in unsuitable chronic sick patients. A further difficulty arose because quite a large proportion of patients (5.8 per cent) were being referred to the EBS by stand-in doctors when covering night service, and who therefore did not know the complete social situation.

23. Against this background, it is not surprising that newly qualified house physicians or recently appointed medical registrars found the whole situation very difficult and worrying. Problems were certainly eased to some extent in those hospitals where there was an experienced admissions officer, but even they found themselves working under very considerable added difficulties during the crisis. The experiment to improve emergency admission arrangements at the Whittington Hospital by providing on a twenty-four hour basis a lay admissions officer service was considered to be worthy

of introduction in other areas. The arrangements seemed to stand up well to the impact of the epidemic.

'Refereed' Admissions

24. When the Emergency Bed Service has failed to find a bed for a patient referred by a general practitioner as needing emergency admission, it can refer the facts to a regional medical admissions officer who has the authority to nominate a hospital which must accept responsibility for the patient. In practice this is the nearest general hospital to the patient's home.

25. During the period of the Red Warning never less than 20 per cent and even as high as 30 per cent of patients had to be 'refereed' into hospital. The normal average figure is 9 per cent. It is worth highlighting just what these difficulties mean. Each 'refereed' admission involves telephoning at least six hospitals and interrupting the activities of busy hospital doctors. More important still is the delay which can occur in the admission of a desperately ill patient. The following example is just one taken from many hundreds in the past 12 months.

PATIENT:	Male, aged 60, living a quarter of a mile from Hospital A, which refused admission.
DIAGNOSIS:	Acute exacerbation of chronic bronchitis.
NOTES:	Patient had been an in-patient of Hospital A 2 or 3 months ago for asthma. Worse for three days. Taken drugs. Is on steroids, but they are no help. Wheezing. Yellow sputum. Dyspnoeic. SLIGHTLY CYANOSED - FOR OXYGEN IN AMBULANCE. No TB History. Home conditions good.

HOSPITALS CONTACTED BY EBS:

0048 - 0050	Hospital	A	(over 500 beds)
0050 - 0100	"	B	
0100 - 0103	"	C	
0103 - 0111	"	D	
0111 - 0116	"	E	

0116 - 0129 Hospital F
0130 - 0145 " G

0050 - Hospital B will ring back and let us know
0100 - " B rang back - they can't take
0116 - " E will ring back
0121 - " E rang back refusing
0123 - " F will ring back
0129 - " F rang back refusing
0135 - " G will ring back

0144 - Relief Service rang back enquiring about patient. Patient getting worse.

0145 - Rang back G for news - they can't help.

0147 - Rang RMAO - he said Med. Ref.

0148 - Rang A to be Medically Refereed. Spoke to Duty Medical Registrar who will ring back and let us know.

0159 - A rang back to say send patient to Casualty Dept

AMBULANCE ORDERED:

0159 - 0200 No delay; slightly cyanosed; oxygen in ambulance.

26. Altogether inflexibility of admission arrangements, and the blocking of admissions at a very junior level, seem to be a much greater factor in refusing a patient than the lack of empty beds. At present hospitals tend to operate as thirty or forty independent ward units, but with a relatively large total (10-20 per cent) of empty beds in the whole hospital at any one time, there does seem to be scope for greater flexibility. Prior agreement about switching a block of beds from surgical to medical use would make it very much easier to achieve the necessary emergency admissions.

Staff Illness

27. During the epidemic, hospitals were working under particularly difficult circumstances; not only were they concerned to treat considerably increased numbers of acute medical emergencies, but inevitably the epidemic affected their own staff in all categories. Replies to the questionnaire circulated showed that on 3 January, 1968,

respectively 67 per cent and 53 per cent of all hospitals reporting from the South East and South West regional hospital boards had more than 10 per cent of their nursing staff incapacitated through illness.

28. The figures for the other metropolitan regions are shown in Appendix V.

29. There is evidence that greater flexibility in the use of staff would have paid dividends. It seems reasonable that when one specialty within a hospital is under abnormal pressure, staff from other departments should provide a relief service. This did not always happen during the Red Warning period.

30. Increased use was made of voluntary workers but only to a very minor extent. A possibility worth further consideration is the mobilisation of a corps of auxiliaries who could be called on to relieve over-worked hospital staff at short notice. This is already planned for major disaster schemes.

Varying Incidence

31. During the epidemic the pressure on hospitals varied in different regions and even between adjacent hospital areas. The outbreak started first in east London and pressure was greatest there throughout the period of the warning. Some hospitals did not begin to feel the effects of the epidemic until after 17 January on which date the Yellow Warning was withdrawn.

Use of Surgical Beds during a Medical Epidemic

32. There is great reluctance among surgeons towards their beds being used for overflow medical admissions. This attitude is founded on a genuine medical reason. Hospitals today are beset

with troublesome antibiotic-resistant germs which give rise to complications among surgical patients. The admission of patients with acute respiratory illness to surgical beds could make worse the problems that already face surgeons. Nevertheless, at a time of epidemic crisis, a compromise has to be reached.

33. This compromise was successfully achieved in some hospitals by being able to switch over a complete ward or block from surgical to medical use. In particular ENT and gynaecological beds lend themselves to this change of user at a time when non-urgent admissions have ceased. Convalescent patients might also be transferred, but the practical difficulties of this proposal are recognised.

Booked Admissions

34. Some hospitals were reluctant to turn away patients who had been called for admission prior to the warning. This meant that time elapsed before beds became available for additional medical admissions. The reasons behind this are appreciated, but after a warning of impending pressure on beds it might be possible to admit more short-stay surgical patients, so that if some surgical wards had to change over to medical use this could be achieved in a relatively short period of time.

Previously Treated In-patients Admitted Elsewhere

35. The enquiry showed that problems could arise when a patient with a history of earlier treatment for the same condition in a particular hospital was not readmitted because no bed was apparently available. The working party appreciates that this must sometimes happen, but as a general rule hospitals should re-admit their recent ex-patients. Busy staff waste time in eliciting histories and making

diagnoses of patients already fully recorded and previously treated in other units. Because of this, the watchkeepers at the EBS will continue to make enquiries of general practitioners concerning past admissions, and attempt first to admit the patient to his former place of treatment. Where local medical 'referees' are appointed, with responsibility for the selection of a hospital, they too might help as far as possible in this respect.

Coloured Warning Procedure

36. Undoubtedly a lesson to be learnt from the epidemic is the need for a Yellow Warning to precede a Red one. In 1967/8 a Red Warning had to be imposed from the start. The great advantage of a Yellow Warning is that it gives hospitals the opportunity to slow down their selective admissions without imposing an unexpected halt. Suddenly stopping these admissions can give rise to personal problems and sometimes real hardship for patients; it may also cause considerable administrative confusion in the hospital, particularly when the significance of the warnings is inadequately appreciated.

37. Some hospitals asked for the reinstatement of the preliminary White Warning, but it is considered preferable that long-range forecasting should be the result of a closer liaison between the Ministry of Health, regional hospital boards, boards of governors, and the Emergency Bed Service so that, at the earliest sign of impending emergency, hospitals can be alerted.

38. There would appear to be a case for sometimes issuing the Red Warning only to those regions where the epidemic had struck. It seems to be unjustified to continue to stop all but emergency admissions in an area where the full effect of the epidemic has not been felt. The Yellow Warning, however, must always apply to the whole London area.

Areas of Ultimate Responsibility

39. Where areas of ultimate responsibility have been established, problems of admission were sometimes increased. Hospitals were so conscious of their duty to admit all patients from a given area that they insisted on keeping a reserve of medical beds for this purpose. In consequence EBS requests to admit patients from an adjacent neighbourhood were often refused.

40. It was also reported that in some instances this arrangement resulted in patients being admitted to hospitals that were unable to provide the requisite treatment. The situation might have been avoided if each hospital had its own local 'referee' able to deal in an authoritative way with EBS requests.

41. The idea of areas of ultimate responsibility is one which is strongly supported in some areas and found equally unacceptable in others. It is beyond the terms of this enquiry to make further comment other than to record the opinion that the whole concept needs very thorough examination by the appropriate authorities.

Plans for Action

42. It was apparent at the time of the epidemic that some hospitals were very much better organised to meet the crisis than others. The reasons for this were made clear by the subsequent visits. The hospitals that coped most easily were those with well-prepared plans somewhat similar in character to those used for major surgical disasters. In the others, no prior arrangements had been made. Among the London teaching general hospitals, only one-third operated an adequate emergency programme and a similar proportion appear to have done almost nothing to meet the crisis. In most hospitals information about bed occupancy at any moment in

time was readily available, in others there was great delay in getting accurate figures. In some hospitals a senior member of the medical staff had been nominated to take ultimate responsibility for admissions and to work in the closest cooperation with the senior administrative and nursing officers who took a very full share in emergency re-organisations. Lewisham Hospital was one visited where an emergency plan had been prepared incorporating each of these features. In some hospitals, on the other hand, there was no-one of seniority responsible and this proved to be the major factor in making admission arrangements inflexible. The need for someone to be in command is equally true of groups of hospitals under one management committee - otherwise one hospital may be under considerable pressure while others are taking much less than their fair share of the load. Examples of this were discovered during the hospital visits, but it did not occur in those groups that had appointed a local or group medical 'referee'. He was able to direct admissions from the EBS to any hospital within the group for which he was responsible. Barnet General and Whipps Cross were amongst the hospitals visited where the local 'referee' system is well established.

ACKNOWLEDGEMENTS

The working party wish to pay tribute to the medical, nursing and administrative staffs of hospitals for the way they take the strain during emergency periods. Their load is a heavy one, but it is thought that it could be eased by a review and possible re-organisation of the administrative arrangements for these recurring epidemiological crises.

They wish also to record their appreciation of the help that has been so readily forthcoming from members of all the hospital and health services. In particular they wish to thank the secretaries of boards of governors and management committees and their staff for their part in completing so fully the basic enquiry forms; the medical, nursing and administrative staff of those hospitals that were visited, for their frank replies to all the probing questions; the general practitioners who put forward their views on the facilities provided for them by the Emergency Bed Service; and the senior administrative medical officers of regional boards for their continuing close interest in the EBS and their observations and cooperation throughout the enquiry.

APPENDIX I

CURRENT MINISTRY OF HEALTH GUIDANCE ON DEALING WITH COLOURED WARNINGS

Overleaf is reproduced the letter from the Ministry of Health which deals with action to be taken in relation to the coloured warnings

MINISTRY OF HEALTH

Alexander Fleming House, Elephant and Castle, S.E.1.
Telephone: HOP 5522 ext. 442

Our reference: 94150/23/22 5th December, 1963.
Your reference:

Dear Dr. Blank

The Emergency Bed Service Committee has suggested some alteration to the present Winter Emergency arrangements and these have now been agreed between the Emergency Bed Service, the Metropolitan Regional Hospital Board, the Teaching Hospitals Association and the Ministry.

For the future the Winter Emergency arrangements, as set out in Dr. Goodman's letter of 29th December, 1961, will be modified to read as follows:-

Winter Warning System

Experience of the 1951 influenza epidemic led to the development of a warning system which, as now agreed, will be acted on by all hospital authorities concerned in the Great London area. Warnings will be instituted by the E.B.S. in consultation with the Ministry of Health according to the needs of the situation, and the following action is recommended where applicable:-

(i) General Action in Preparation for Winter:

- (a) Plan to avoid closure of wards, e.g. for redecoration, in the period mid-December to mid-March.
- (b) Complete lists of local Nurses and Nursing Auxiliaries who would be able to help in an emergency.

(ii) When a Yellow Warning is in force:

- (a) Reduce substantially admissions from waiting lists.
- (b) As far as medical considerations permit, admit patients to any vacant beds, regardless of specialty.
- (c) Discharge, or transfer to convalescent units, as many patients as possible.

It is emphasised that this Warning should not be regarded merely as a "stand-by" signal. If adequate action is taken it may well be possible to avoid the issue of a Red Warning altogether, or at any rate to ensure that such a Warning is only of brief duration.

(iii) Red Warning:

- (a) Stop all but very urgent admissions.
- (b) Call in reserve of local Nurses and Nursing Auxiliaries.
- (c) Put up extra beds to the limits of the nursing staff available.

Yours sincerely,

(sgd.) Albertine Winner

To: Senior Administrative Medical Officers of Metropolitan Regional Hospital Boards
Secretaries of Boards of Governors of London Undergraduate Teaching Hospitals

(Copies for information to: The Secretary, Teaching Hospitals Association,
The Secretary, Emergency Bed Service).

APPENDIX II

QUESTIONNAIRE USED IN THE ENQUIRY

On the next three pages is reproduced the questionnaire used in the working party's enquiry

KING EDWARD'S HOSPITAL FUND FOR LONDON

ENQUIRY INTO THE EFFECTS OF THE EMERGENCY BED SERVICE RED WARNING SYSTEM

QUESTIONNAIRE TO ALL HOSPITALS SERVED BY E.B.S.

Hospital .... (address)

B. of G./H.M.C. .... R.H.B.

1.	ALL MEDICAL BEDS (S.H.3 lines 1 - 10)	Beds Available i.	No. of Patients at 00.01 ii.	Please leave blank iii.	Admissions etc. iv.	Please leave blank v.	No. of Patients at 23.59 vi.	1.
a.	On 15.11.67							a.
	27.12.67							
	3. 1.68							
	10. 1.68							
	17. 1.68							
	31. 1.68							

	ALL SURGICAL BEDS (S.H.3 lines 13-24)	Beds Available i.	No. of Patients at 00.01 ii.	Please leave blank iii.	Admissions etc. iv.	Please leave blank v.	No. of Patients at 23.59 vi.	
b.	On 15.11.67							b.
	27.12.67							
	3. 1.68							
	10. 1.68							
	17. 1.68							
	31. 1.68							

2.	ADMISSIONS (S.H.3 lines 1 - 10 & 13-24)	From List i.	Emg. ii.	Total Ad'ms iii.	EMERGENCIES (If records permit) E.B.S. iv.	Cas. v.	O.P.D./G.P. vi.	Please leave blank vii.	REFUSALS E.B.S. viii.	G.P. ix.	2.
	On 15.11.67										
	27.12.67										
	3. 1.68										
	10. 1.68										
	17. 1.68										
	31. 1.68										

	NURSING STAFF plus Nursing Auxiliaries. (W/T equivalents).	Number available for nursing duties	Number Sick	Number not available for other causes, - leave, block etc.	Total Nursing Staff	
3.		i.	ii.	iii.	iv.	3.
a.	On 14.11.67					a.
	2.1.68					

b. Comments

c. Was use made of the N.H.S.R. or other voluntary nursing organisations?

On 14.11.67 Yes ☐ ☐ No

2. 1.68 Yes ☐ ☐ No

(please tick ✓ in box as appropriate).

d. Comments

---

4. Changes due to the "Red" warning.

a. Were extra beds erected? Yes ☐ ☐ No

b. Comments

c. Were any medical patients nursed in non-medical wards? Yes ☐ ☐ No

d. Comments

e. Were any wards or part wards closed as a result of staff shortages? Yes ☐ ☐ No

f. Comments

g. Please give any other changes due to the "Red" warning, such as early discharge, transfer to or from other hospitals.

h. Have you a recognised procedure for the needs of a "Yellow" or "Red" warning? If so, please describe briefly.

5. Any further comments on the Warning system and Emergency Bed Service which might assist the Working Party. 5.

Please Note: A separate return is requested for each hospital specified but spare sheets are provided in order that you may take your own copies.

The finding of this enquiry will largely depend on the accuracy of the statistical information that can be provided. Relevant comments on any figures quoted will be of considerable value.

Please return the completed form via your House Governor/Group Secretary to Mr. A. G. Keep, Secretary to the Working Party, Hospital Administrative Staff College, 2, Palace Court, London, W.2., not later than 21st February, 1968.

Your help is much appreciated.

Signed ______________________________

House Governor/Group Secretary.

____________________1968.

AGK/AC
5.2.68

INTRODUCTION TO APPENDICES III - V

The figures in the following Appendices are based on a preliminary analysis of the questionnaire to show the situation in the hospitals before, during and after the Red Warning. The figures have been summarised by 'category' (ie, for each of the four regional boards and for the teaching hospitals) and arranged under the headings of bed occupancy, medical and surgical admissions, and staff sickness and related figures. Appendix III deals with bed occupancy, Appendix IV with medical and surgical admissions and Appendix V with staff sickness and related figures.

Not all the questionnaires could be used in each analysis. In some the information was incomplete, others were from very small hospitals with under seventy beds, or from hospitals with only medical or only surgical patients, or with no differentiation between medical and surgical beds.

APPENDIX III

BED OCCUPANCY

Shown in the table below are the median bed occupancy rates for each 'category' before, during and after the Red Warning. Shown first are the rates for medical beds, second for surgical beds, and third for medical and surgical combined.

Median Bed Occupancy Rates (Hospitals of 70 beds or more)

No. of Hospitals	Category	15.11.67	27.12.67	3.1.68	10.1.68	17.1.68	31.1.68
Medical Beds							
25	NE Met	86	91	98	92	93	92
19	NW Met	86	91	94	96	94	93
8	SE Met	86	107	110	112	96	94
12	SW Met	84	88	95	100	98	89
25	Teaching	90	86	93	95	92	94
89	Total	86	91	95	96	94	93
Surgical Beds							
25	NE Met	88	62	68	72	79	86
19	NW Met	81	59	72	78	78	83
8	SE Met	91	63	67	70	74	86
12	SW Met	89	54	68	72	84	90
25	Teaching	88	65	77	84	82	89
89	Total	88	61	71	76	80	86
Combined Beds							
25	NE Met	86	75	81	81	83	88
19	NW Met	88	75	83	86	87	88
8	SE Met	93	73	85	88	85	92
12	SW Met	85	72	81	86	88	88
25	Teaching	91	74	83	86	86	91
89	Total	87	75	84	85	86	88

It will be seen that the effect of the epidemic on medical bed occupancy was first felt in the South East Metropolitan Region and remained greatest there. In the same way, surgical bed occupancy, which was higher in the South East Metropolitan Region in November than in the other 'categories' was just the lowest by 3 and 10 January. The bed occupancy of the teaching hospitals showed comparatively little change for medical or surgical beds, except that on Boxing Day the occupancy rate for surgical beds was low for all hospitals. The rate for medical and surgical beds combined remained remarkably even for all 'categories' (except on Boxing Day) although for the South East and North East Metropolitan Regions and for teaching hospitals it did not reach the pre-warning norm until 31 January.

It is worth noting that extra beds were erected in 42 per cent of the hospitals and that medical patients were nursed in surgical beds in 80 per cent of them.

APPENDIX IV

MEDICAL AND SURGICAL ADMISSIONS

Numbers of Medical and Surgical Patients Admitted 15.11.67 and 3.1.68 (Hospitals of 70 beds or more)

No. of Hospitals	Category	Date	Medical Patients			Surgical Patients			Total Patients		
			Numbers	Increase	Per cent	Numbers	Decrease	Per cent	Numbers	Decrease	Per cent
26	NE Met	15.11.67	2215			2916			5131		
		3. 1.68	2620			2258			4878		
				405	18		658	23		253	5
22	NW Met	15.11.67	2508			3027			5535		
		3. 1.68	2685			2539			5224		
				177	7		488	16		311	6
10	SE Met	15.11.67	1043			1220			2263		
		3. 1.68	1183			937			2120		
				140	13		283	23		143	6
14	SW Met	15.11.67	1267			1681			2948		
		3. 1.68	1476			1326			2802		
				209	17		355	21		146	5
26	Teaching	15.11.67	3410			4462			7872		
		3. 1,68	3576			3696			7272		
				166	5		766	17		600	8
98	Total	15.11.67	10443			13306			23749		
		3. 1.68	11540			10756			22296		
				1097	10		2550	19		1453	6

APPENDIX V

STAFF SICKNESS AND RELATED FIGURES

Shown in the table below are the results of the questionnaire in relation to nurse sickness. The percentage of nurses sick was found for each hospital of seventy beds or more for 15 November, 1967 and 3 January, 1968.

Nurse Sickness Rates

No. of Hospitals	Category	Median Rates 15.11.67	3.1.68	Percentage of Hospitals with 10 per cent or more members absent on 3.1.68
27	NE Met	4	7	30
22	NW Met	4	6	23
9	SE Met	5	11	67
15	SW Met	5	10	53
22	Teaching	4	9	37
95	Total	4	8	37

Not only was the nurse sickness rate doubled for the whole group of hospitals, but the South East Metropolitan Region which had the highest medical bed occupancy rate also had the largest percentage of hospitals with more than 10 per cent members absent.

Use of Voluntary Nursing Organisations

Little use was made of voluntary organisations even in those hospitals that had high nurse sickness rates. The questionnaire showed that of thirty hospitals with 10 per cent or more nurses sick, seven used voluntary organisations on 15 November, 1967, whereas nine used them on 3 January, 1968. Of fifty hospitals with 9 per cent or less nurses sick, five used voluntary organisations on 15 November, 1967, whereas eight used them on 3 January, 1968. Taking both sets of

hospitals together, this gives a total of eighty hospitals, twelve of which were using voluntary organisations on 15 November, 1967; seventeen on 3 January, 1968.

Closure of Wards

The closure of wards seems to have been connected with staff shortage. Of thirty hospitals with 10 per cent or more nurses sick, twelve (or 40 per cent) closed wards, whereas of fifty hospitals with 9 per cent or less nurses sick, only 9 (or 18 per cent) closed wards.

Printed in England by Walbrook Supplies Company

Cover printed by Alabaster Passmore and Sons Ltd, and
designed by Steve Storr / Ken and Kate Baynes