Pharmacy Discharge Plan for Continuity in Patient Care

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The philosophy of pharmaceutical care proposes that the pharmacist accepts the responsibility for meeting the drug-related needs of the patient. In order to apply this concept, the pharmacist must establish a relationship with the patient, collect the relevant information on drugs and disease states, identify and prioritize the patient's drug-related problems, assume responsibilities for management, develop therapeutic and monitoring plans and follow-up on the proposed plans.

During hospitalization, the patient's drug therapy is often modified. On discharge, a medical discharge summary is usually sent to the community primary care physician who will assure continuity of care for the patient. Changes in drug therapy during hospitalization are usually not mentioned in the medical discharge summary. Furthermore, the community pharmacist does not have access to this information even though he is usually the first health professional the patient sees after leaving the hospital. Due to a lack of information, the community pharmacist is unaware of the final diagnosis of the patient, of the therapeutic rationale for new medications and of the reason for changes made in the previous drug regimen.

Burns et al. also evaluated the pharmacotherapy of patients five to 10 days after hospital discharge. They recommended that communication of information between hospital and the community physician be done more effectively and that community pharmacists be informed of the needs of senior patients. Tamblyn et al. found that the greater the number of physicians prescribing medications for an elderly patient, the greater the risk that patient will receive a potentially inappropriate drug combination. The authors also found that the presence of a single primary care physician and a single community pharmacist for a patient may have protective factors in preventing potentially inappropriate drug combinations.

To facilitate continuity of patient care between hospital and the community, a form entitled "Pharmacy discharge plan" was developed. This form was validated through a questionnaire and the results of the study are currently being analyzed for publication. It was found that the pharmacy discharge plan facilitates the transmission of drug-related information to community pharmacists and other health-care professionals.

In order to maintain confidentiality in transferring sensitive information on the patient, the pharmacy discharge plan can be given to the patient when he/she leaves the hospital, along with the discharged prescription. A copy of the pharmacy discharge plan can also be sent to the community primary care physician along with the copy of the medical discharge summary.

To illustrate how the pharmacy discharge plan can be used in clinical practice, a case of a real patient admitted to the geriatric unit at the Royal Victoria Hospital is presented. The patient was an 98-year-old woman admitted with generalized weakness, falls and weight loss. She had a history of Parkinson's disease, osteoporosis, malnutrition and constipation. Her weight was 42 kg upon admission. She had no known allergy and lived alone with her three cats and one dog. She had help at home for bathing three times per week from health-care nurses. Upon admission, laboratory values were all within normal limits except for an albumin of 30g/L. Her calculated creatinine clearance using the Cockcroft and Gault formula' was 25 mL/min or 0,41 mL/s.

Numerous drug-related problems were detected when the patient was admitted to the unit. The drug-related problems were classified into five different categories.
1. The patient was taking drugs for which there were no clear indication.

The patient was receiving hydrochlorothiazide 50 mg daily with no clear indication. Her blood pressure on admission was 100/60 and she had a history of falls. Her calculated creatinine clearance was 25 mL/min. Thiazide diuretics are ineffective with a creatinine clearance of less than 30 mL/min. She was also taking methyldopa 250 mg daily. The patient mentioned that her blood pressure pills were prescribed one month ago after a visit to her doctor where he mentioned that her blood pressure was elevated. It was soon after she started to take these pills that she began to fall and became weak. Both hydrochlorothiazide and methyldopa were discontinued in the hospital and the patient's blood pressure monitored daily. Potassium supplement was also discontinued since there was no indication for this medication.

2. Patient was receiving too little of the correct drug.

The patient was taking a total of 1000 mg of elementary calcium each day. After evaluation by the dietitian, it was recommended to increase her intake of elementary calcium to 1500 mg per day. Her dose of elementary calcium was increased to one tablet of 500 mg three times daily.

3. Patient needed pharmacotherapy but is not receiving it.

The patient needed to receive at least 400 IU of vitamin D for her osteoporosis. A multivitamin preparation with 400 IU of vitamin D was prescribed once daily.

4. Patient was receiving too much of the correct drug

After evaluation with the physiotherapist, it was decided that her dose of Sinemet needed to be readjusted to Sinemet 100/25 one tablet at 6hOO, 11hOO, 17hOO and 22hOO. With this dose, the patient was functioning well and could manage her activities of daily living.

5. Patient was receiving the wrong drug.

The patient was receiving a stool softener and was still complaining of constipation. At home, she mentioned that she was taking mineral oil one tablespoon at bedtime. She did not like the taste of milk of magnesia. After negotiating with the patient, it was decided that she would try Lactulose one to two tablespoons daily in the morning as needed for her constipation.

A copy of the pharmacy discharge plan was sent to her community pharmacist along with her discharge prescription, and to her physician with the medical discharge summary. The patient received one copy to give to the nurse that was visiting her at home.

A pharmacy discharge plan is routinely used for all patients discharged from the geriatric unit at the Royal Victoria Hospital. This form is also being used by fourth-year pharmacy students at the Faculty of Pharmacy at the University of Montreal during their clinical clerkship. From experience, 15 minutes are required to fill this form for an average patient. This form is available on paper and electronic format (Word for Macintosh and PC, and WordPerfect) in English, French, or both languages. It will soon be downloadable from USAGE's Internet site (www.USAGE.mcgill.ca). For more information on this form, readers can contact Louise Mallet at (514) 842-123 1, extension 5872, or by fax at (514) 843-1738. The authors authorize the reproduction of the form but would appreciate if their names and their affiliations be noted in the original form.

References

**PHARMACY DISCHARGE PLAN**

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<th>Establish: Royal Victoria Hospital</th>
<th>Medical Chart Number: RVH-XXXXXXXXX</th>
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<tbody>
<tr>
<td>Last Name XXXX</td>
<td>First Name, Initials: XXXXX</td>
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<td>Health Insurance Number XXXX-1111-2222-3333</td>
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<table>
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<tr>
<th>Birthday: 1909-01-14</th>
<th>Age: 88</th>
<th>Gender: F</th>
<th>Weight: 42kg</th>
<th>Allergies: None</th>
<th>Diet: Nothing special</th>
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<tr>
<td>Admission date: 1997-01-10</td>
<td>Discharge date: 1997-01-25</td>
<td>No of days hospitalized: 15 days</td>
<td>Creatinin clearance: 25mL/min or 0.41mL/s</td>
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**NAME, ADDRESS, PHONE NUMBER**

<table>
<thead>
<tr>
<th>Patient: 3660xxxx Montreal, Que H3A 1A1 Tel: xxx xxxx</th>
<th>Family Physician: Dr. xxxx Xxx St Joseph St. Montreal, Que H3A 2S2 Tel.: xxx xxxx</th>
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</thead>
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<tr>
<td>Community Pharmacist: Mr. xxxx xxxxxxx 2333 Pine Avenue Est Montreal, Que H2S 1A1 Tel.: xxx xxxx</td>
<td></td>
</tr>
<tr>
<td>CLSC/Other: Mrs xxxx CLSC xxxxxx 2222 Notre Dame St. Montreal, Que H3S 1A1 Tel: xxx xxxx</td>
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**Diagnoses:**
- Falls
- Generalized weakness
- Weight loss
- Vitamin B₁₂ deficiency

**Medical Problem List:**
- Parkinson's disease
- Constipation
- Osteoporosis
- Malnutrition

**Medical Management:**
The patient was started on the self-medication program while in hospital. She has one dosette box that the pharmacist will fill every week. She understands why she is taking her different medications. A medication schedule was given to the patient.

**Medication Upon Admission:**
- Methyldopa 250 mg qd
- Hydrochlorothiazide 50 mg qd
- Colace 100 mg bid
- Mineral Oil 15 mL at bedtime
- Calcium Carbonate 500 mg qd
- Sinemet 100/25 1 ½ tablet at 6h00, 14h00 and 22h00

**Medication Upon Discharge:**
- Calcium carbonate 500 mg tid
- Fortamines 1 tablet qd
- Sinemet 100/25 1 tablet at 6h00, 11h00, 17h00 and 22h00
- Lactulose 1 tablespoon every morning if needed for constipation
- Vitamin B₁₂ 100mcg q month

**Medications:**
- 1. Calcium Carbonate 500mg tid and Fortamines 1 tablet daily
- 2. Sinemet 100/25 1 tablet at 6h00, 11h00, 17h00 and 22h00
- 3. Lactulose 1 tablespoon in the morning when needed for constipation
- 4. Vitamin B₁₂ 100 mcg q month

**Reasons for Treatment or Modifications (Incl. Laboratory Results):**
- For her osteoporosis. It was evaluated that her daily requirement for calcium was not met in her diet and the dose of elementary calcium was increased to 1500 mg per day. She also needs a multivitamin preparation that contains at least 400 IU of vitamin D.
- The dosage of levodopa was decreased and a change in the time of administration was made according to her clinical response.
- Colace was discontinued since it was not effective after two weeks of usage. The patient was also informed that she should not take mineral oil for her contipation when she returns at home. The side effects of using mineral oil were explained to the patient. She knows how to use her lactulose and takes it when needed.
- A diagnosis of vitamin B₁₂ deficiency was made while in hospital. She needs a monthly injection of vitamin B₁₂. Home health-care nurse will administer every month. She received her dose on January 20.

**Follow-up-needed:**
- No laboratory tests needed. Need to follow if the patient is constipated.
- Next dose due on February 20

Evaluated by: _________________________     Tel.: _____________________________ Date: ______________________

Copies: 1 - Hospital Chart. 2 - CLSC. 3 - Community pharmacist. 4 - Family physician. 5 - Patient. © 1996 Mallet/Bergeron/Laprise: RVH/USAGE