PHARMACY PRACTICE

Implementation of a Pharmaceutical Care Practice Model for Palliative Care

Michelle M. Diment and Barb L. Evans

INTRODUCTION

Hepler and Strand[1] define Pharmaceutical Care (PC) as the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient's quality of life. The pharmacist, as the drug expert, defines patient-specific pharmacotherapeutic outcomes, which are achieved by performing three major functions: identifying, resolving and preventing actual or potential drug-related problems (DRPs). Strand[2] defines a DRP as an undesirable event; a patient experience that involves or is suspected to involve drug therapy and actually, or potentially, interferes with a desired patient outcome. The listing of a patient's actual and potential DRPs defines the Pharmaceutical Care activities required for each patient.

Saskatoon City Hospital (SCH) is a 295-bed, acute care, teaching facility under the Saskatoon District Health. SCH provides a palliative care service on a consultation basis, receiving an average of 200 consultations per year. A team approach is utilized consisting of a physician, nurse manager, social worker, and representatives from spiritual care, therapies, nutrition services and pharmacy. The service is based on a scattered bed model, as no beds are specifically designated to palliative care. The patient is assessed by the palliative care physician, nurse manager and social worker; other team members assess the patient when required. The team meets weekly for sit-down rounds to discuss the care of each patient. All DRPs identified and patient-care recommendations made by pharmacists are documented as a quality assurance measure.

RATIONALE

The palliative care service at SCH would benefit from the introduction of PC for the following reasons: 1) the small number of patients receiving palliative care at any given time represents a manageable workload for the pharmacist; 2) the high medication to patient ratio; 3) the potential for suboptimal pain and symptom management; 4) the potential for an excessive number of side effects experienced by the palliative patient; 5) the lack of a consistent direct relationship between the pharmacist and palliative patient; and 6) the lack of a PC practice model for the palliative patient population.

The role of the pharmacist in palliative care has been reported in the literature. A consultation service in pain pharmacotherapy was described by both the Department of Pharmacy at Hôpital Saint-François-d'Assise, Quebec City[3] and the Kitchener-Waterloo Hospital Pharmacy Department[4]. In each case, a review of the patient's medical record and a patient interview was utilized to determine the patient's problems. Pharmacists' recommendations were documented in the medical record and daily follow-up provided by both departments.

The palliative care unit at Parkwood Hospital in London, Ontario, utilized a pharmacist on the palliative care team.[5] The pharmacist assessed all medications on admission for appropriateness of regimen and dose, interactions, contraindications, polypharmacy, allergy status and formulary status at Parkwood Hospital. The pharmacist then documented the medication assessment in the progress notes of the patient's medical record. Weekly multidisciplinary rounds were held to discuss patient care. The pharmacist assessed drug therapy and made recommendations for changes when indicated.

To our knowledge there have not been any published studies discussing the development and implementation of a PC practice model for the palliative population. The purpose of this study was to develop and implement a PC practice model in the palliative care environment based on the following objectives: 1) to introduce PC to staff pharmacists; 2) to educate staff pharmacists on palliative pharmacotherapy; 3) to develop monitoring tools to guide staff pharmacists in implementing the PC practice

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model; 4) to compare the number and type of DRPs identified by staff pharmacists prior to and following PC implementation; 5) to determine staff pharmacists' perceptions of PC; and 6) to determine the workload requirements for provision of PC to palliative patients.

METHODS

The study proposal was approved by the SCH Pharmacy, Therapeutics and Nutrition Committee in November 1993. The study was divided into three phases from December 1, 1993 to March 31, 1994. Phase I consisted of a retrospective medical record review; all patients who received a written consultation to palliative care between December 1, 1993 and January 31, 1994 were included. Phase II consisted of formally educating the staff pharmacists and occurred during the week of January 22 - 31, 1994. Phase III, a two month implementation period, included patients who received a written consultation to palliative care between February 1 and March 31, 1994. Patients were excluded from Phase III if they were unable to communicate, in an altered state of consciousness or if they refused to participate. Phase III was followed by a post-study PC questionnaire.

Phase I: Retrospective Review

A retrospective review of patients' medical records and patient-care recommendations was completed by the pharmacy resident to determine the number of medication histories and medication counsellings performed by pharmacists and the number and types of DRPs identified.

Phase II: Education

PC and palliative care pharmacotherapy were introduced to staff pharmacists by provision of a reading package and lectures, including a demonstration of a pain and symptom assessment. The reading package consisted of general review articles and was provided to each pharmacist prior to the lectures. Each pharmacist completed a certification exam on palliative care pharmacotherapy and was required to achieve 80% or greater prior to being eligible to participate in the study. The exam consisted of 18 short-answer questions on palliative pharmacotherapy and one case study directed at identification of DRPs. All exams were marked by the pharmacy resident and reviewed by the manager of clinical pharmacy services.

Phase III: Implementation of PC Practice Model

A policy and procedure outlining the process of PC in palliative care was developed. This process was adapted from preliminary information available from the CSHP — Saskatchewan Branch Pharmaceutical Care Task Force Committee's report (Draft Copy; Barb Evans, Personal Communication). The key components of the practice model included: 1) establishing a working relationship with the patient; 2) interviewing the patient to obtain information; 3) documenting the interview in the patient's medical record; 4) identifying the patient's DRPs; 5) determining potential pharmacotherapeutic alternatives; 6) developing and communicating a plan to other health care professionals; 7) educating the patient and family; and 8) monitoring the patient seven days a week. A flow diagram summarizes the PC practice model for palliative care (Appendix A). The policy, procedure and flow diagram were reviewed with staff pharmacists prior to initiation of Phase III.

Implementation of the PC practice model required the development of monitoring tools. A Pain and Symptom Assessment Tool (PSAT) (Appendix B) was adapted from the Victoria Hospice Society Pain Assessment Tool[6] by the pharmacy resident, palliative care nurse manager and physician. A visual analog scale was used in combination with the PSAT. Pain and symptom assessments were performed upon consultation to palliative care and twice daily (0830h and 1430h) thereafter, when appropriate, by the staff pharmacist.

A Medication History Tool (Appendix C) was adapted for use in palliative care. The medication history helped to determine prescription drug, nonprescription drug and herbal product use prior to admission, allergies, intolerances, adverse drug reactions and a community pharmacist contact, when applicable. Specific to palliative care, it was designed to identify the patient's attitude toward narcotics and drug therapy, prior medication counselling, and past 24-hour narcotic requirement. It ensured any patient-care recommendations made by the pharmacist were based on accurate and complete information. The medication history helped to identify actual and potential DRPs and was performed in conjunction with the PSAT and visual analog scale upon patient consultation to palliative care.

A PC Patient Pharmacotherapy Monitoring Tool (PPM) (Appendix D) was designed exclusively for use in the palliative patient population. It served as a portable patient database for the pharmacist and facilitated documentation of progress, identification of DRPs, and development of a PC plan. It promoted continuity of care by enhancing verbal communication when patient care was transferred from one pharmacist to another. The PPM tool was initiated by the pharmacist upon patient consultation to palliative care and used to record and monitor progress until patient discharge.

Post-Study PC Questionnaire

Staff pharmacists who participated in the study were asked to complete a three-part, post-study PC questionnaire. Section A was designed to assess the pharmacist's confidence level in providing PC. Section B was designed to determine the pharmacist's general understanding of PC, to provide an

estimation of time required to deliver PC and to determine personal barriers and facilitators to provision of PC. Section C consisted of general questions related to PC and the study, allowing the pharmacist to provide feedback and general comments.

RESULTS

Phase I: Retrospective Review

Over the two-month retrospective review, four palliative care patients were followed resulting in 78 patient days monitored. No medication histories or medication counsellings by pharmacists were documented (Table I). Identification of five DRPs resulted in five patient-care recommendations, all of which were accepted and implemented by the physician. All DRPs and recommendations were unrelated to palliative pharmacotherapy.

Phase II: Education

All six staff pharmacists attended the lectures and completed the certification exam. One of the six pharmacists was required to rewrite the certification exam.

Phase III: Implementation of PC Practice Model

Eight patients received written consultations to the palliative care service between February 1 and March 31, 1994. Three patients were excluded from the study for the following reasons: two patients were unable to communicate and one patient, who suffered from schizophrenia, could not be accurately assessed for pain and symptoms. A total of five patients were included in Phase III, resulting in 48 patient days monitored by a pharmacist. The data are presented in Table I. Pharmacists performed pain and symptom assessments upon referral to palliative care for all patients; however, twice-daily assessments were not routinely performed. Pain was not an issue for three of five (60%) patients; therefore, the pharmacists modified the number of pain assessments accordingly. Twenty-eight DRPs were identified and 28 patient-care recommendations were made by pharmacists; 75% of these were accepted and implemented by the physician. Based on the information in the patient-care recommendations, nine (32%) DRPs were related to pain, three (11%) were related to nausea, seven (25%) were related to bowel care, and nine (32%) were related to other palliative symptoms. When compared to Phase I, Phase III data revealed an increase in the number of pain and symptom assessments performed and in the number of patient-care recommendations made. Due to the small sample size, no statistical tests were performed.

Workload Measurement

No formal workload measurement system was developed prior to implementation of the project. However, limited information could be retrospectively abstracted from the clinical records. Time to complete the medication history was recorded for two medication histories performed. Twenty-three minutes was the mean time to complete a medication history (range: 15-30 minutes). Medication counselling was performed on one patient. The number of medications reviewed was not recorded and the total time to counsel was 20 minutes. Time spent monitoring patients each day was not recorded by the pharmacists.

Post-Study PC Questionnaire

All six pharmacists involved in Phase III completed the follow-up questionnaire. The results of Section A of the questionnaire are summarized in Table II. Five of the six pharmacists felt confident in delivering PC to palliative patients. The most interesting result refers to the confidence level in performing the pain and symptom assessments; three pharmacists felt neutral while one pharmacist did not feel confident in this area.

Table I: Phase I versus Phase III: Pharmacists' Interventions

Variable	Phase I (n=4)	Phase III (n=5)
Number of Patient Days Monitored	78	48
Number of Medication Histories Performed	0	4
Number of Medication Counsellings Performed	0	1
Number of Pain and Symptom Assessments Performed	0	108
Number of Patient-Care Recommendations	5	28
Number of Recommendations Accepted	5	21

Table II: Questionnaire Section A: Pharmacists' Confidence Level in Delivering PC (n=6)

Statements	Score* mean (range)
I feel confident in delivering pharmaceutical care to palliative care patients.	2.0 (1-3)
I feel confident in my ability to identify and solve drug-related problems.	1.5 (1-2)
I feel confident in initiating relationships with my patients.	1.8 (1-2)
I enjoy working with palliative patients to establish goals of therapy.	1.7 (1-2)
I assume responsibility for the pharmaceutical care of my patients.	1.5 (1-2)
I feel confident in assessing pain and symptoms of palliative patients.	2.7 (1-4)
I feel confident in the therapeutics of pain and symptom management of palliative patients.	1.8 (1-2)
I was adequately prepared to facilitate the pharmacists' role in this study.	1.7 (1-2)
I have a high level of job satisfaction.	1.7 (1-2)
Pharmaceutical Care is the direction our profession should take.	1.2 (1-2)

* A five point scale was used as follows: 1= strongly agree; 2= agree; 3= neutral; 4= disagree; 5= strongly disagree.

In Section B of the questionnaire, all six pharmacists felt they had a good understanding of PC and four pharmacists said their perception of PC changed as a result of the study. All comments received were positive and identified a definite role for pharmacist involvement in palliative care. The average time per patient per day to deliver PC, estimated by the pharmacists, was 38 minutes (range: 20-90 minutes). All six pharmacists believed they had a positive impact on the patients monitored with an improvement in quality of care secondary to pharmacist involvement. However, outcome data were evaluated to confirm or refute their belief. Section B also asked pharmacists to identify personal facilitators and barriers of PC, and to suggest measures to eliminate the barriers. Education prior to implementation of PC was identified as an important facilitator, while lack of continuity due to the short length of the clinical rotation was identified as a barrier to PC.

Section C of the questionnaire was designed to assess the pharmacists' general opinions of PC and to gain feedback regarding the study. Although pharmacists found the PC process made their job more enjoyable, it was noted delivering care to this patient population was sometimes frustrating and disheartening. Pharmacists felt promotion of the program to physicians and other health care professionals would enhance the success of PC in the future. All pharmacists felt the provision of PC to palliative patients at SCH should continue.

DISCUSSION

The small number of patients enrolled in the study was a limitation. As a result of the small sample size, no firm conclusions could be made based on statistical methods. However, as expected, a trend towards an increased number of DRPs identified by pharmacists was seen when PC was provided to the palliative patient population. Although a larger number of participants would have been optimal, the study was terminated due to time restrictions.

SCH had not implemented any PC practice model prior to this study. Educating staff pharmacists by providing lectures and circulating a reading package, followed by a certification exam was effective in ensuring a minimum level of knowledge. The limitation was that only two lectures were provided to pharmacists and it was the pharmacists' responsibility to review the reading package. Upon completion of the education phase, the pharmacist was left to implement PC without extensive guidance. Understanding of PC, ongoing support, and training are essential to success. Future studies implementing PC should consider extensive support such as regularly scheduled rounds where pharmacists can discuss patients and utilization of a designated PC preceptor to act as a role model and provide guidance and feedback. In addition to internal education, external education of other health care providers and management groups should be done to promote PC.

All of the tools utilized (PSAT, Medication History, PPM Tool, PC Questionnaire) were developed specifically for this study. Although they were reviewed by professionals and peers, repeated testing and refinement of the tools are required before validity can be confirmed. Although the medication history tool included a section to record workload time, the PSAT and the PPM tools did not. This may help explain why pharmacists were not consistent in recording time for activities. Workload measurement techniques should be incorporated into future monitoring tools and staff should be trained extensively on its importance.

Section A of the post-study questionnaire was designed to assess the pharmacist's confidence level in providing PC. In retrospect, a pre-study questionnaire should have been completed to assess each pharmacist's baseline confidence level. As a result, the data are somewhat limited since the impact of the project on the pharmacist's opinions could not be assessed. It is possible that the pharmacists had exactly the same opinions prior to implementation of the program.

The assessment of pain and symptoms represented a new role for the staff pharmacists at SCH, whereas, they have had experience performing medication histories and patient pharmacotherapy monitoring with other patient populations. Encouraging pharmacists to participate in a practice session on pain and symptom assessment prior to implementation would have been beneficial and may have increased their confidence in this area. In addition, developing communication skills with this patient population requires experience and may explain the low confidence level. Despite their inexperience, all pharmacists felt PC is the direction our profession should take. Programs designed to hone communication skills as well as prepare pharmacists to deal with issues related to death and dying would have been useful. Human resources and the palliative care service should be contacted regarding the availability of such programs.

The organizational structure of clinical pharmacy activities at SCH was a limitation. The pharmacist responsible for a group of patients on a clinical rotation changed weekly resulting in a lack of continuity of patient care. Restructuring of the pharmacists' schedule to increase the length of the clinical rotation was necessary to improve the continuity of care. Management can provide further support by educating pharmacists on time and stress management.

Medication counselling was an integral component of the PC practice

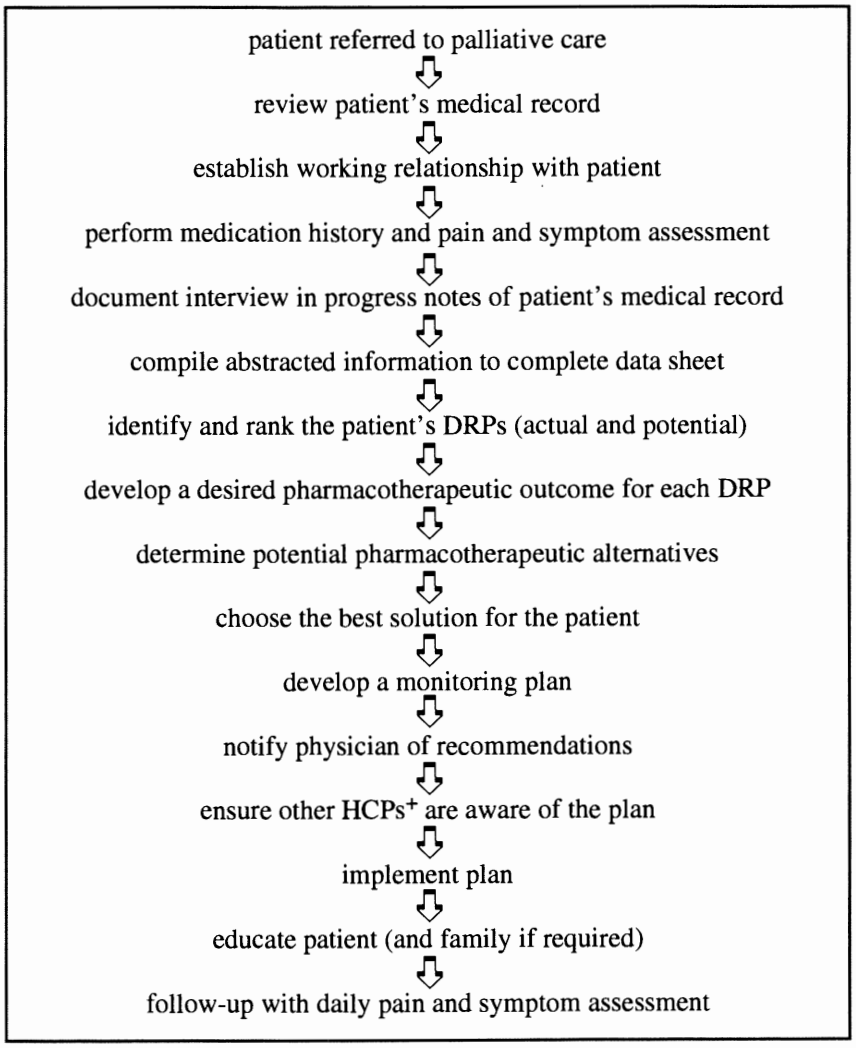
model however, only one of the five patients in Phase III received medication counselling. Although there was no excuse for not providing medication counselling, time constraints may have interfered with counselling priorities. Expectations of the staff pharmacists while providing PC should have been made clear; perhaps pharmacists did not see medication counselling as an essential component of this PC practice model. Due to the time involved in providing one-to-one medication counselling, future studies may consider use of patient counselling videos and group counselling in the palliative patient population, when appropriate, to increase efficiency. For patients who are discharged to the community, the department has begun preliminary steps to ensure a successful transition of care to the patient's community pharmacist. On discharge, the hospital pharmacist notifies the community pharmacist of discharge plans, any unresolved DRPs and the need for counselling.

Defining and determining measurable outcomes of PC is difficult and was outside the scope of this study. We cannot conclude that PC made a significant impact on the care of palliative patients. However, this study has confirmed that the introduction of a PC practice model in the palliative care environment results in an increased level of pharmacist involvement, number of DRPs identified and number of patient-care recommendations made by pharmacists. Further studies must target the measurement of patient outcome variables to demonstrate that Pharmaceutical Care significantly impacts quality of patient care.

REFERENCES

1. Hepler C, Strand L. Opportunities and responsibilities in pharmaceutical care. *Am J Hosp Pharm* 1990; 47:533-43.
2. Strand L, Morley P, Cipolle R, et al. Drug-related problems: Their structure and function. *Drug Intell Clin Pharm* 1990; 24:1093-7.
3. Gregoire O. The pharmacist and the control of cancer pain. *Pain Management Newsletter (Knoll)* 1989; 2(3):4-5.
4. Dean T. Pharmacist as a member of the palliative care team. *Can J Hosp Pharm* 1987; 40(3): 95-6.
5. Hanif N. Role of the palliative care unit pharmacist. *J Pall Care* 1991; 7(4):35-6.
6. Victoria Hospice Society. *Medical care of the dying* (2nd Ed). Victoria 1993.

Appendix A: Pharmaceutical Care Practice Model: Flow Summary



*DRP = drug-related problem
+HCP = health care professional

Appendix B: Pain and Symptom Assessment Tool

PAIN AND SYMPTOM ASSESSMENT
SASKATOON CITY HOSPITAL
Department of Pharmaceutical Services
Palliative Care Consultation

Addressograph

LOCATION
Indicate the location of each pain, beginning 'A'.
Show direction of spread, if any.

FIRST BEGAN
How and when did your pain begin?

INTENSITY
How would your rate your overall pain?

0 1 2 3 4 5
no pain severe pain

At present.....
Past 24 hours.....
At med time.....
1 hour after med .....
worst ever.....
least ever .....

QUALITY
Check the words that best describe the quality of your pain(s).

- ☐ dull ache
- ☐ nagging
- ☐ cramping
- ☐ throbbing
- ☐ stabbing
- ☐ burning
- ☐ tingling
- ☐ deep
- ☐ external
- ☐ tender
- ☐ numb
- ☐ tiring
- ☐ shooting
- ☐ unbearable

ONSET & DURATION
What time of day does your pain begin? How long does it last?

MODULATION
What makes your pain worse?

- ☐ movement
- ☐ rest
- ☐ position
- ☐ pressure
- ☐ heat
- ☐ cold
- ☐ eating
- ☐ other

What relieves your pain?

- ☐ movement
- ☐ rest
- ☐ position
- ☐ pressure
- ☐ heat
- ☐ cold
- ☐ eating
- ☐ other

EFFECTS OF PAIN
Does your pain affect:

- ☐ mood
- ☐ hobbies
- ☐ walking
- ☐ conversing
- ☐ other
- ☐ sleep
- ☐ concentration
- ☐ appetite
- ☐ emotions

Has the pain or treatment produced any other effects?
Do you have any other symptoms?

- ☐ nausea
- ☐ constipation
- ☐ incontinence
- ☐ hiccups
- ☐ skin breakdown
- ☐ sedation
- ☐ dyspnea
- ☐ cough
- ☐ restlessness
- ☐ delirium
- ☐ change in appetite
- ☐ urinary retention
- ☐ vomiting
- ☐ diarrhea
- ☐ dry mouth
- ☐ confusion
- ☐ weakness
- ☐ insomnia
- ☐ depression
- ☐ anxiety
- ☐ dizziness
- ☐ swallowing difficulty
- ☐ twitching
- ☐ other

FEELINGS TOWARD DRUG THERAPY:
Do you have any concerns about taking painkilling medications?

PAST 24HOUR NARCOTIC REQUIREMENT:

Appendix B: Pain and Symptom Assessment Tool *(continued)*

NAUSEA & VOMITING

Rate the severity of your nausea & vomiting:

0 1 2 3 4 5
no nausea severe vomiting

How often do you experience nausea ?

- ☐ constant nausea
- ☐ periodic nausea
- ☐ no nausea

How often is the nausea accompanied by vomiting?

- ☐ always
- ☐ sometimes
- ☐ rarely

What relieves the nausea & vomiting?

- ☐ medication
- ☐ position
- ☐ movement
- ☐ dietary choices

What aggravates the nausea & vomiting?

- ☐ medication
- ☐ position
- ☐ movement
- ☐ dietary choices
- ☐ other symptoms (i.e., pain)

BOWEL CARE

Do you experience:

- ☐ constipation
- ☐ diarrhea
- ☐ normal bowel movements

Rate the severity of your constipation or diarrhea.

0 1 2 3 4 5
mild severe

How often do you have a bowel movement?

- ☐ every 1-3 days
- ☐ greater than every 3 days

When was the time of your last bowel movement?

DYSPNEA

Rate your ability to breath comfortably.

0 1 2 3 4 5
no difficulty very difficult

Check all that apply:

- ☐ breath comfortably
- ☐ dyspnea on movement
- ☐ dyspnea at rest
- ☐ audible wheezing
- ☐ audible gurgling

What aggravates your ability to breath?

What helps you to breath more comfortably?

SUMMARY: (to be completed by assessor)

ASSESSED BY:

DATE:

Appendix C: Medication History Tool

MEDICATION HISTORY: PALLIATIVE CARE
SASKATOON CITY HOSPITAL
Department of Pharmaceutical Services

Addressograph

CURRENT MEDICAL PROBLEMS

ALLERGIES AND INTOLERANCES
Identify drug and nature of allergy or intolerance.
Identify any contraindications to future therapy.

PRESCRIPTION DRUG THERAPY PRIOR TO ADMISSION
Identify drug, dosage and regimen, reason for use, efficacy and duration taken.

Community Pharmacy Contact:

NON-PRESCRIPTION DRUG THERAPY PRIOR TO ADMISSION
Identify drug, dose and regimen, reason for use, efficacy and duration of use.

- ☐ analgesics
- ☐ vitamins and minerals
- ☐ cough and cold
- ☐ antacids
- ☐ laxatives
- ☐ health food products
- ☐ herbal products
- ☐ other

ATTITUDE TOWARD DRUG THERAPY
Identify any barriers toward drug therapy, including level of knowledge, myths about narcotics, will patient ask for break-through doses.

HAS PATIENT RECEIVED MEDICATION COUNSELLING PRIOR TO ADMISSION?

SUMMARY

ASSESSOR:
DATE:

TIME TO COMPLETE:

Appendix D: Patient Pharmacotherapy Monitoring Tool

DRUG MONITORING PROFILE: PALLIATIVE CARE

Saskatoon City Hospital
Department of Pharmaceutical Services

addressograph

ADMISSION

Height..... Weight ..... Lean Body Weight .....

EtOh ..... Smoker .....

Diagnosis:

PAST MEDICAL HISTORY

PAIN ASSESSMENT SUMMARY

Identify sites, quality, severity, timing, modulating factors and probable etiology.

SYMPTOM AND CLINICAL STATUS ASSESSMENT SUMMARY

- ☐ nausea
- ☐ vomiting
- ☐ weakness
- ☐ GI obstruction

MEDICATION HISTORY SUMMARY

Include any allergies or intolerances.

- ☐ constipation
- ☐ diarrhea
- ☐ incontinence
- ☐ urinary retention
- ☐ dry mouth
- ☐ hiccups
- ☐ skin breakdown
- ☐ confusion
- ☐ change in appetite
- ☐ anxiety
- ☐ insomnia
- ☐ sedation
- ☐ dyspnea
- ☐ myoclonus
- ☐ hypercalcemia
- ☐ depression
- ☐ cough
- ☐ swallowing difficulty
- ☐ restlessness
- ☐ delirium
- ☐ dizziness

Comments:

LABORATORY TESTS

SCr (50 - 130 umol/L)						
CrCl						
ALT (30 - 120 umol/L)						
AST (5 - 38 U/L)						
albumin (35 - 50 Gm/L)						
Ca (2.14 - 2.66 mmol/L)						

CURRENT DRUG THERAPY

Attach copy of computer patient medication profile. Update daily.

Appendix D: Patient Pharmacotherapy Monitoring Tool *(continued)*

IDENTIFICATION OF DRUG-RELATED PROBLEMS

Identify actual and potential drug-related problems in order of priority. Determine the desired endpoint, solution to the problem and monitoring parameters. Include date problem is identified and date solved.

PAIN AND SYMPTOM ASSESSMENT RECORD

Rate the symptom on a scale of zero to five, using the Rainbow Scale for reference. Mark the number with an **X** on the table below. Join the **X**'s with a line to see if the symptom is improving or not. **Symptom assessments should be done twice daily, at a consistent time.**

PAIN	**Date**														
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
worst imaginable	**5**														
	4														
	3														
	2														
	1														
no pain	**0**														

NAUSEA	**Date**														
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
worst imaginable	**5**														
	4														
	3														
	2														
	1														
no nausea	**0**														
# of emesis															

BOWELS	**Date**														
		AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
worst imaginable	**5**														
	4														
	3														
	2														
	1														
normal, regular	**0**														
# of BM's															