Utilisation of Health Services Project

Hospital Study

Report of Pilot Stage

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Introduction

The Hospital Study forms one of three related studies which are currently being undertaken by the Health Services Research Unit as part of the Utilisation of Health Services project. The basic objective of the Hospital Study is to examine the causes of the higher rate of hospital use by non-married compared with married people. More specifically, it is hoped to determine how much of the higher rate of use of hospital beds by non-married persons is appropriate to their medical needs, reflecting (for whatever reason) a greater need for hospital care, and how much is due to the differential distribution between married and non-married patients of circumstances that would enable adequate care to be given outside the hospital.*

It is proposed to base the study initially on the general medical and general surgical wards at the Kent and Canterbury Hospital. The study will be confined, in the first instance, to patients aged 65 years and over, who form the group with the highest rates of hospital use. However, it is hoped that it may later be possible to extend the study to other specialties and other age groups.

The pilot study was run at the Kent and Canterbury Hospital in July-August 1975 with the generous co-operation of two General Medicine firms and one General Surgery firm. The aim of the pilot study was both to evaluate the questionnaire and to determine whether the administrative arrangements for conducting the study were satisfactory.

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* For an analysis of rates of bed use by married and non-married people and a review of the literature, see: J.R. Butler, M. Morgan. Marital Status, Illness and the Use of Health Services: Interim Report (H.S.R.U. October 1974)

Study population

During a four-week period all NHS patients aged 65 years and over admitted to the Kent and Canterbury Hospital under the three consultants participating in the pilot study were included in the study population. This gave a total of 64 patients; 36 in general medicine and 28 in general surgery.

Data collection

Information on the patients was collected by means of a questionnaire which was completed by the hospital staff. Unlike most previous studies of hospital use in which a questionnaire was completed at one particular point in time, in the present study the questionnaire was designed to be completed at various stages during the individual patients' stay.

The questionnaire was divided into four parts:

Part I recorded routine demographic and admission data of the kind collected in the Hospital Activity Analysis. This part was completed by the ward clerk or sister when a newly admitted patient who formed part of the study population first came into the ward. The questionnaire was then placed in the patient's case notes where it remained throughout the patient's hospital stay.

Parts II, III and IV recorded the doctor's judgement about the appropriateness (on clinical grounds) of the patient's admission and length of stay, and the reasons why any inappropriate hospitalisation occurred. These parts were completed by the medical staff, with Part II being filled in shortly after the first examination of the patient, Part III at the time the provisional discharge date was set and Part IV when the case summary was written. On completion, the questionnaire was removed from the case notes and placed in a special folder on the ward trolley to await collection by the research staff.

Patients are not being questioned at any point during the Hospital study. However, it is planned to follow-up patients 2-3 weeks after leaving the Kent and Canterbury to gain information on the patient's household composition and living arrangements and the availability of care from friends and family members. The schedule to be used in the follow-up study was tested by interviewing patients who were discharged from the Kent and Canterbury during the first few weeks of the pilot study.

Findings

A total of 64 patients were included in the pilot study and questionnaires have now been completed for 58 patients. Of the remaining patients, three are still in the Kent and Canterbury hospital, one was transferred for treatment to

a London hospital and two were discharged without their questionnaire being retrieved. Of the 58 patients for whom questionnaires were completed, 31 were in general medicine and 27 in general surgery.

1. Discharges and deaths

Twelve of the 58 patients died in hospital and 46 were discharged. Nearly all the patients discharged from general medicine went straight home, while about one-third of the general surgery patients were transferred to another hospital.

On the basis of the numbers obtained in the pilot study, a study based on all patients aged 65 years and over admitted to general medicine and general surgery over a six-month period would give a total of just under 800 patients, of whom about four-fifths would be routine discharges.

2. Marital status

An examination of the marital status of patients showed that married men and widowed women formed the two largest groups, while the third largest group was that of married women. The numbers of widowed men and single persons of either sex were quite small. However, on the basis of the present distribution, it seems that the full study should provide sufficient numbers in each of these groups.

3. Average length of stay

The average length of stay was 10.0 days for the 31 general medicine patients and 9.4 days for the 27 general surgery patients. In both specialties the length of hospital stay was quite short for the majority of patients, with about one half of the patients staying for 7 days or less. Only 7 of the 58 patients stayed for 20 days or more.

4. Appropriateness of hospital use

(i) Patients

Eleven patients, or about one-fifth of the study population, were considered to have occupied hospital beds for all or part of their stay when this was not necessary on the basis of their medical needs alone. In two cases this occurred through patients being admitted to the Kent and Canterbury for medical conditions which, in the opinion of the reviewing physician, could have been treated in the out-patient department or by the general practitioner, if his/her home circumstances were favourable. One of these patients was a single woman aged 91 years and the other a widowed woman aged 76 years. Both were eventually transferred from the Kent and Canterbury to another hospital.

Nine patients whose admission to the Kent and Canterbury was considered to have been justified on account of their medical needs were reported to have been delayed in hospital for non-medical reasons. In three cases the provisional discharge date was delayed as a result of the patient's home circumstances, while in seven cases a delay occurred between the provisional discharge date and the patient's actual discharge. The main reason for patients remaining in hospital after the provisional discharge date appeared to be due to their having to wait for a bed to become available in another hospital. A few patients were being transferred to another hospital for specific medical treatment or nursing care but most required only non-skilled care.

Number of persons involved in inappropriate hospital use

	Inappropriate admission	Discharge delay	Total persons
General surgery	1	3	4
General medicine	1	6	7
Both specialties	2	9	11

(ii) Bed days

One advantage of the approach being adopted in the present study of assessing the appropriateness of an individual patient's hospital stay is that it is possible to aggregate the total number of bed days used as a result of inappropriate bed use.

During the pilot study, the 58 patients for whom questionnaires were completed occupied a total of 573 bed days, of which 71 days (12%) were considered to be 'inappropriate', or not necessary on the basis of their medical needs alone. A large proportion of the total number of inappropriate days were accounted for by the two inappropriate admissions who stayed a total of 41 days. Only 30 bed days were used as a result of discharge delays with the longest delay being only 8 days. Inappropriate bed use due to discharge delay was therefore mainly caused by several people staying 2 or 3 extra days.

Number of days of inappropriate bed use

	Inappropriate admissions	Discharge delay	Total days
General surgery	14	9	23
General medicine	27	21	48
Both specialties	51	30	7

Evaluation of the Pilot Study

Organisation

The organisation of the study appeared to be most successful, thanks to the diligence of the ward sisters and ward clerks involved. Almost all the patients who ought to have been included in the study population were in fact included. The questionnaire was successfully retained in the patient's case notes despite a considerable amount of movement between wards, and with very few exceptions, the questionnaires were removed from the patient's notes on completion. In all, less than half-a-dozen patients were omitted or lost from the study, which represents a high success rate.

Questionnaire

Despite a large turnover of medical staff during the six weeks the pilot study was running the questionnaires were completed with few omissions. In general the questionnaires appeared to have been completed at the appropriate stages during the patient's hospital stay, although as might be expected, delays in completing the forms did sometimes occur.

The questions which probably posed some difficulty, and particularly to physicians who had not been involved in the pilot study from the beginning, were those concerning the appropriateness of the patient's admission and the factors affecting the provisional discharge date. This may have resulted in some understatement of the amount of hospital use which was not justified on medical grounds alone. Discussions will be held with the medical staff involved concerning these questions and any necessary revisions incorporated in the questionnaire.

A few other minor changes to the questionnaire are envisaged as a result of the pilot study. These include, for example, a distinction being made between patients admitted for regular treatment, such as a regular blood transfusion, as compared with an isolated episode of therapy. Similarly, the name of the hospital to which patients are transferred will be asked. This information was usually provided, although not specifically required, but should prove useful in locating patients for the follow-up study.

The pilot stage of the study seems to have been carried out most successfully and indicates that the method of organisation and the questionnaire, with a few minor modifications, are suitable for use in the main study. The success of the pilot stage gives us every reason to believe that the main study will prove to be both a successful and worthwhile venture.

We should like to thank the hospital medical staff who participated in this pilot study for their generous co-operation. We are also very grateful to the ward sisters and ward clerks on the six wards involved for their valuable assistance throughout the study.

Patient's name .....

Consultant .....

Confidential

Health Services Research Unit

University of Kent

Canterbury

Utilisation of Health Services

Hospital Study - Pilot questionnaire

Hospital number ☐☐☐☐☐☐

Part I

1. Name: Mr./Mrs./Miss(surname) .....(forename) .....

2. Permanent address: .....

.....

Tel no. .....

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3. Age (yrs) ☐☐

4. Date of birth ___/___/___

5. Sex ☐

6. Marital status:

single	☐		
married	☐	divorced	☐
widowed	☐	separated	☐

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7. Consultant under whom admitted .....

8. Date of admission to Kent and Canterbury ___/___/___

9. Route of admission:

via casualty department	☐	
via out-patient department	☐	go to question 10
direct referral by GP	☐	
inter-hospital transfer	☐	go to question 11
other	☐	specify .....

10. Date on waiting list (if applicable) ___/___/___

11. Name of hospital admitted from .....

12. Date admitted to above hospital ___/___/___

Part II

Please complete this section when patient is first seen as an in-patient

1. Was this patient's admission:

   (a) urgent ☐

   (b) planned ☐

2. What were the patient's medical requirements which caused him/her to be admitted?

   surgery ☐

   diagnostic reasons ☐

   therapy ☐

   admitted primarily for nursing care ☐

   admitted primarily for observation ☐

3. Could this patient have been treated in the out-patient department or by the general practitioner, if his/her home circumstances were favourable?

   required hospital admission ☐

   could have been treated by GP or in out-patient dept. ☐

   Why was this patient admitted to in-patient care?

Date: .....

Reviewing physician: .....

Part III

Deaths

If the patient dies in hospital, enter date ___/___/___

Transfers

1. If patient was admitted from another hospital and transferred back, enter date of transfer ___/___/___

2. If patient was admitted through casualty and then transferred to their local hospital, enter date of transfer ___/___/___

3. If patient was transferred to another hospital for specific medical procedures, enter date of transfer ___/___/___

Other discharges

Please complete this section when the provisional discharge decision is made

1. The patient's provisional discharge date was ___/___/___

2. Was the provisional discharge date delayed as a result of the patient's home circumstances?

No ☐ go to question 3

Yes ☐

(a) What were the social factors which influenced the provisional discharge date?

(b) How much earlier would the provisional discharge have been set if the patient's home circumstances had been favourable?

No. of days ☐

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3. Was the provisional discharge date set earlier than "normal" due to the pressure on beds?

No ☐

☐

How much later would the provisional discharge date have been set in "normal" circumstances?

No. of days ☐

Date: .....

Reviewing physician: .....

Part IV

4. On what date was the patient actually discharged? ____/____/____

5. If the date of actual discharge (recorded in question 4) differs from the provisional discharge date (recorded in question 1), please give the reasons for this:

6. Place of discharge:

private household	☐	
warden assisted accommodation	☐	go to question 7
lodgings	☐	
another hospital	☐	
old people's home	☐	go to question 9
other	☐	

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7. Have any special arrangements been made for discharge (e.g. attendance at day hospital, meals-on-wheels, etc.)?

8. What type of care did the patient require at the time of discharge?

capable of self-care	☐
required non-skilled care	☐
required skilled nursing care	☐

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9. Why was this patient discharged to (another hospital) (old people's home) etc.?

(Please state the social and/or medical factors responsible for the patient's place of discharge).

Date: .....

Reviewing physician: .....