

What primary care wants from hospital electronic discharge summaries

– a North/West Auckland perspective

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ABSTRACT

Electronic discharge summaries (EDSs) are now a widely used means of transferring information about a patient's care between secondary and primary care. This study looked at ways of improving the EDS. Themes arising from three GP focus groups held in North and West Auckland guided construction of an online questionnaire that was emailed to 277 GPs practising in the Waitemata DHB catchment, achieving a 37.5% response rate. GPs had clear and consistent views on the utility of and requirements for the EDS, relating to purpose, ownership, qual-

ity of content, and medicolegal issues. Widely held concerns about current EDSs included inaccurate information, especially medication errors, irrelevant information, especially laboratory results (creating a 'data dump'), poor formatting, and insufficient information relating to follow-up requirements in the community. Recommendations relate to improvements in format, content quality and relevance.

Key words

Electronic discharge summary

Introduction

The information flow from secondary to primary care about a patient's acute or elective admission to hospital has been and remains the only way that a patient's GP can accurately know what has happened to the patient and what the ongoing requirements are for that patient in the community. Traditionally this information flow was via written letters and

could be significantly delayed,¹ but the now widespread use of electronic discharge summaries (EDSs) enables rapid, often same-day dissemination of clinical information: for the period 2003 to 2006, 80% of the 19 899 general medicine and 51% of the general surgical admissions to North Shore Hospital had an EDS generated on the same day that the patient was discharged from hospital. Anecdotes

tally, while this move towards same-day EDS delivery has been widely welcomed by GPs, concerns about the EDS content remain,² especially regarding accuracy and relevance of the information.³⁻⁶

This present study, undertaken for the Waitemata District Health Board (WDHB), sought the views of local GPs on problems and solutions relating to current EDSs.



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Figure 1

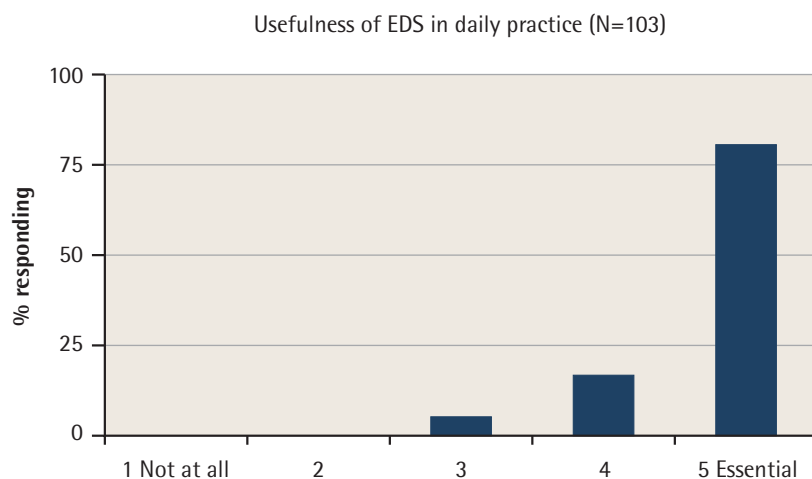


Figure 2

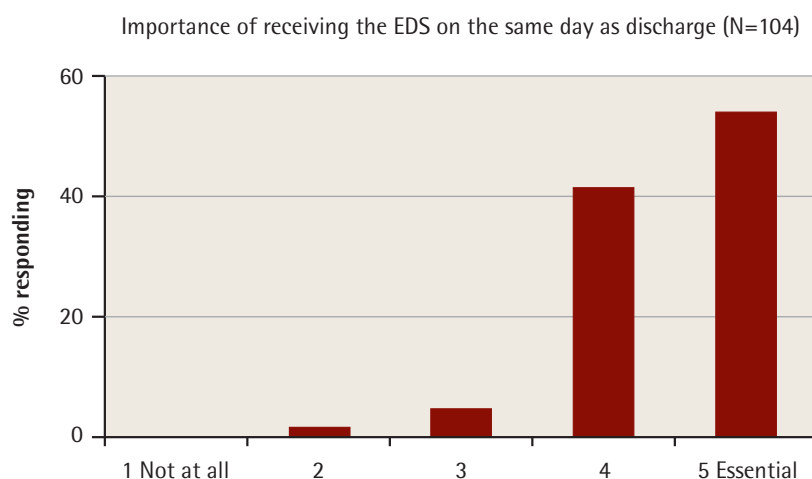
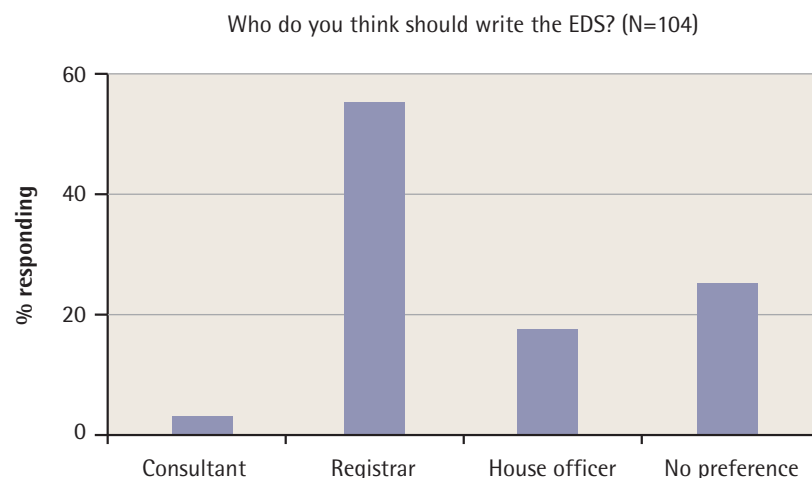


Figure 3



Methods

Three focus groups were held in the Waitemata district in August 2007, at which 20 practising GPs were asked a range of questions relating to EDSs. Participants consisted of a peer review group from Birkenhead, a group of HarbourHealth GPs who responded to an invitation on the weekly PHO newsletter, and a HealthWest GP reference group. Comments and themes arising from these focus groups were then used to construct an incentivised semi-quantitative online questionnaire which was emailed to 277 of the 352 GPs practising in the Waitemata district (belonging to five Primary Health Organisations, or PHOs). Closed questions were used with either 'Yes/No' type, a five-point Likert scale ('not at all' to 'essential'), or multiple choice questions. Some questions had space for free-text comments. This survey had a three-week timeframe, with an emailed reminder sent after one and two weeks.

This study was approved by and registered with the WDH Knowledge Centre under the category of Audit, as defined in the New Zealand Health and Disability Ethics Committee 'Guidelines for Observational Studies'.

Results

Survey respondents

One hundred and four GPs responded to the online questionnaire, which represented a 37.5% response rate. Sixty per cent were male. No respondents were aged less than 30 yrs; 63% were aged 30–50 years, and the remainder over 50 years of age. Three per cent were working <0.3 FTE in general practice, 32% were working 0.3–0.6 FTE and 65% more than 0.6 FTE (three did not answer). Ninety-three per cent were in group practice, of which 69% were in practices of five or more doctors.

Survey results*

See Figures 1 to 3.

* Final collated results and free-text comments by individual respondents can be viewed at http://www.surveymonkey.com/sr.aspx?sm=A96u7xxZaN_2bkjdMyHhu9Bm7AwjzqsyF5uooSJkIeLog_3d

Does the present EDS have sufficient detail to be useful in general practice? N=101.

Seventy-two per cent of respondents indicated that the present EDS had about the right amount of detail; 8% felt there was not enough detail, and 20% felt that the EDS had too much detail.

There were 54 free-text comments relating to this question, relating to three main themes: (1) poor formatting; (2) too many laboratory test results, and (3) the need for different emphases in the EDS. Many GPs clearly expressed their concerns about the EDS being hospital-centric rather than a guide for follow-up care in the primary sector.

'Many discharges have a history of two lines only which is not adequate but 100 lines of lab results, mostly normal.'

'The current summary reads as a record of the past rather than an on-going referral back into primary care.'

Do you agree with the idea of an 'executive summary' (ES) at the start of the full EDS? N=104

91.4% of respondents liked this idea.

Do you want your patients to receive a copy? N=104

Eighty-seven per cent of respondents wanted their patients to receive a

Table 1.

Information wanted in Executive Summary	% Response (N=99)
Accurate diagnosis	100
Discharge medications	92
Major interventions	90
Follow-up requirements in primary care	87
Any specialist follow-up arranged	79
Reasons for any changes in medications	70
ACC data (if applicable) e.g. number, DOI, correct coding	69
Significant investigations at this admission	65
Significant lab results at this admission	63
Where patient was discharged to (e.g. home/rest home/family)	59
Co-morbidities	40
Results pending	33
Palliative care issues	26
Admission medications	24
All investigations undertaken at this admission	6
All lab results at this admission	6

copy of the Executive Summary, and 58% a copy of the full EDS. Comments (N=23) were grouped as:

1. GPs who were keen for their patients to receive copies, for reasons that included self-empowerment, assistance with after-hours care, and the opportunity for 'de-briefing'.

'They often bring these with them and apart from empowering them

with their own information it is a backup for failure of EDS transmission.'

2. Concerns about patients not understanding or misinterpreting information in the EDS.

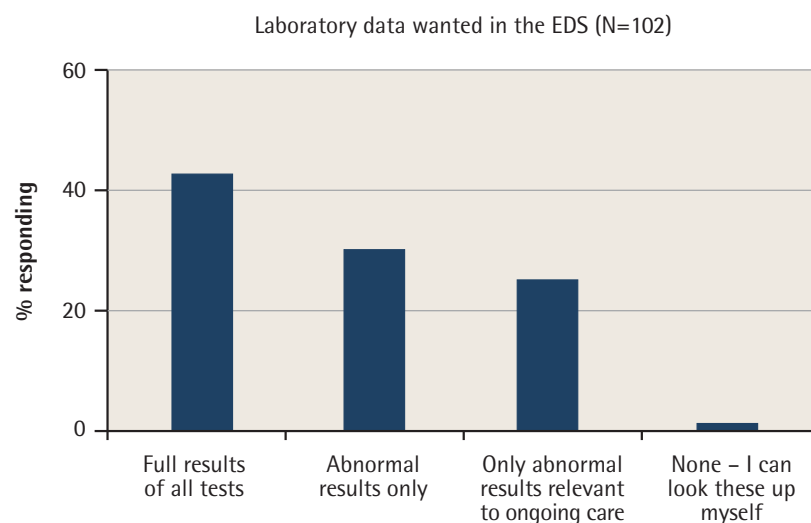
Comments (N=35) centred around GPs not being aware of being able to access laboratory data, formatting issues relating to highlighting of abnormal results, and relevance of results to ongoing GP care.

'Currently there is minimal difference between abnormal and normal. Needs to be very clear when scanning through visually.'

What investigations do you want in the full EDS? N=103

Fifty-eight (56.3%) respondents wanted full results of all investigations, with 25.2% preferring only abnormal results and 17.5% wanting only abnormal results relevant to ongoing care in general practice. More than half (55.9%) of the respondents wanted only abnormal laboratory results but 43.1% wanted all test results (Figure 4).

Figure 4



Any medicolegal concerns about the EDS? N=103

22.3% of respondents indicated that they do have medicolegal concerns about the EDS, with comments (N=23) pertaining to:

1. Lines of responsibility, especially relating to follow-up care.
'Advice that GP be required to follow up a result of a test requested by the hospital doctor within their system – e.g. MSU result, or histology result in particular which are difficult for us to access. This does not follow guidelines on responsibility of care.'
2. Medication errors
3. Visual error/formatting
4. Data inaccuracy
5. IT security concerns.

Do you want to be contacted directly by medical staff about complex/high risk patients prior to their discharge? N=102

94.1% of respondents indicated 'Yes', of which 60% preferred contact to be made by telephone, 12% by fax, 9% by email, 11% via the practice nurse, and 1% via the practice receptionist/manager.

Discussion

The Waitemata district on Auckland's north and western shore has a total population of 481 611 (2006 Census), of which 329 618 (68.4%)

are enrolled in the five Primary Health Organisations (PHOs) who participated in this survey. These PHOs have between them 277 member GPs, of which 104 (37.5%) responded to the online survey. This response rate reflects traditional difficulties with canvassing GP views, and results need to be interpreted in light of whether the respondents represent a reasonable cross-section of GPs in this district.

Table 2.

Do you wish to be advised in the EDS about:	% Yes (N=102)
Services put in place for your patient after discharge e.g. NASC, home support?	98%
Information given to your patient about e.g. smoking, lipids, diabetes nurse referral	81%
Whether an interpreter was involved?	31%
Ethnicity/cultural issues	28%
Information about your patient's religion/beliefs?	20%

The results of the focus groups and online survey clearly showed that GPs value receiving an EDS, and especially valued the EDS's immediacy, when compared to written mailed information. Many comments were made bemoaning the historical time delays in receiving information and difficulties this created to the ongoing care of sick patients.

One of the first themes to emerge from GPs was the plurality of purpose of the EDS: is this a transfer of care document first and foremost, or a hospital record that is, secondarily, a handover to

primary care? GPs clearly expressed that this needs to be defined and, if deemed to not be a handover document, then such a document certainly should be created. Hence a widely endorsed proposal was that an 'executive summary' be cre-

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ated and placed at the start of the EDS, containing all information that is of immediate relevance to the handover process and the continuation of patient care in the post-hospital setting (see Table 1). Medicolegal responsibilities for GPs would reside in this part of the EDS, as would clear instructions for follow-up specialist reviews in outpatient clinics and any ongoing investigative procedures.

Formatting of the EDS was a clear concern – what leaves the hospital often bears no visual relationship to the end-product on GPs' screens. Clear paragraphing, bold titles, and sensible spacing of material are all lost in the transfer process, so that the final document arriving in the GP's electronic inbox is plain text and is difficult to read. This raised medico-legal concerns relating to missing important clinical information that may be 'hidden', undifferentiated, as the user scrolls through the mass of text and laboratory data.

Allied to clear formatting is the need for the text in the EDS to be succinct, straightforward and clear, and relevant to general practice. The first three relate to the writer's ability to convey information in a sensible form; relevance relates to an understanding of the working realities of primary health care. Lack of EDS relevance was a frequent criticism by GPs, reflecting overseas experience that hospital doctors can be 'almost oblivious to GP functions'⁷ and that GPs want discharge summaries that are short and contain pertinent data that concentrates on discharge information – medications, active medical problems at discharge, and follow-up requirements.^{6,8,9} GP views on who writes the EDS were, however, somewhat split; some expressed sympathy for the time constraints of hospital doctors, while other felt that junior doctors were unsuited because of their inexperience and that it behooved senior clinicians to write the EDS.

'Our letters are addressed to a consultant and so they should reply to us. Also they will have a much better idea of what we require to care for the patient. House surgeons can't provide a good opinion and registrars may not be a lot better. We need expert advice.'

A frequent complaint by GPs was the irrelevancy of much of the laboratory data being included in the EDS. This was described as a 'data dumping ground'; not only does almost every test done in the hospital end up in the EDS, but this data is unformatted and therefore very hard to read, with abnormal results poorly differentiated from the many normal results. Even if the formatting was improved with tables and the like, many GPs clearly did not want screeds of laboratory results. A number of GPs stated that 'thoughtful' summaries were more useful to them than detailed results of diagnostic procedures.

Inaccuracy of information in the EDS was the other major concern expressed by GPs, many citing specific examples of inaccurate/incorrect material in an EDS. This is a well recognised problem, here and overseas.^{3-6,10,11} GPs were particularly concerned about inaccuracy of discharge medications – type and dosage – and the frequent absence of a rationale for medications being changed. It is well documented that medication errors are not uncommon when a patient leaves hospital and returns to the care of their GP.^{12,13} Locally, a recent study of 100 patient charts from the general medical service and 100 from the general surgical service at Auckland Hospital found 0.81 medication errors per surgical discharge summary and 1.42 errors per medical discharge summary; of these, four errors were graded as having the potential to cause hospital readmission, and 24 as potentially serious.¹⁴

Medicolegal concerns related to the EDS were expressed by a number of GPs, centred on missing important information and inaccuracies,

Table 3.

Recommendations from primary care to improve the EDS

1. Clearly define and declare:
 - (i) the purpose of the EDS – transfer of care to the primary sector versus secondary care handover?
 - (ii) 'ownership' of the EDS – whose responsibility is this document?
 - (iii) the priority of the EDS – the EDS should be considered an important component of the working day of whoever is designated to write the EDS, with sufficient time allocated for this purpose.
2. Provide information that is accurate, relevant to ongoing GP care, concise, in a visibly clear format.
3. Clear formatting of text and laboratory results.
4. Send the EDS to GPs on the day of discharge from hospital. Where complex issues exist around a patient's discharge, contact the GP directly to advise of these and discuss transition steps.
5. Executive Summary at the start of the EDS, succinctly outlining:
 - (i) A brief, clear overview of the admission, the outcome, and the follow-up requirements. This may need to be formulated by the senior doctor involved with the patient's care in hospital
 - (ii) Accurate diagnosis
 - (iii) Significant investigations at this admission
 - (iv) Significant laboratory results at this admission
 - (v) Major interventions
 - (vi) Discharge medications + Reasons for any changes in medications after admission
 - (vii) Specific follow-up requirements in primary care
 - (viii) Any specialist follow-up arranged
 - (ix) Where patient was discharged to (e.g. home/rest home/family etc.)
 - (x) Specific data that is otherwise difficult to obtain:
 - ACC data (if applicable) e.g. number, DOI, correct coding
 - PHARMAC SA numbers.
6. Avoid cluttering with irrelevant lab results. The Executive Summary should contain only those results that are significant and/or of direct relevance to ongoing GP care, and results in the full EDS should likewise be relevant, with abnormal results clearly differentiated.
7. Clear identification of new or altered information in amended EDSs sent to GPs.
8. Clear identification of who has written the EDS, which hospital consultant the patient was under the care of, and contact details for the recipient GP to discuss the EDS with, if necessary.
9. Formal training for whoever writes the EDS. This needs to include:
 - the rationale for the EDS
 - medicolegal issues relating to the EDS (lines of responsibility)
 - what GPs need in the EDS to optimise transfer of care.
10. Monitoring and evaluation of the EDS
 - within the hospital by senior registrars/consultants
 - by sentinel general practices, with clear line of feedback to the DHB.
11. The patient and their family/whanau/carer should be given a copy of the EDS Executive Summary before or at the time of discharge, and this be explained to them – including follow-up requirements – in language that is appropriate to their health literacy level and culturally appropriate.

Fundamentally, the message from the GP respondents to this survey and focus group participants was: the EDS should receive higher priority from secondary care; it should be clear, sensible, relevant, accurate and appropriate to the requirements of follow-up care in the community. It requires intellectual input from its creators, rather than a cut and paste approach. It is well worth the effort.

particularly of medications. Others cited worries about unclear lines of responsibility in the transfer of care, and a number of GPs were clearly concerned with being asked to follow up test results and with expectations generated by junior hospital doctors that they felt were not their responsibility, e.g. being asked to refer the patient on to specialist services. This issue has received little attention in the literature. A US study found that 41% of 2644 patients discharged from two large tertiary hospitals had pending laboratory and radiologic test results, and that 9% of these results were potentially clinically actionable – of these, 33% would change the patient's diagnostic or therapeutic plan, and 13% required urgent action.¹⁵

Most GPs wanted their patients to receive a copy of some form of discharge summary at their time of dis-

charge from hospital, although some were concerned about the potential for misinterpretation and/or anxiety. Patients also like to receive information about their medical care[†] and, while they may not comprehend some of the terminology, it appears that they also want to know what their GP is being told.^{16,17}

The transition from hospital to home is a potentially vulnerable period for patients, and a time when adverse events can occur that are often not recognised or reported.^{18,19} Patients are often discharged with problems that, while improving, are not yet resolved; as such they may still be quite unwell. The trend to discharge patients earlier after acute hospital admission only increases the requirement for more succinct, relevant and accurate information not only for their GPs but for patients and their family/whanau.

This study shows that GPs in North/West Auckland have a number of concerns about the present iteration of the EDS. Recommendations arising from their feedback will need to be addressed in order to optimise the role of the EDS as an essential tool for achieving seamless transition of care between secondary and primary health care sectors.

Acknowledgements

This work was funded by the Waitemata DHB and by a grant from the Auckland Faculty of the RNZCGP Charitable Trust.

Competing interests

This study was funded by grants from the Waitemata District Health Board and the Auckland Faculty of the Royal NZ College of General Practitioners Charitable Trust. Otherwise, the authors have no other competing interests.

† Another part of this project involved telephone interviews with 22 patients who had recently been discharged from North Shore or Waitakere Hospital. One hundred per cent of these patients believed that they should receive an EDS at the time of discharge, and 90% of those who received an EDS said they had read it. Some stated that they could not understand some of the information, but that they were able to discuss this with their GP subsequent to their discharge.

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