

# Quality of Discharge Summaries sent by a Regional Hospital to General Practitioners

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## ABSTRACT

**Background:** A comprehensive hospital discharge summary sent to the patient's general practitioner (GP) in a timely manner can ease patient transition between care settings.

**Aim:** To investigate the quality of discharge summaries sent by a regional hospital to GPs; and to evaluate GPs' satisfaction with the medication list contained in the discharge summary.

**Method:** A questionnaire was mailed to a sample of 80 Gold Coast GPs who had made more than five referrals to the Gold Coast Hospital during June 2009.

**Results:** 18 responses (23% response rate) were received from September to October 2009. The majority (67%) of GPs received discharge summaries from the hospital and they were mostly in an electronic format with attached medication lists. The reasons for changing medications were not well explained and the timeframe for receiving summaries was considered unsatisfactory. Overall, the majority of GPs were satisfied with the quality of the discharge summaries.

**Conclusion:** GPs mostly received the discharge summaries and the majority received them electronically. The majority of GPs indicated that the medication lists were often attached to the discharge summaries and changes to medications recorded.

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## INTRODUCTION

Hospital discharge summaries provide continuity of care to patients transitioning to the community from hospital.<sup>1</sup> When patients are discharged from hospital their management is taken over by general practitioners (GPs) who often have not been in contact with either the patient or treating doctor during the hospital stay. GPs assume responsibility for patients' treatment after discharge from hospital and they need to be informed of the care provided during the hospital stay and any ongoing issues needing follow-up. One of the principle mechanisms of communicating inpatient treatment and follow-up care are via discharge summaries.<sup>2</sup> Discharge summaries are pivotal in promoting safety in the continuum of care.<sup>3</sup>

It is estimated that medication errors are responsible for 10% of admissions to Australian hospitals.<sup>4</sup> A significant number of medication errors occur due to communication failures about the patient's therapeutic plan, such as ceasing medicines or continuing medicines that are ineffective or harmful, due to incomplete or missing discharge summaries.<sup>4</sup> Stowasser et al.<sup>5</sup> reported that a reduction in 20% of hospital readmissions can be achieved by the provision of comprehensive and accurate discharge summaries.

Lack of communication between health professionals at each transition of care is an opportunity for losing clinical information or inadequately communicating information. Unsuccessfully managed care transitions have been recognised as contributors to adverse drug events and increased medical costs.<sup>6</sup> Studies investigating communication between hospitals and GPs vary in their estimation of how frequently hospital documentation is available to primary care providers. For example, a study undertaken in Balmain Hospital, New South Wales, estimated that 77% of discharge summaries were received by GPs.<sup>7</sup> While a study conducted in another NSW health service district found that only 27% of discharge summaries reached a patient's GP.<sup>8</sup> Studies conducted by the University of Ottawa, Canada, found discharge summaries to be available for only 12% or 15% of outpatient visits following hospital discharge.<sup>9,10</sup>

A systematic review of 73 studies by Kripalani et al.<sup>2</sup> demonstrated that discharge summaries were available for only 12 to 34% of initial follow-up visits. Van Walraven<sup>9</sup> reported that discharge summaries were only available for 12% of outpatient visits (n = 888). They also found a trend towards reduced readmission rates for patients seen by GPs who had received discharge summaries prior to the patients' visits.<sup>9</sup> Similar research of 792 patients found that discharge summaries were available for only 15% of outpatient visits and 8.2% of initial visits, and for 68% of patients no discharge summary was available for any of their visits.<sup>10</sup> Furthermore, discharge summaries were not available because they were either not sent to the GPs (51%) or not generated in time (20%).<sup>10</sup> The timely availability of discharge summaries and medication lists is vital for patient safety.

Surveying GPs to obtain feedback has been used in various studies. One study found that surveys reported low levels of satisfaction with the communication across the discharge process, with GPs being unhappy with the communication they received from hospitals.<sup>11</sup> Another study that similarly surveyed GPs, reported that communication between the emergency department and GPs was unsatisfactory, with confusion on follow-up care and a lack of support for older people at discharge.<sup>12</sup> Despite these studies, little is published about the effectiveness and accuracy of discharge summaries. Therefore, this study aimed to investigate the quality of discharge summaries sent by a regional hospital to GPs; and to evaluate GPs' satisfaction with the medication list contained in the discharge summary.

## METHOD

The study was conducted at the Gold Coast Hospital, a 450-bed public teaching hospital located on the Gold Coast, Queensland. Ethics approval was granted by the Gold Coast Health Service District Ethics Committee and the Griffith University Human Ethics Committee.

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## Sampling and Survey

Of the estimated 450 GPs that practise on the Gold Coast, a sample of 80 GPs was selected who had made more than five referrals to the Gold Coast Hospital during June 2009. This purposeful sample was chosen so that relevant feedback could be gleaned from GPs who worked with the hospital in the local area. Sending questionnaires to all GPs practising on the Gold Coast would have been costly, time consuming and not necessarily beneficial. The surveys were mailed to the 80 GPs during the second week of September 2009.

Face validity of the questionnaire was established by two senior hospital pharmacists and a GP who was a liaison between General Practice Gold Coast and the District. The survey consisted of nine closed-ended questions and one open-ended question inviting comments and suggestions from the GPs. A four-point Likert scale was chosen for responses to the nine closed-ended questions. The questionnaire was designed to be completed in around 5 minutes, as there is criticism that many surveys are long and tend to discourage busy GPs from responding.<sup>13</sup>

The authors promoted the study and its objectives in the July monthly newsletter distributed by General Practice Gold Coast, with the aim of increasing the response rate. High response rates can be achieved by informing doctors of the research topic before mailing questionnaires to them.<sup>14</sup>

GPs were advised to fax the completed questionnaires to the School of Pharmacy, Griffith University and they were allowed four weeks (last two weeks of September and first two weeks of October).

## RESULTS

Eighteen (n = 80) GPs responded to the questionnaire (23% response rate). Responses were calculated using numbers and percentages and the qualitative feedback was thematically analysed. Table 1 provides a summary of the survey results; two (11%) GPs 'always' received discharge summaries from the Gold Coast Hospital, 14 (78%) 'often' and two (11%) 'not often'.

**Table 1. Responses to the questionnaire received from general practitioners (n = 18)**

Questions	Always	Most often	Not often	Never
Receiving DS	2 (11%)	14 (78%)	2 (11%)	-
Receiving DS in timely manner	-	12 (6.7%)	4 (22%)	2 (11%)
Receiving DS in electronic form	3 (1.7%)	13 (72%)	-	2 (11%)
Medication list attached with DS	6 (33%)	12 (67%)	-	-
Medication list accurate and complete	3 (17%)	14 (78%)	1 (6%)	-
Medication list has medication changes	2 (12%)	11 (65%)	4 (24%)	-
Reasons for medication changes mentioned	1 (6%)	5 (30%)	8 (41%)	4 (22%)
DS contains ADRs	3 (17%)	7 (39%)	7 (39%)	1 (6%)
Satisfied with DS quality	1 (6%)	12 (67%)	4 (22%)	1 (6%)

DS = discharge summary. ADR = adverse drug reactions.

The majority of GPs (67%) reported that they 'most often' received discharge summaries in a timely manner, however, four (22%) GPs did not receive discharge summaries in a timely manner and two (11%) GPs 'never' received discharge summaries in a timely manner. The majority of discharge summaries were received electronically (72%), although two GPs (11%) 'never' received the electronic version. GPs stated that medication lists were either 'always' attached (33%) or 'most often' attached (67%) to the discharge summaries.

Of the 17 GPs who responded to questions about the medication list, 24% did not know about the changes to medications. Eight GPs (41%) did 'not often' know the reason for the changes and four GPs (22%) 'never' received this information. The majority of respondents (67%) were 'most often' satisfied with the quality of the discharge summaries.

Eleven GPs included the following extra comments on their questionnaires:

- better hand writing (n = 2), more time to be spent on discharge summaries and comprehensive pathology results;
- send discharge summaries by e-mail (n = 2), separate section for medications that are changed and send discharge summaries in a suitable timeframe; and
- cease handwritten discharge summaries (n = 3).

## DISCUSSION

The majority of GPs 'most often' received discharge summaries from the hospital. GPs 'most often' received discharge summaries in a timely manner before the patient's first appointment with the GP after discharge. However, it is significant that 22% of GPs indicated they did 'not often' receive and 11% 'never' received discharge summaries in a timely manner. These data are an improvement to research from Northwestern University, Chicago, which reported that only 19% (n = 226) of respondent GPs were satisfied with the timeline for receiving the handwritten discharge summaries.<sup>11</sup> This was reiterated by Kripalani et al.<sup>2</sup> who indicated that discharge summaries have to be available for GPs during the first week of discharge to ensure that GPs are aware of their patient's health status and management before the first follow-up visit. A recent study of over 100 000 patients by Roughead et al.<sup>15</sup> found that 25% of patients visited their GPs during the first four days post-discharge. Therefore, suggestions for using prompt methods of communication (e.g. fax, e-mail) to send discharge summaries are reasonable and would provide a solution to the time gap to access discharge summaries.

All of the GPs preferred electronic discharge summaries as they were accurate, legible and contained medication lists in most instances. This finding was consistent with the results from a study by Callen et al.<sup>16</sup> which found that electronic summaries are of high quality in terms of accuracy and completeness. Comparisons between paper-based and electronic discharge summaries in a randomised trial, have shown electronic summaries to be more complete and accurate.<sup>16</sup>

It is common practice within Queensland Health hospitals that medication lists are generated by either the doctor involved in the patient's discharge or the pharmacist who has prepared the discharge medication profile. Time constraints and staff shortages often prevent health professionals from writing comprehensive medication lists at discharge. The absence of updated

and uniform medication lists poses a problem for continuity in patient care with the risk of less effective treatment and adverse drug reactions.<sup>17</sup> Another reason according to Coombes et al.<sup>18</sup> and Ketley et al.<sup>19</sup> is the lack of proactive discharge planning, which increases the stress on the patient who wants to go home and hospital administration who may require the bed for another patient. Such pressures may increase the possibility of doctors not generating medication lists. This could also partly explain why most GPs indicated that the changes in patients' medications were not well described or explained.

The majority of GPs (72%) were satisfied with the accuracy of information on the discharge summaries, including accurate and complete information about changes made to medicines. These results are in variance to the Northwestern University study, which found that only 32% of the 226 respondent GPs were satisfied with the quality of discharge summaries.<sup>11</sup> However, the response rate to the present survey was low and it is possible that non-responders could have been dissatisfied with the quality of the discharge summaries.

Of concern is that 45% of GPs 'not often' or 'never' received information on patients' adverse drug reactions in the discharge summaries. This finding supports research which indicated that from 2004 to 2005, an estimated 90 371 hospital admissions resulted from adverse medication events, i.e. 2% of all hospital admissions.<sup>20</sup> Many of these could have been prevented and a significant reduction in healthcare costs could have been achieved.<sup>20</sup> It has been reported that 19 to 23% of patients experience an adverse event following discharge from hospital, with adverse drug reactions being the most prevalent, and that half of these adverse drug reactions could be prevented or ameliorated through improved transitional care.<sup>21-23</sup> One possible explanation for the apparent lack of up-to-date adverse drug reaction information is the complexity involved in merging data from different clinical software sources into the electronic discharge summary.

GPs' comments focused on developing discharge summaries for all patients, only generating electronic discharge summaries, clearly stating changes to medicines in discharge summaries and forwarding it in a timely manner.

In conclusion, GPs mostly received the discharge summaries and the majority receiving them electronically. The majority of GPs indicated that the medication lists were often attached to the discharge summaries and changes recorded. However, the reasons for the changes to medications and adverse drug reactions were not appropriately addressed.

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