

# Hospital Topics

## General Surgical Pre-admission Clinic

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### Summary

Ninety-nine patients from a non-urgent general surgical waiting list were randomly selected for either direct admission to a hospital bed or review at a preadmission clinic. A considerable reduction in subsequent bed occupancy was shown in the latter group. The findings suggest that more detailed review of patients in the outpatient department would result in the more efficient use of hospital facilities.

### Introduction

Acute hospital beds are expensive to maintain and to staff, and it is important to use them efficiently. It is our experience that some wastage of beds occurs when for various reasons surgical patients fail to attend for admission to a reserved bed. Also, when some patients are admitted to hospital clinical review shows that they no longer need an operation or that previously undetected disorders are present. In either case it becomes necessary to cancel or postpone an operation which had been planned in the outpatient department. With these points in mind it was decided to assess the value of a pre-admission clinic. The main objective of this clinic was to review waiting list patients as thoroughly as possible within two weeks of their admission for elective surgery.

### Patients and Methods

The waiting list cards of 49 male and 50 female patients were taken from the non-urgent waiting lists of three consultant surgeons who worked together as a firm sharing 42 acute surgical beds and a medical junior staff of one senior registrar, one registrar, one senior house officer, and three resident house officers. Patients were allocated at random for either attendance at a preadmission clinic or direct admission to a reserved hospital bed. The surgical diagnoses, average age, and waiting list times of these patients are listed in Table I.

General anaesthesia was thought necessary in all cases, and the same surgical teams undertook operations in both groups of patients. All patients received about one week's notice for either attendance at a preadmission clinic or admission to a reserved hospital bed.

TABLE I—Indication for Operation in the Two Groups of Patients

	Preadmission Clinic Group	Direct Admission Group
No. of patients:	49	50
Varicose veins . . . . .	9	13
Hernia or scrotal swelling . . . . .	8	10
Haemorrhoids and anorectal disorders . . . . .	10	9
Gall-bladder disease or peptic ulcer . . . . .	4	2
Goitre . . . . .	3	2
Pilonidal sinus . . . . .	0	2
Miscellaneous* . . . . .	15	12

\* These included operations for Dupuytren's contracture, submandibular calculus, carpal tunnel syndrome, phimosis, ganglion, dermoid cyst, ingrowing toenail, lipomata, and recurrent appendicitis.

Preadmission clinic: average age of patients 50 (range 14-74 years, average waiting list time before admission 25 (range 6-80) weeks.

Direct admission: average age of patients 50 (range 20-80) years, average waiting list time before admission 28 (range 3-82) weeks.

### PREADMISSION CLINIC

The preadmission clinic was held in a temporarily vacated two-bedded side ward of a general surgical ward on one afternoon each week. This arrangement allowed the patients who attended the clinic to become acquainted with the ward and nursing staff. An average of eight patients were seen during each three-hour session. After a routine clinical examination by a resident medical officer the patient was seen in joint consultation by a surgeon and an anaesthetist who were of consultant or senior registrar status. A date for admission to the ward was then arranged with the patient, whose name was added to a particular operation list. So far as possible account was taken of a patient's social and domestic commitments, and a medical social worker attended to help with any difficulties of this nature that arose.

Investigations arranged at the clinic included urine analysis, full blood count, blood grouping, and chest x-ray examination. Electrocardiograms were done routinely in patients over 45 years of age. In the absence of any clinical suspicion of abnormality the results of these investigations were not checked until the patient was admitted for operation; however, when clinical abnormalities were discovered which might have added to the risks of the proposed operation the results of investigations were obtained before making arrangements to admit the patient to a hospital bed. This sometimes meant reattendance of a patient at a subsequent clinic.

The timing of patients' admissions from the preadmission clinic was such that they spent the minimum preoperative period in hospital necessary for the completion of preoperative procedures, such as shaving and marking the operation site. During their attendance at the clinic the nature of the operation was discussed with each patient. Also an estimate was given of the time likely to be spent in hospital and the time before return to normal activity.

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## DIRECT ADMISSION

Patients in this group were asked to attend for admission according to the standard procedure for the hospital. Beds were reserved one or more days before operation according to the extent of the preoperative assessment and preparation thought necessary from information on the waiting list cards. Preoperative clinical examination and investigations were the same as those undertaken for patients attending the preadmission clinic. The addition of a patient's name to a particular operation list was confirmed after a consultant or registrar ward round, and a duty anaesthetist attended the ward on the evening before the day of operation in order to evaluate the patient and to chart preoperative medication.

## POSTOPERATIVE CARE

This did not differ between the two groups of patients. The general policy was early mobilization and discharge home or discharge to a preconvalescent bed in a nearby hospital.

## EVALUATION OF PREADMISSION CLINIC

This was done by comparing the use of hospital beds reserved for the admission of patients from the two study groups.

## Results

No deaths or serious morbidity occurred in any of the patients.

**Preadmission Group.**—Forty-nine patients were requested to attend the preadmission clinic (Table II). Five did not keep their

TABLE II—Fate of Patients

	Preadmission Clinic Group	Direct Admission Group
No. of patients	49	50
Patients defaulting attendance at preadmission clinic without explanation	2	
Patients requesting cancellation or deferment of operations	2	6
Patients who had undergone operations elsewhere	1	1
Patients who no longer needed operation	7	2
Patients defaulting admission to reserved hospital bed without explanation	1	3
Patients admitted to hospital	36	40
Patients found to be unfit for operation after admission	1	2
Patients undergoing operations	35	36

appointments; two failed to attend without explanation, two wrote to say that they no longer wished to have an operation, and one had already had the operation at another hospital. Of the 44 patients seen at the clinic seven no longer needed operative treatment (Table III). The dates of admission and operation for the remaining 37 patients were arranged at the clinic. One of these failed to come into hospital without explanation and one was unfit for operation after admission because of hypertension. Thus 37 beds were reserved for the admission of 36 patients, 35 of whom underwent operative treatment (Table

TABLE III.—Operations Postponed or Deferred in the Two Groups of Patients

Case No.	Waiting List Diagnosis	Reason for Cancellation or Deferment
<i>Preadmission Clinic Group</i>		
58	Anal skin tags, second-degree haemorrhoids	Asymptomatic for seven months
30	Recurrent infection of submandibular salivary gland	Asymptomatic for one year
70	Carpal tunnel syndrome	Asymptomatic for 11 months
50	Large incisional hernia	No longer wished operation. Satisfied with abdominal support
44	Mastitis of puberty	Spontaneous regression
14	Pilonidal sinus	Asymptomatic for eight months. No longer wished operation
32	Non-toxic goitre	Asymptomatic. Remained under outpatient surveillance
<i>Direct Admission Group</i>		
57	Varicosity right calf	On review operative treatment considered unnecessary
51	Recurrent infection of submandibular salivary gland	Asymptomatic for 18 months

IV). Sixteen patients were fasting on admission and had their operations the same day. The combined preoperative bed occupancy of the remaining 19 patients was 23 days. The postoperative bed occupancy for the 35 patients who underwent operations was 122 days (range 1-15 days).

**Direct Admission Group.**—Three of the 50 patients in this group failed to attend for admission without explanation (Table II). A further six patients wrote requesting that their admissions be postponed but gave insufficient notice of their non-attendance for other waiting list patients to be offered the reserved beds. One other patient who did not attend for admission wrote to the admissions office that his operation had been performed at another hospital. Thus 50 hospital beds were reserved for the admission of 40 patients (Table IV). After admission it was decided that operative treatment was no longer indicated for two patients (Table III). Two further patients had their operations postponed and were discharged home while outpatient investigations and treatment were undertaken; one of these was found after admission to have diabetes and the other to have chronic bronchitis with purulent sputum. The remaining 36 patients who were admitted had their operations after a combined preoperative bed occupancy of 74 days; their postoperative bed occupancy was 145 days (range 1-15 days).

## Comment

The efficient use of acute hospital beds should not be considered without reference to the provision of good patient care, and so far as could be determined during this study all patients were equally well treated. The total bed occupancy of patients who had attended the preadmission clinic was reduced by 87 days, compared with the bed occupancy of those who were admitted direct from the waiting list. This saving was mainly due to the shorter preoperative period spent in hospital by patients in the former group, who also made fuller use of reserved hospital beds.

This study therefore illustrates that the direct admission of surgical patients from a long waiting list is likely to result in a considerable wastage of acute hospital beds and also that the wastage may be reduced by clinical review of patients at a preadmission clinic. The findings strongly support the view<sup>1,2</sup> that

TABLE IV.—Bed Occupancy by the Two Groups of Patients

	No. of Reserved Hospital Beds	No. of Patients Admitted to Reserved Hospital Beds	Bed Occupancy of Patients Discharged Without Undergoing Operation (Days)	No. of Patients Having Operation	Bed Occupancy of Patients Undergoing Operation (Days)		Total Bed Occupancy
					Pre-operative	Post-operative	
Preadmission clinic group	37	36	1*	35	23	122	181
Direct admission group	50	40	13†	36	74	145	268

\* One patient confirmed to be hypertensive after admission; operation deferred pending out-patient assessment.

† Includes one patient found to be diabetic; operation deferred; one found to have chronic bronchitis with purulent sputum, operation deferred; two found to no longer need operative treatment (see Table III).

surgical waiting lists should be abolished and that patients should undergo detailed assessment in the outpatient department before booking their admissions for elective operations.

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### References

- <sup>1</sup> Gardner, R. H., and Moreny, M. H. *Health Trends*, 1970, 2, 49.  
<sup>2</sup> Raw, S. C., *British Medical Journal*, 1967, 1, 424.

## Medical History

### Conquest of General Paralysis

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It is just 50 years since the malarial treatment of general paralysis was introduced into Great Britain, and for the first time some cases of this dreadful disease were cured. General paralysis of the insane, or G.P.I., as it was commonly called, was one of the scourges of Victorian and Edwardian society, and the number of deaths from it each year was registered in thousands. Its syphilitic origin, though previously suspected by many "alienists," was not definitely established until the introduction of the Wassermann reaction in 1906. Mott,<sup>1</sup> writing in 1910, regarded general paralysis as "parasyphilitic," meaning that while syphilis was an essential factor in its causation there must be other factors, since only a small proportion (3-5%) of persons primarily infected developed this disease.

G.P.I. affected men much more than women, and as it came on as a rule between 12 and 20 years after infection it often affected men of high intelligence and vigour when they had attained positions of responsibility and possibly eminence. Its incidence had begun to decline well before the first world war, and the Registrar General's reports, which excluded deaths in the armed Forces, showed a further steep decline during the war years (Fig. 1). Many men who were potential cases of general paralysis must have been killed in the Army, Navy, and the small air force of those days. After the war the continuing decline in the incidence of the disease may be attributed to several factors—(a) the improvement in the treatment of primary syphilis as a result of the introduction of salvarsan and its derivatives, (b) the establishment of local authority clinics for the treatment of venereal diseases, and (c) the improvement in general hygiene, reduction of syphilis in the general population, and the greater availability of contraceptives.

The individual case of G.P.I., however, remained incurable. While occasional remissions were well-recognized, the disease was invariably fatal, the usual duration being two to three years.

#### Fever Treatment

It was not until 1922 that it became known in Britain that in 1917 Julius Wagner-Jauregg, professor of neurology at Vienna

(Fig. 2), had achieved apparent cures by inoculating patients suffering from G.P.I. with benign tertian malaria. Wagner-Jauregg had for some time been experimenting with methods of producing fever, and the chance admission to his ward of a soldier suffering from active malaria had given him the opportunity of inoculating some patients with G.P.I. with malarial blood and thus trying this infection as a means of fever therapy. The results were sufficiently satisfactory to induce him to continue to use it, and by the end of the war experience had enabled him to standardize the treatment, eight febrile attacks being considered adequate.

The first inoculations in this country were carried out at

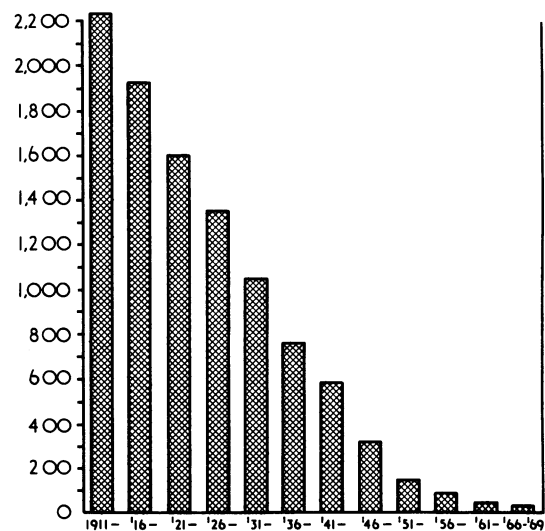


FIG. 1—Registered deaths from general paralysis of the insane in England and Wales 1911-69 (five-yearly averages).

Whittingham Mental Hospital, Lancashire, in July 1922, with the associated supervision of the professor of tropical medicine at the Liverpool school, and in the following year the treatment was extended to about a dozen other mental hospitals throughout the country. Its use soon spread to other hospitals and private mental homes, and the Ministry of Health set up an organization for the inoculation of patients by infected mosquitoes.

The mortality, however, was very high. A survey made for the board of control<sup>2</sup> after the first five years showed that out of a