Pharmacy Practice

Utilizing Home Medication Supplies for Hospital Patients

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INTRODUCTION

In 1993, the Pharmacy Services Department, in cooperation with the Nursing Department, at The Moncton Hospital was asked to design a pilot program whereby a patient's home supply of medication would be used in hospital. The program was to be initiated at The Moncton Hospital and evaluated for province-wide implementation. The program was created with the support of the administration of the Hospital Corporation as well as the Provincial Minister of Health. It was envisioned as a cost-saving measure intended to reduce drug expenditures.

The Facility

The Moncton Hospital is one of 5 health care facilities in the South-East Health Care Corporation. It is a 399-bed, active treatment regional hospital. The hospital is a community oriented organization involved in a wide range of services including preventative medicine and health education.

Medications are provided to in-patients through a combination of individual prescriptions and wardstock items, dispensed from a central pharmacy. This modified unit-dose system uses a computerized 7-day medication cart exchange system. As well, the pharmacy produces a daily computerized medication administration record (MAR) for each patient, along with other relevant reports and documentation.

The Pharmacy and Therapeutics Committee maintains a relatively restrictive formulary while attempting to reflect current practice needs. There is a Drug Use Evaluation program in place which attempts to maximize the cost-benefit ratio of chosen formulary agents.

Program History

The "Home Medication Program" began to take shape in June of 1994. One full-time equivalent (FTE) was added to the staffing complement and this allowed one pharmacist to be dedicated to the pilot program which initially began on one Family Practice Nursing Unit and one Surgical Nursing Unit. All patients on these units were asked to participate. There was no differentiation between patients with or without third party drug coverage. All patients were treated equally. At all times, participation in the program was voluntary.

Third party payers were notified in writing that the Home Medication Program was being developed at the Moncton Hospital. Written response indicated that these insurers did not object to the principle of the program since all patients were included regardless of drug coverage.

The actual time necessary to provide this service to 101 patients over a 6-week period was recorded and averaged. Early estimates suggested that, on average, a time of 13 minutes per patient was required to reach the nursing unit, locate the patient's chart, home medications, verify that these medications could be used safely in hospital and complete the necessary documentation.

In collaboration with the Admitting and Community Relations Departments, an information pamphlet describing the program was developed and provided to the public. The pamphlet was included with the pre-surgical information packet given to all booked surgical patients. The pamphlet explained that patients were to bring their medications to hospital in the original containers as dispensed by their community pharmacy. Once in hospital, these medications were received by a nurse and verified by a hospital pharmacist. All medications were stored in the medication cart and administered by a nurse at standard dosing times.

Program Changes

It was decided in July of 1994 that concentrating on all patients with non-formulary medications throughout the entire facility, rather than patients with formulary or non-formulary medications on the Family Practice Unit, would result in a greater cost savings. The non-formulary budget was in excess of $80,000 and it was felt that

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there was great potential to reduce this expenditure if patients used their own supply of medication. Therefore, although the Home Medication pharmacist had many positive interactions with staff and patients in Family Practice, the major focus of the project was cost savings.

As well, the newly designed "Day of Surgery Admission" program was incorporated into the Home Medication Program. Patients in this program were seen at a pre-operative clinic 1 week prior to surgery. At this clinic, patients were given information about the program. Both formulary and non-formulary medications could easily be verified on the morning of the surgery and passed on to the patient's post-operative nursing unit.

In the spring of 1995 a chart audit of 500 patients who had participated in the Home Medication Program between May 1994 and January 1995 was performed. A savings of $24.60/patient/hospital stay was calculated. Using this figure, an annual cost savings of $182,655 was projected for a hospital-wide program that included both formulary and non-formulary medications.

This same chart audit demonstrated that 64% of admissions had home medications available for use in hospital. The figure of 13 minutes to complete all aspects of the program for each patient was confirmed. Considering that The Moncton Hospital averaged over 12,000 admissions per year, it was decided that a second FTE would be required if the program was to expand to include the entire hospital.

Once again, the assistance of the Community Relations Department was requested to convey the message to the public to bring their medications with them to the hospital. Community Relations began an advertising blitz using newspaper and radio interviews to convey the message to patients. The cost savings and improved patient care benefits of the program were emphasized during the campaign.

Starting in September of 1995, a new nursing unit was added to the program every 2 weeks. All medications, both formulary and non-formulary, were verified. In November 1995 when approximately 75% of the nursing units were participating in the program, a second audit was performed. Data from 252 patients admitted between November 6 and 10 were compiled and assessed. The actual daily drug cost was multiplied by the average lengths of stay on each nursing unit. The results estimated a cost savings of $32.05 per patient admitted to the hospital with their home medications.

Current Practice

The program is structured to begin with a patient interview on admission. The patient's medication history is recorded on a "Medication at Home Data Base" (MAHDB). This form (Appendix A) is to be completed for all patients admitted to any nursing unit. It may be completed by the nurse, physician, or pharmacist at the time of admission. The MAHDB is a triplicate form consisting of: a) page 1 (white) - to be filed on chart. Designed to act as the first physician's medication order; b) page 2 (yellow) - to be sent to pharmacy for order processing and addition to the MAR; c) page 3 (pink) - to be filed on chart in the medication section. Serves as a working copy of the document where days supply, refill information, and general communication will be documented.

The initial medication history provides information describing allergy status, medications used at home, the strength per unit, frequency of administration, availability while in hospital, and any other comments that are relevant to the patient's medication history. As well, the patient's height, weight, diagnosis and surgery (where applicable) are recorded in the appropriate boxes on the MAHDB. To initiate the home medication orders, the MAHDB must be signed by the physician or signed by the nurse on the physician's behalf, once a verbal order has been received, to continue the listed drug therapies.

If the patient takes a medication differently at home than prescribed, the prescription label directions will be listed under the column "directions from bottle". The dosing schedule, as relayed by the patient, will then be recorded under the column stating "comments including directions as stated by patient". With the physician's approval, directions as stated by the patient are followed when they differ from label directions. The directions as stated by the patient are felt to more accurately reflect any changes in drug therapy that may have been made by the physician since the original prescription was filled. The physician is always at liberty, however, to prescribe the former dosing regimen or a totally revised regimen if he or she feels that the patient is not following an efficacious schedule at home. A new supply of medication is dispensed for any in-house orders that do not correspond with the directions listed on the home prescription label. However, it is a principle of the program that at no time, no matter what the circumstance, will a patient be denied medication.

Verifying Medications

Home medications are not to be used until verified by a pharmacist. Medications are verified by the Home Medication pharmacist on the premise that they appear acceptable to be used in the hospital setting. Tablets or capsules are identified by colour, shape, and markings and confirmed by an acceptable reference source such as the Compendium of Pharmaceuticals and Specialties. Bulk products such as inhalers and eye drops are verified by examining the manufacturer's original product label. Re-packaged creams, ointments and liquids are identified by colour and the appearance, ensuring that

these products have not been tampered with since the original date dispensed. It is understood that when a pharmacist identifies a home medication, he/she is verifying it on the basis that the product appears acceptable. Product sterility and integrity cannot be verified.

Medications brought into the hospital are also examined to identify the name of the patient for whom the medication was prescribed, the name of the drug, the strength per unit of the drug, the original directions, any expiry dates where available, the date when the available supply of medication will run out, and the number of refills available. Once verified, the pharmacist attaches an auxiliary label with his/her initials and the date. The Home Medication pharmacist initials and signs the bottom of the MAHDB. If a medication cannot be verified prior to the next scheduled dose, pharmacy will supply an interim quantity of medication until such time as the home prescriptions can be evaluated. However, not all "home medications" are deemed suitable for use within the hospital. A medication is deemed unusable if: 1) The directions on the label are not consistent with the manner in which the patient takes the medication at home; 2) The directions on the label do not match how the medication is ordered in hospital; 3) The product appears to have been tampered with (i.e., two different types of medication in one prescription vial, or contents that differ from the drug listed on the label); 4) The medication is bubble packed and contains more than one drug per blister; 5) The medication is in a dosette container with no label or directions; 6) The medication is a prescription narcotic. Use of hospital stock is preferred to avoid issues such as accounting and accountability; 7) Other circumstances where the pharmacist deems the use of the medication in hospital would not be appropriate, such as outdated medications or crushed tablets; 8) Medications with labels reading "as directed", OTC products without a drugstore label, and bulk products without a label are often deemed usable.

Regardless of the reason why a medication is deemed unusable for use in the hospital, the directions specified by the patient are documented and a fluorescent pink "Not Verified" sticker is attached to the product and a new supply is dispensed from hospital stock. These unused medications are stored in the medication drawer of the cart or in a locked drawer on the nursing unit until such time as they can be sent home with the patient's family or caregiver.

Computer Procedures

A report listing all patients using their home medication is printed in the pharmacy each night. This list is sent to the nursing units and is to be used as a reference to indicate which patients require refills of their prescriptions. Home medications are flagged in the computer system using a "Z" in front of the frequency code (i.e., Z-QID) and by adding "Home Med Program" to the special instructions. This information also appears on the Medication Administration Record which is printed nightly by the pharmacy.

Responsibility for Acquiring Refills

It is the responsibility of the nursing staff to contact a family member or appropriate contact person approximately 48 hours before the next scheduled refill. As well, the nursing staff acquire a new prescription from the physician when there are no refills left. The need for medication refills is designated by the code "R(0)" on the list of patients using home medications. The nurse documents in the "comments" section of the pink copy of the MAHDB that he or she has spoken with the appropriate person and arranged to obtain a new supply of the patient's own medication.

A patient will never be denied medication while hospitalized. Although every effort is made to obtain a new supply of medications from the patient's community pharmacy, in situations where it is not feasible to obtain a supply of formulary or non-formulary "home medications", the nursing staff notifies the pharmacy. The pharmacy staff will in turn obtain and dispense an interim supply of the medication to be used while the patient is in hospital. The current average length of stay at The Moncton Hospital is 6.8 days, thus, refills have not been a major issue with the implementation of the Home Medication Program.

Refills Received in Hospital

Upon receipt of a refill prescription, the nurse notifies the pharmacist. The refill medication is not to be used until verified by a pharmacist (with the exception of a non-formulary or bulk medication). The pharmacist will note "refill" on the pink copy of the MAHDB and indicate the approximate quantity, any refill date, and his or her initials. The updated refill information is further transcribed to the medication order information stored in the pharmacy computer system.

If the refill medication is received after hours, nursing staff may acquire an interim supply of medication from the night cupboard. This allows therapy to continue uninterrupted until a pharmacist can verify the refill medication on the following day.

Bulk medications, such as inhalers and eye drops, are easily identified by checking the manufacturer's label for drug name, strength, and expiry date. Nursing staff may use these medications before they are verified by the pharmacist if they are examined properly and the nurse feels they are useable. Non-formulary medications are not available in hospital and cannot be ordered after hours. Therefore, if the physician chooses not to change

to a formulary item, since it is a principle of the program not to deny a patient any medication, there is little choice other than to use the home supply, even though it has not been verified by a pharmacist.

Progress and Accomplishments

Expansion of the program to 2.5 FTEs was necessary to achieve full, hospital-wide implementation and this is one of the few hospital-wide programs in the country. The Home Medication Pharmacists evaluate the medications of 60 to 120 patients per day. A cost savings of over $200,000 per year has been estimated based on the November 1995 audit. Therefore, the program is judged, as being cost-effective since the estimated cost savings easily supports the 2.5 FTEs dedicated to the program.

Informal feedback has indicated that the program has been well received by the medical and nursing staff. Pharmacists have become more visible on the nursing units, adding to patient care through clinical interventions and provision of drug information. These additional services have been documented on the pharmacists' monthly intervention sheets. Pharmacists have been increasingly given the opportunity to record the patient's medication history and to have input into care issues from the outset of hospitalization.

Length of stay is steadily decreasing as the health care system is forced to cut costs. As a result, refills are generally not an issue for most patients. When refills are required, families and patients are highly cooperative. Overall, public acceptance of the program has been extremely positive. Press reviews and local news releases have emphasized the potential patient care benefits of the program. There have been very few patients who have refused to participate in the program. Furthermore, patients are generally pleased to take part and many have made the comment to the pharmacists that they see using their own medications as a means to help maintain a financially burdened health care system. Furthermore, patients frequently state during the medication history taking that they prefer to use their home medications. They are familiar with the appearance of these products and are more comfortable using these medications.

In conclusion, a Home Medication Program has been successfully implemented at The Moncton Hospital. The program has been well received by both staff and the public. The initial vision of a cost-saving program has expanded to include significant improvements in patient care. From pharmacy's perspective, this program has provided a tool and the opportunity to implement pharmaceutical care through increased direct patient care activities.

Appendix A.

SOUTH-EAST HEALTH CARE
SOINS DE SANTÉ DU SUD-EST

MEDICATIONS AT HOME ADMISSION DATA BASE

No known allergies ☐	Date:
Allergies:	Describe Reaction
Other:	
Physician's Signature:	

Ht. Wt. Diagnosis: Surgery:

MEDICATIONS AT HOME - PRESCRIPTION AND NON-PRESCRIPTION

MEDICATION	STRENGTH PER UNIT	DIRECTIONS ON BOTTLE	MED ON UNIT Yes/No	COMMENTS INCLUDES DIRECTIONS AS STATED BY PATIENT	MED ID BY PHARM	DATE	DATE Rx IS DUE	NO. OF REFILLS

Initial:	Name:	Designation:
Initial:	Name:	Designation:

OMIT THE FOLLOWING HOME MEDS:

CONTINUE HOME MEDS AS STATED BY PATIENT ☐ **FOR** _____ **DAYS**

DATE: PHYSICIAN'S SIGNATURE:

A PHYSICIAN'S ORDER *IS REQUIRED* BEFORE THE ABOVE HOME MEDICATIONS CAN BE PROCESSED.

TELEPHONE AND VERBAL ORDERS MUST BE COUNTERSIGNED

PAGE 1 (white) - CHART
PAGE 2 (yellow) - SEND TO PHARMACY
PAGE 3 (Pink) - CHART (under Medication)

(forms\hmmed.rx)