Annals of the Royal College of Surgeons of England (1993) *vol.* 75, 96–99

Surgical discharge summaries: improving the record

David C R Adams FRACS
Surgical Registrar

Keith R Poskitt MD FRCS
Consultant Surgeon

James B Bristol MD FRCS
Consultant Surgeon

Cheltenham General Hospital, Cheltenham

Key words: Computerisation; Discharge summary; Audit

The problem area of communication between hospital and general practitioners may potentially be improved by the advent of new information technology. The introduction of a regional computer database for general surgery allows the rapid automated production of discharge summaries and has provided us with the opportunity for auditing the quality of old and new styles of discharge communication. A total of 118 general practitioners were sent a postal questionnaire to establish their views on the relative importance of various aspects of patient information and management after discharge. A high response rate (97%) indicated the interest of general practitioners in this topic. The majority (73%) believed that summaries should be delayed no more than 3 days. The structured and shortened new format was preferred to the older style of discharge summary. The older format rarely arrived within an appropriate time and its content was often felt to be either inadequate (35%) or excessive (7%) compared with the new format (8% and 1%, respectively). The diagnosis, information given to the patient, clinic date, list of medications and investigations were considered the more important details in the summary. Improvements in the discharge information were suggested and have subsequently been incorporated in our discharge policy. The use of new information technology, intended to facilitate clinical audit, has improved our ability to generate prompt, well-structured discharge summaries which are accepted by the general practitioners.

Communication between hospital practitioners and general practitioners after patient discharge has clearly been defined as a problem area *(1–3)*. With increasing emphasis on improving hospital services for both general practitioners and patients, hospital practitioners are faced with the dilemma of improving the quality and speed of discharge summaries without increasing the provision of medical staff or secretarial services.

The recent commitment of both the Royal College of Surgeons of England and the Department of Health towards improving standards of surgical audit has resulted in the establishment of a regional computer database for surgical audit by the South West Regional Health Authority. Patient information stored on computer databases may subsequently be extracted to generate audit information and computer-generated discharge summaries *(4)*. The former practice of this department was to produce a brief handwritten summary on the day of discharge. The hospital notes were then forwarded to the surgical registrar to dictate a formal summary. The initial introduction of this new system to two of the four general surgical firms in our hospital provided us with an opportunity to assess the old and the new styles of discharge summary production. This staggered introduction exposed the general practitioners to both formats simultaneously, enabling a comparison to be made without a time bias. The new computer format has subsequently been adopted by all four firms.

The aims of this study were to (i) assess the quality of previous discharge summaries and the new computer-generated discharge summaries, (ii) identify areas in which further improvement could be made to the summaries, and (iii) investigate methods of improving the efficiency and quality of patient management after discharge.

Materials and methods

The Family Health Services Authority provided a list of all general practitioners registered within the

Correspondence to: Mr K R Poskitt, Consultant Surgeon, Cheltenham General Hospital, Sandford Road, Cheltenham, Glos. GL53 7AN

Cheltenham and District Health Authority (now the East Gloucestershire NHS Trust). A postal questionnaire, with a personalised explanatory letter and a reply-paid envelope were sent to each of the 118 general practitioners registered in this district. A second letter was sent to those who had not responded after 1 month.

The questionnaire was of multiple choice format and enquired into:

(i) The content and timing of previous discharge summaries.
(ii) The content of the new discharge summaries.
(iii) The ideal timing of and acceptable delays in summaries.
(iv) The information content required in summaries.
(v) The dispatch method and format of summaries.
(vi) Management of surgical patients after discharge.

The promptness of the new summaries was established directly by comparing the date of discharge and the date of despatch of the summary as recorded on the computer database.

Results

Responses were obtained from all but four of the 118 general practitioners. The handwritten summary previously produced on the day of discharge was not regarded highly, with 64% of the general practitioners stating that the content was inadequate (Fig. 1) and 50% commenting that they were usually illegible. There were 23% of general practitioners who had apparently not yet seen the new format summaries. Despite this 62% of the total, or 82% of those who had seen the new format, felt that the content of these was adequate. Furthermore, 35% reported that the old format was inadequate compared with only 8% for the new format. The content of the old format was thought to be excessive by 7% of general practitioners compared with 1% for the new format (Fig. 1).

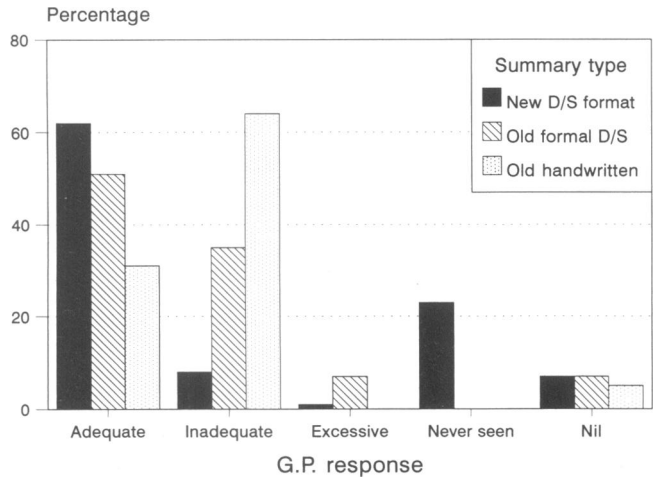

Figure 1. General Practitioners' assessment of the content of computer-generated summaries compared with the handwritten note and old format discharge summary (D/S).

While the formal summaries had adequate content for just over one-half of the general practitioners, 85% indicated that they were dissatisfied with the time they took to arrive. Further information pertinent to the summary, such as histology results and reports of special investigations, may delay completion of a discharge summary. In this situation, 57% of general practitioners would like the formal summary to be produced on the day of discharge, with other results to follow later, while 36% would like a brief discharge note on the day of discharge and a formal summary including these results when available later. Simply delaying the summary until the results came to hand was acceptable to only 3%. On enquiring into the length of delay that could be considered acceptable, 29% felt no delay at all was acceptable, while 44% said delays of 2–3 days were allowable (Table I). Review of our computer records shows that 80% of our new discharge summaries were despatched within this timeframe during the study period.

Of the general practitioners, 95% indicated that the diagnosis and a comment as to whether the patient had been informed of the diagnosis were considered the most important factors (Table II). The date of clinic follow-up and a full list of medications were also ranked highly. The details of the presenting illness were only considered to be necessary by 55% of general practitioners. Information on operative procedures in the form of an advice note at the time of surgery was requested by only 24%, with 72% stating that simply naming the operation within the discharge summary was sufficient.

The preferred method of despatch of discharge summaries was by post (59%), although a significant minority (17%) would prefer them to be given to the patient/relative to deliver by hand or for a copy to be sent by both methods (20%). There was strong support for a

Table I. The ideal timing and acceptable delays for production of discharge summaries (D/S) and the time taken for previous summaries to arrive

	Number (%)
Ideal timing	
D/S on day of discharge	67 (57)
D/S delayed pending results	3 (2)
Note same day and D/S delayed	42 (36)
No answer	6 (5)
Acceptable delays	
No delay	34 (29)
2–3 days	52 (44)
1 week	23 (20)
1 month	2 (2)
No answer	6 (5)
Timing of old format D/S	
Appropriate	12 (10)
Too late	79 (67)
Often never	21 (18)
No answer	6 (5)

'No answer' includes the four GPs not responding to the questionnaire

Table II. Information which general practitioners considered necessary in a discharge summary

Information required	*Yes*	*No*	*No answer*
Diagnosis (Dx)	112 (95)	1 (1)	5 (4)
Patient told Dx?	112 (95)	0 (0)	6 (5)
OPD clinic date	100 (85)	12 (10)	6 (5)
Full medications list	97 (82)	15 (13)	6 (5)
Investigation results	95 (81)	18 (15)	5 (4)
Name of referring GP	94 (80)	19 (16)	5 (4)
Relatives told Dx?	86 (73)	27 (23)	5 (4)
Presentation	65 (55)	48 (41)	5 (4)
Postoperative management plan	65 (55)	49 (42)	4 (3)

Percentages in parentheses. 'No answer' includes those general practitioners not responding to the questionnaire

change in the size of paper used from A4 (22%) to the smaller A5 (69%).

Only 7% of general practitioners felt that all patients should be seen in hospital outpatient clinics after uncomplicated surgical procedures. Over 80% were happy to manage straightforward cases, such as appendicectomy and lipoma excision, and the majority felt that it was appropriate for general practitioners to manage the follow-up of patients after cholecystectomy and varicose vein surgery. However, over one-half of those replying indicated that patients should be reviewed in hospital after breast lump excision. There were 89% in favour of patients being issued with information sheets discussing the nature of their operation and giving postoperative advice.

Discussion

Much has been made recently of consumerism in medicine. In this context, the consumer is generally thought of as the patient and surgical audit has largely been driven by measures of patient outcome. However, the general practitioner is also a user of hospital services, a concept which has become more evident with the advent of budget holding practices. It is therefore timely to audit an aspect of our services to general practitioners. Postal questionnaires have previously been shown to accurately reflect the opinions of general practitioners *(5)* and the high response rate to the current survey reflects the great interest that general practitioners assign to the communication process.

In common with findings elsewhere *(1–3)*, discharge communications from this department have been inadequate in the past and clearly scope for improvement was present. Our study has demonstrated considerable improvement following the introduction of new information technology. This reflects several factors. Patient data is entered at source, ie during the admission, and scrutinised by the team at the time of discharge. Compared with the retrospective way in which information for summaries was drawn from hospital notes in the past, this enhances accuracy of information and minimises significant omissions. The summaries are structured under headings, which makes them easier to follow *(1)* and again diminishes the risk of omitting important elements. Much of the data used in our summaries is imported directly from the hospital's computerised patient administration system (PAS). The rest is transcribed to the computer from proforma cards by our secretarial staff on the day of discharge. The medical input is limited to filling out sections on the proforma related to clinical and operative details, discharge details and the follow-up arrangements. As the system uses codes for much of this information, this data entry is quicker and more efficient than typing discharge summaries and has therefore decreased the secretarial workload. The time spent waiting for dictated discharge summaries to be typed has previously been identified as one of the main factors in delays seen with that form of discharge summary *(6)*.

All of those items which we suggested might be required in a discharge summary were deemed necessary by over 50% of the general practitioners; however, only 55% wanted to know the details of the presentation. Detailed reiteration of these features to the general practitioners is unnecessary when they have seen the patient themselves before admission and may be one reason why the content of summaries was felt to be excessive in the past by some respondents.

Earlier studies *(7–9)* have looked into factors influencing the timing of delivery of discharge summaries to general practitioners, and in particular the question of whether the summary should be posted or given to the patient/relative to deliver by hand. Sandler's study demonstrated decreased delays with the latter *(7)*, although the same percentage eventually arrived with either method. The preference in our study for the postal method may result from this hospital's very efficient internal mail system which provides a daily delivery service to the general practitioners.

A preference for A5 size summaries was demonstrated by general practitioners, presumably reflecting their use of the smaller Lloyd George files rather than A4. We expect this inclination will change as more general practitioners move towards A4 filing systems, so although our computer system allows for both formats, we have not yet changed our policy of providing summaries on A4 paper.

The majority of general practitioners are happy to conduct the follow-up of patients after uncomplicated, relatively minor procedures. Increasing the role of general practitioners in the aftercare of patients has the potential of reducing the hospital clinic load, thereby allowing better access to clinics for patients who do need to be seen. However, it is our present policy that patients discharged before histology results are available, are routinely reviewed to avoid missing significant results. The provision of perioperative information and instruction leaflets to both patient and general practitioners will

play an integral part in improving communication at all levels and thereby improve the quality of patient care. As a result of this study, we are starting to provide such information sheets preoperatively.

The recent introduction of new information technology to the NHS has not only improved the ability to carry out surgical audit, it has allowed the production of computerised discharge information on patients. This shorter, more structured form of discharge summary is clearly more acceptable to general practitioners and potentially may be used by all hospital specialties to provide a speedier, more efficient communication service to the general practitioner.

We would like to thank the General Practitioners of East Gloucestershire for their participation in this survey.

References

1 Tulloch AJ, Fowler GH, McMullan JJ, Spence JM. Hospital discharge reports: content and design. *Br Med J* 1975;**4**: 443–6.

2 Mageean RJ. Study of 'discharge communications' from hospital. *Br Med J* 1986;**293**:1283–4.

3 Harding J. Study of discharge communications from hospital doctors to an inner London General Practice. *J R Coll Gen Pract* 1987;**37**:494–5.

4 Dunn DC, Dale RF. Combined computer generated discharge documents and surgical audit. *Br Med J* 1986;**292**: 816–18.

5 Hicks NR, Baker IA. General practitioners' opinions of health services available to their patients. *Br Med J* 1991; **302**:991–3.

6 Penney TM. Delayed communication between hospitals and general practitioners: where does the problem lie? *Br Med J* 1988;**297**:28–9.

7 Sandler DA, Mitchell JRA. Interim discharge summaries: How are they best delivered to general practitioners. *Br Med J* 1987;**295**:1523–5.

8 Kendrick AR, Hindmarsh DJ. Which type of hospital discharge report reaches general practitioners most quickly. *Br Med J* 1989;**298**:362–3.

9 Dover SB, Low-Beer TS. Study of discharge communications from hospital (letter). *Br Med J* 1986;**293**:1505.

Received 8 April 1992

Book review

Surgery of the Spine. A Combined Orthopaedic and Neurosurgical Approach edited by Gordon Findlay and Robert Owen. 2 Volumes. 1264 pages, illustrated. Blackwell Scientific Publications Ltd, Oxford. 1992. £175.00. ISBN 0 632 03021 6

There was a time when orthopaedic surgeons did not speak to neurosurgeons, or was it the other way round? Now they not only talk and write to each other but they actually write (and edit) together. Other than wedlock it is difficult to conceive of a closer relationship. Thus has been produced a two-volume text seeking to cover the whole gamut of spinal surgery from congenital anomalies at the beginning to spinal injuries at the end of the fifteen sections. Intervening sections cover deformity, neoplasia, infection, degenerative disease, vascular disease, inflammatory disease, metabolic bone disease, syringomyelia, pain and spasticity. The text is well laid out and nicely published and the fact that it is also readable is undoubtedly attributable to the fact that neither author/editor is English. This is the umpteenth spinal surgery textbook that I have reviewed recently for various journals and most have been of the two-volume variety. There is, therefore, a lot of competition ready and waiting for this Liverpool text. Where I think it may win over its rivals is that, despite 87 contributors including the editors, it has a smooth consistency and says enough without too much. Accordingly, the editors are to be congratulated. The text is well illustrated and, for once, most of the radiographs/clinical pictures are recognisable.

On the minus side, spinal surgical texts nowadays seem to have the obligatory first few chapters on anatomy, function, clinical assessment and investigation which have to be negotiated, or skipped, before one gets to the meat of the matter. Then there is the question of disproportion. How can you have the same number of pages devoted to 'parasitic infections of the spine' as to 'thoracic intervertebral disc protrusions'—mind you Liverpool always has been a dangerous place? Fortunately, the positives greatly outweigh the negatives and where I see this text really winning is for the young spinal surgeon in training whose ongoing clinical experience ought to be firmly based upon an adequate knowledge of infrastructure which this text will certainly supply.

ROBERT A DICKSON
Professor of Orthopaedic Surgery
St James's University Hospital
Leeds