The Journal of Laryngology and Otology
April 1997, Vol. **111**, pp. 357–360

Audit Article

Pre-admission clinics in ENT: A national audit of UK practice and opinion

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Abstract

A one-year prospective audit (1989) of patient non-attendance for elective surgery in our department showed that of those summoned, five per cent defaulted on the day of admission without contacting the hospital (Hampal and Flood, 1992). Contributing factors such as lengthy waiting lists and inefficient communication with the patients were amenable to correction by the hospital. However, the current admission policy made inevitable a significant waste of theatre time.

The pre-admission clinic (PAC), an outpatient attendance shortly before planned surgery, was recommended in ENT practice by Robin (1991) and introduced into our department that year. Failure to attend the PAC allowed adequate time for replacement on the theatre list and was recommended as a solution to the problem of unfilled theatre sessions (Dingle *et al.*, 1993).

A subsequent four-year experience of conducting PACs has confirmed several expected advantages. However, some of the hopes for development expressed in our earlier work (Dingle *et al.*, 1993) have failed to materialize. This study aims to review retrospectively our experience and compare it with the admission practice and desires of ENT departments in the United Kingdom as revealed by a postal survey. The findings are of relevance to all surgical specialties and to anaesthetic departments wishing to adopt this system of admission.

Key words: Clinic, pre-admission; Surgery, otorhinolaryngological

Method

We established a database of 170 main ENT departments in England, Scotland, Wales and Northern Ireland, where main is defined as those hospitals that provide the principal ENT service for their district. We identified the senior consultant by a telephone call to the medical secretariat and mailed a questionnaire (Appendix) together with a pre-paid envelope, to establish their present admission practice and views on pre-admission clinics.

Results

The 170 questionnaires posted, produced a gratifying response rate of 63 per cent, with 106 replies that are analysed below. As shown in Table I, 68.9 per cent of respondents ran PACs for all routine admissions and a few (3.8 per cent) reserved them for day-cases or selected patients. Two centres had abandoned PACs finding them 'not cost effective'. Table II shows the types of patient considered suitable for PAC, in the majority both day-cases and those requiring post-operative stay. Table III examines the staffing of the PAC, usually a junior doctor with a nurse attendant. The relationship between availability of junior doctors and adoption of the PAC system is illustrated in Table IV. Table V looks at those respondents not currently running PACs, and shows that given adequate resources, the majority would be enthusiastic. Finally, Table VI summarizes current practice in obtaining consent for surgery.

Discussion

Our interest in PACs was stimulated by the problem of in-patient non-attendance. A one-year

TABLE I
PRE-ASSESSMENT CLINICS

	Frequency	Per cent
Yes	73	68.9
No	26	24.5
Yes, for special cases	2	1.9
Yes, for daylists	2	1.9
No, being set up	1	0.9
No, but used to	2	1.9
Total	106	100.0

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Accepted for publication: 27 January 1997.

TABLE II
PATIENTS PRE-ASSESSED

	Frequency	Per cent
Day-case	3	3.8
Inpatient	20	25.0
Both	52	65.0
Children only	2.5	2.5
Not applicable	3.8	3.8
Total	80	100.0

audit suggested a benefit in allowing early replacement for defaulters (Dingle *et al.*, 1993). Robin had recommended PAC to Otolaryngologists as:

(1) patients received adequate notice of admission;
(2) non-attenders were identified early and substituted;
(3) those unfit for general anaesthetic were withdrawn if the anaesthetist was forewarned;
(4) junior medical staff time was more effectively used;
(5) phlebotomists, audiometrists and suitably trained nurses contributed to pre-operative investigations with the results collated by clerical staff;
(6) patients could be admitted the day of surgery (Robin, 1991).

A pre-operative visit has been further recommended in countries not enjoying the benefits of the National Health Service, in allowing financial counselling and pre-certification for private patients well before admission (Senters, 1991; Miller, 1993).

A randomized controlled trial did not confirm all the expected benefits of the PAC versus traditional admitting procedures however. MacPherson and Lofren's study covered all surgical admissions but ENT patients comprised the largest single group, over one-third of the total. Examining length of stay as their outcome measure, they found that pre-operative hospitalization was reduced from a mean of 2.9 days to 1.6 days in the PAC group, but that total length of stay was unchanged (MacPherson and Lofren, 1994).

Unsolicited, but very welcome, comments on our questionnaire and our own experience have suggested that some further expected benefits have failed to materialize.

TABLE III
STAFFING OF PAC

		Frequency	Per cent
1	Nurse	0	
2	Junior Doctor	18	22.5
3	Both	55	68.8
4	Consultant	1	1.3
5	All	2	2.5
6	2 and 4	1	1.3
8	Cannot define	3	3.8
Total		80	100.0

TABLE IV
RELATIONSHIP BETWEEN AVAILABILITY OF JUNIOR DOCTORS AND ADOPTION OF PAC

No. of SHOs	Departments running PAC	Departments not running PAC
0	3	2
1	13	4
2	23	10
3	19	10
4	17	1
5	2	1
6	0	1

Patient inconvenience

The patient must make two visits to the hospital which for some is compensated by avoiding the pre-operative night in hospital. There is no such advantage for day-case admission; a significant proportion of those passing through PAC (Table II).

Emergency admissions

There must still be a mechanism for inpatient admission on the ward to deal with emergencies and with substitutes for defaulters summoned at short notice.

Cancelled operations

An intercurrent illness between PAC and admission may still produce a vacant theatre session and even after attending PAC, a minority of patients will fail to attend on the day of surgery. In either event, a delayed admission may require repetition of the pre-operative preparation (Le Noble, 1991).

Early morning admissions

To prepare newly admitted patients for theatre requires considerable ward nursing resources and is labour intensive. Discharge of post-operative patients, settling of new admissions with handover of nursing shifts means a busy and early start (Livingstone *et al.*, 1993).

Pre-operative surgical/anaesthetic visit

The traditional visit by the surgeon to the patient's bedside the night before theatre is now replaced by, at best, a few moments discussion and confirmation of existing pathology. The pressure for informed consent is increasingly transferred to the outpatient clinic and the PAC (Table VI). Even with overnight pre-operative admission, one study has shown that 8.8 per cent of patients did not receive a pre-operative assessment by an anaesthetist (Lunn and Mushin, 1982).

TABLE V
WOULD ESTABLISH A PRE-ASSESSMENT CLINIC IF GIVEN ADEQUATE RESOURCES

	Frequency	Per cent
Yes	21	77.8
No	4	14.8
Yes, being set up	1	3.7
No, GP domicillary visit	1	3.7
Total	27	100.0

https://doi.org/10.1017/S0022215100137302 Published online by Cambridge University Press

TABLE VI
CONSENT

	Frequency	Per cent
1 = listed for surgery	8	7.5
2 = at pre-assessment	45	42.5
3 = on admission	34	32.1
All three	2	1.9
1 + 2	1	0.9
1 + 3	6	5.7
2 + 3	7	6.6
1. Cannot define	8	2.8
Total	106	100.0

Involvement of junior anaesthetic medical staff in PAC is recommended in most studies (Livingstone *et al.*, 1993; Miller, 1993) but current recruitment difficulties in the United Kingdom make this prospect remote. It is unlikely that the anaesthetist in PAC would ultimately be involved in the inpatient episode anyway. One respondent (Table V) expressed the view that general practitioners should take the responsibility for pre-admission, which seems an even remoter possibility!

The nurse practitioner

The widespread acceptance of medical history questionnaires can reduce the quantity of paperwork required of medical staff (Porter, 1985) and with training nurse practitioners can supervise the initial patient assessment (Pearson and Jago, 1981; Rudkin *et al.*, 1983). Indeed, a recent study has questioned the need for constantly rotating house officers when trained nurse practitioners provide a continuity of service, albeit at a more expensive hourly rate (Dowling *et al.*, 1995). The nurse practitioner could be expected to undertake medical clerking of routine admissions, limited clinical examination and specified clinical interventions on inpatients (e.g. catheterization, iv cannulation). Nonetheless we have not identified any UK unit where the nurse practitioner has replaced medical staff in PAC (Table III).

Following this survey one unit has reported preliminary experience of a nurse-led PAC for elective ENT surgery. Over an eight month period 'a total of 514 adult patients were (*sic*) invited to attend' and 454 did so. This total is exceeded by the average monthly attendance in our unit, suggesting that it may be inappropriate for departments with a significant workload (Koay and Marks, 1996).

The reliability of questionnaire assessment was, however, questioned by Zeitoun *et al.* (1994) who compared this system with routine clerking of 109 paediatric otolaryngology submissions. Only 82 per cent of parents returned the questionnaires, many of these filled incompletely. Fifty-six per cent of parents could not name the operation planned and only half of these actually wanted further information! Questionnaires proved reliable in recording previous surgery and anaesthesia but poorly sensitive for previous medical history and allergy. It was concluded that parents are unable to provide the necessary data without medical assistance.

Effect on junior doctors' hours

The need to reduce doctors' hours of work (NHS Management Executive, 1991) combined with the shortened period of specialist training in the United Kingdom (Calman, 1993) reduces the availability of trainee medical staff for routine service work. Such concerns have led to plans for out of hours cross over between adjacent ENT units (Hartley and Rothera, 1994) and loss of the traditional three tier system of resident doctor, on-call trainee and on-call consultant for emergencies (Fisher *et al.*, 1994). Dilution of emergency experience makes junior doctors' time in hospital even more precious. The intensive clerking session in PAC seems a more efficient use of doctors' time than the traditional system of admitting on Sunday afternoons and late evenings whilst simultaneously providing ward cover and treating emergencies.

The contribution of the nurse practitioner has, in our experience, eased the workload of the junior doctor in PAC. Although admission work is highly concentrated, the PAC has however provided no extra free time for training or for rest. A medical input is still needed to:

(1) review the PAC questionnaire;
(2) confirm persisting need for surgery;
(3) obtain consent.

The last task is considerably eased by mailing of information sheets regarding proposed surgery, together with the completed but unsigned consent form when summoning patients to the PAC. In United Kingdom practice, one-fifth of specialists sign the consent form in the routine outpatient clinic but the majority devolve this task to the junior (SHO) staff (Dawes, 1994). Information sheets complement but cannot replace a medical interview to provide the required details of diagnosis, surgery, complications, post-operative course and success rate. A half of respondents in our survey relied on medical input to PAC to obtain signed consent (Table VI).

The disappointing lack of obvious benefit to junior doctors' hours perhaps explains why, in this study, the availability or lack of SHOs did not influence departments' enthusiasm for PACs (Table IV).

Our experience is perhaps best summarized by an anonymous comment on a returned questionnaire, that PAC 'fills the lists but does not free junior doctors' time'. A highly intensive pre-operative clerking session reduces the pre-operative hospital stay and allows substitution of non-attenders. A medical input has proved indispensable in practice, although the nurse practitioner, outpatient clerk and operative information sheets reduce the workload. The dawn influx of patients for a morning list requires considerable nursing resources. This study has demonstrated continuing enthusiasm for the pre-admission clinic, tempered by experience of its limitations.

Summary

A survey of main Otolaryngology departments in the United Kingdom shows widespread enthusiasm for the pre-admission clinic, a system that requires an

outpatient attendance immediately prior to admission for surgery. There are obvious advantages in allowing a shorter inpatient stay and forewarning of non-attendance and this is reflected in the adoption of this system by the majority of respondents. The contribution of the nurse practitioner eases the workload of junior hospital doctors but has not led to a reduction in hours worked. The rapid throughput of surgical cases requires, if anything, increased ward staff during admission/discharge periods and the patient perception of a conveyor-belt system must be avoided.

Acknowledgement

This study was funded by a grant from the Clinical Audit department, Northern and Yorkshire Regional Health Authority.

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Appendix

1 Do you run a pre-admission clinic in your department?

Yes ☐
No ☐ **(If the answer is No please go to question number 4)**

2 If you do run a pre-admission clinic, which of the following group of patients is offered this service?

Daycases ☐
Inpatients ☐
Both ☐

3 If you do run a pre-admission clinic, is assessment carried out solely by?

Nursing staff ☐
Junior doctors ☐
Both ☐

4 If you do not run a pre-admission clinic do you think that given adequate resources your department would be interested in introducing such a system?

Yes ☐
No ☐

5 In your current practice, when is the written consent form signed by the patient?

When listed for surgery in the outpatient clinic ☐
At pre-admission clinic ☐
On admission ☐

6 Could you please state the number of Senior House Officers in your department.

The number of SHOs is ☐ and their on call rota is 1: .....