

# Improving Communication Between Hospitals and Community Providers: The Role of a Pharmacy Discharge Letter

Roland Grad and Louise Mallet

## INTRODUCTION

Drugs prescribed by community-based doctors are often changed during the course of a hospitalization.<sup>1</sup> In addition, hospitalization may expose patients to new medication<sup>2,3</sup> which may be continued after discharge, further adding to the complexity of the discharge planning process. For recently hospitalized patients with multiple chronic diseases, medication management is an especially important issue post-discharge.

Only a minority of community-based doctors are satisfied with the information related to change in drug therapy as provided to them by hospitals.<sup>4</sup> In this paper, we describe how a pharmacy discharge letter can facilitate continuity of patient care between the hospital and the community. Discharge letters provide community-based pharmacists and other health professionals with information that may improve patient compliance with the changes in their drug regimen. The "pharmacy discharge letter" (Appendix A) includes information on medication changes that occurred during hospitalization, the reasons for these changes, and suggestions for medication management and follow-up. Controversial and complex drug-related issues addressed in this letter are usually resolved in discussion with the patient and other providers. The utility of the pharmacy discharge letter is illustrated by the following clinical case.

## Case presentation

An 88 year-old man was admitted to a general medical ward for treatment of cellulitis. His past history included hypothyroidism, congestive heart failure and recent onset of anorexia and weight loss. He lived alone without family support and required weekly assistance for bathing. Contact was made with the community pharmacist who confirmed that prior to admission, the patient was dispensed the following medications on a monthly basis: digoxin 0.25 mg 1 tablet daily, enalapril 5 mg 1 tablet twice daily, ECASA 325 mg 1 tablet daily, levothyroxine 0.075 mg 1 tablet daily, and omeprazole 20 mg 1 tablet daily.

On admission, laboratory values were within normal limits except for a serum albumin level of 29 g/L (normal range 35-55 g/L) and a digoxin level of 3.5 nmol/L

(therapeutic range: 0.8-2.6 nmol/L). His calculated creatinine clearance was 26 ml/min or 0.43 ml/s.<sup>5</sup>

Cloxacillin 500 mg IV every 6 hours was administered for treatment of cellulitis, and digoxin was held for 2 days pending a repeat blood level. Lorazepam 1 mg *hs prn* was prescribed for insomnia, and given nightly by the nursing staff. There was no clear indication for omeprazole, therefore it was discontinued. Levothyroxine, ECASA and enalapril were continued unchanged. On the third hospital day, a repeat digoxin level was 1.4 nmol/L, and the daily dose of this drug was decreased to 0.125 mg. A generalized maculopapular rash developed, and clindamycin was substituted for cloxacillin. Allergy to cloxacillin was documented in the medical chart and pharmacy database.

## DISCUSSION

Unfortunately, patients about to leave the hospital may have relatively little knowledge of their discharge medication.<sup>6</sup> If community-based pharmacists and other health professionals receive a summary of hospital-associated medication changes, the potential for continuity of care (which includes the task of monitoring the effect of new medication or changes in dose) is enhanced. In addition, allergic reactions can be communicated to community-based prescribers and pharmacists to diminish the probability of re-exposure.

Several issues in drug management are illustrated by this case, namely the change in digoxin dose, initiation of lorazepam in hospital, discontinuation of omeprazole, and allergy to cloxacillin. Since hospitalization exposes patients to new medication, exposure to drugs such as

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benzodiazepines while in hospital may initiate a pattern of long-term use. In support of this hypothesis, a recent case-control study using data from the Quebec Health Insurance Board revealed that elderly persons newly dispensed a benzodiazepine were more than 3 times as likely to have been recently hospitalized as compared to users of other medication.<sup>7</sup> Furthermore, two-thirds of new users refilled their first benzodiazepine prescription at least once after discharge from hospital indicating that new use frequently leads to long-term use. Although short-term use of benzodiazepines in hospital may be appropriate,<sup>8</sup> abrupt discontinuation after regular use may precipitate withdrawal symptoms. Therefore, for this patient our pharmacy discharge letter recommended tapering lorazepam to minimize the risk of rebound insomnia.<sup>9-12</sup>

The pharmacy discharge letter was validated using a 17-item questionnaire mailed to 20 community pharmacists, 20 physicians, and 10 home care nurses.<sup>13</sup> Each provider rated the quality and pertinence of the information transmitted by this letter on a 5-point Likert scale. Overall, ratings of clinical utility, quality and pertinence of information provided were very high. When asked if they would like to receive such a letter for all of their patients, 82% of physicians, 71% of pharmacists, and 80% of nurses said "yes". Thus, the providers confirmed that the pharmacy discharge letter facilitated the transmission of pertinent information regarding the patient's drug regimen. Interestingly, the level of support from pharmacists was lower than physicians or nurses. Possible reasons for a lower level of support in the pharmacist group include a lack of familiarity with this approach (while physicians and nurses are familiar with discharge summaries), and concerns about the interpretation of clinical data, such as laboratory results.

This pharmacy discharge letter is routinely completed for all patients discharged from the Geriatric Inpatient Unit at the Royal Victoria Hospital. For most patients, we estimate that 15-30 minutes of the hospital pharmacist's time is required to prepare such a form. Approval by the hospital medical records department will be sought to formally incorporate the letter into the hospital medical record. With regard to the case of our patient presented earlier, a copy of the pharmacy discharge letter was given to the patient, along with the discharge prescription, to bring to his community pharmacist. The patient's personal physician was mailed a copy of the pharmacy discharge letter in addition to the usual medical discharge summary, and the geriatric liaison nurse

faxed a copy of the pharmacy and medical discharge summaries to the local community health nurse responsible for home care.

Further research to evaluate the impact of enhanced communication as a result of using this pharmacy discharge letter is recommended. Anecdotal comments received from community providers have been very positive. Community physicians and pharmacists who are better informed regarding changes in their patients' drug regimen may be more likely to recognize drug-related adverse events and to implement interventions in the community setting to reduce inappropriate drug use. ☒

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## Appendix A

**Plan de soins pharmaceutiques au congé de l'hôpital / Pharmacy discharge letter**

Établissement: Establishment:		Royal Victoria Hospital		Numéro de dossier médical: Medical chart Number:		RVH-XXXXXXXXXX	
Admission (date): 1998-01-01	Congé/Discharge 1998-01-25	N° jours d'hosp./N° days hosp 24 days		Numéro d'assurance-maladie/Health insurance number: XXXX-1111-2222-3333			
Allergies: Cloxacillin		Diète/Diet:		Nom/Last Name: XXXXXX		Prénom/First name, initials: Henry	
Clairance à la créatinine: Creatinine clearance:		26 mL/minute 0.43 mL/sec		Date de naissance/Birthday: 1909-01-14	Âge/Age: 88	Sexe/Sex: M	Poids/Weight: 50 kg

**NOM, ADRESSE, TÉLÉPHONE / NAME, ADDRESS, PHONE NUMBER**

Bénéficiaire: Patient: 3660 XXXXXX Montreal, Que H1A-1A1 Tel: xxx-xxxx		Médecin de famille: Family physician: Dr. XXXXXX xxxx St Jacques Street Montreal, Que H1A-1A1 Tel: xxx-xxx	Pharmacien communautaire: Community pharmacist: Mr. XXXXXX XXXXX 2333 Pine Avenue Montreal, Que H2A-1A1 Tel: xxx-xxxx	CLSC: Ms. Nurse CLSC St Henri xxx Notre Dame St Montreal, Que H4C 1P5 Tel: xxx-xxxx
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Diagnosics/Diagnoses: Leg cellulitis	Liste des problèmes/Problem List: Hypothyroidism Congestive heart failure Constipation
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**Gestion des médicaments/Medication management:**  
A written medication calendar was explained and given to the patient by the hospital pharmacist.

<b>Médicaments à l'admission/Medication upon admission:</b> Digoxin 0.25 mg qd Enalapril 5 mg bid Omeprazole 20 mg qd Levothyroxine 0.075 mg qd ECASA 325 mg qd	<b>Médicaments au congé/Medication upon discharge:</b> Digoxin 0.125 mg qd Enalapril 5 mg bid ECASA 325 mg qd Levothyroxine 0.075 mg qd  Lorazepam 0.5 mg qhs for one week, then discontinue.
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Medicaments Medications	Raisons du traitement/modifications (incl. valeurs de lab.): Reasons for treatment or modifications (incl. laboratory results):	Suivi recommandé: Follow-up needed:
1. Digoxin	Digoxin dose was decreased from 0.25 mg qd to 0.125 mg qd, as serum level was too high on admission (3.5 nmol/L).	Repeat digoxin level not done after lower dose of digoxin was prescribed. If clinically indicated, a repeat digoxin level is recommended.
2. Omeprazole	Medication discontinued as of no clear indication.	
3. Lorazepam	Started for acute insomnia related to hospitalization. Taken nightly while in hospital.	A tapering regimen is suggested to minimize risk of rebound insomnia: Lorazepam 0.5 mg qhs x 1 week then discontinue.
4. Enalapril 5. ECASA 6. Levothyroxine	No changes were made in these medications	
<b>* NOTE CLOXACILLIN ALLERGY: GENERALIZED RASH.</b>		

Évaluation faite par: \_\_\_\_\_ Tél./Tel.: \_\_\_\_\_ Date: \_\_\_\_\_  
Evaluated by: \_\_\_\_\_