OFFICIAL PUBLICATIONS

Pharmaceutical Care: Information Paper on the Evolution of Patient Pharmacotherapy Monitoring to Pharmaceutical Care (1994)

Canadian Society of Hospital Pharmacists
Société canadienne des pharmaciens d'hôpitaux

Pharmaceutical Care: Information Paper on the Evolution of Patient Pharmacotherapy Monitoring to Pharmaceutical Care

Published by the Canadian Society of Hospital Pharmacists (CSHP), Ottawa, Ontario. 1994 edition. Use of this document was approved by CSHP Council in 1994.

Suggested citation:

Canadian Society of Hospital Pharmacists. Pharmaceutical care: information paper on the evolution of patient pharmacotherapy monitoring to pharmaceutical care. Ottawa (ON): Canadian Society of Hospital Pharmacists; 1994.

© Canadian Society of Hospital Pharmacists 1994

30 Concourse Gate, Unit 3
Ottawa ON K2E 7V7
Telephone: 613.736.9733
Fax: 613.736.5660
Internet: www.cshp.ca

Pharmaceutical Care: Information Paper on the Evolution of Patient Pharmacotherapy Monitoring to Pharmaceutical Care

PREPARED BY THE CLINICAL PHARMACY ADVISORY COMMITTEE OF THE CANADIAN SOCIETY OF HOSPITAL PHARMACISTS.

PREFACE

This is the 1994 edition of the Canadian Society of Hospital Pharmacists Pharmaceutical Care: Information Paper on the Evolution of Patient Pharmacotherapy Monitoring to Pharmaceutical Care. This document was approved under the title of Information Paper on the Evolution of Patient Pharmacotherapy Monitoring to Pharmaceutical Care; the title was fine-tuned in 2009.

Information documents are intended to educate members and/or an external public party regarding a specific issue. It may be an end point in itself and may not necessarily lead to development of a Discussion Paper. An Information Document may lead to development of a Statement, Standard or Guideline. An Information Document is not required to follow a standard format, but does go through the CSHP approval process (Standards and Publication Advisory Committees followed by Council approval) prior to release.

1. INTRODUCTION

A new direction for the evolution of pharmacy practice has developed over recent years with the acceptance that the primary function of pharmacy as a profession is the provision of pharmaceutical care. Pharmaceutical care has been defined as "the responsible provision of drug therapy for achieving definite outcomes that improve a patient's quality of life".[1] The philosophy of pharmaceutical care mandates that the pharmacist providing care and services related to drugs, to an individual, ensure that the patient obtains the desired results from his or her therapy. The pharmacist will use all the methods, skills, and authority of the profession to assist the patient in achieving the desired outcome.

Hospital pharmacists have been enthusiastic in adopting this philosophy and endorsing development of such pharmacy practice. The Canadian Society of Hospital Pharmacists has endorsed pharmaceutical care as the primary function of hospital pharmacists.[2] A similar position has been taken by the American Society of Hospital Pharmacists,[3] as well as the Canadian Pharmaceutical Association,[4] and the American Association of Colleges of Pharmacy.[5] The acceptance by these organizations of pharmaceutical care as the practice philosophy has generated the need for information to assist the practising pharmacist. This paper provides information to help pharmacists in their transition to pharmaceutical care.

2. WHY IS PHARMACEUTICAL CARE AS A PHILOSOPHY ENDORSED?

Despite awareness by all health professionals of the potential for any drug to fail to produce the desired response or to produce undesirable effects, many patients are not receiving the desired benefit, or are experiencing adverse effects, from their drug therapy.[6] Current health care practices do not identify which professionals are responsible for ensuring that adverse effects of sub-optimal therapy do not occur. The physician frequently bears responsibility for drug misuse or lack of efficacy since he or she has prescribing authority.

Although other health professionals involved in patient care can participate, pharmacists should play a leadership role in the provision of pharmaceutical care. The pharmacist is in the unique position of having access to the patient, having knowledge of the patient's prescription and non-prescription drug therapy, and possessing knowledge of the potential beneficial and toxic effects of drugs. The pharmacist can readily obtain additional information regarding the patient's drug use. No other profession has the same scope of knowledge on drugs as pharmacists.

Enhanced awareness of the need to improve drug therapy outcomes and the potential for pharmacists to significantly impact upon these, is occurring at a time when the traditional functions of pharmacists are changing. Although pharmacists have always participated in direct patient care, their focus has often been on the procurement, preparation, and safe distribution of drugs. The expanded role of pharmacy technicians has reduced the requirement for pharmacists to perform distributive functions. Computerized pharmacy systems, particularly when combined with computerized physician order entry, are reducing the need for pharmacists in drug distribution. Furthermore, the explosion in numbers and complexity of drugs generated the need for individuals with specialized knowledge. As a result, the provision of drug information to health professionals has become a major component of pharmacy practice. However, technology has the potential to reduce pharmacists' participation in drug and information delivery.

In the past, patient-related functions were frequently aimed at determining the correct drug or dosage for the individual without relating "correctness" to the patient's desire for treatment of specific outcome. While the need for pharmacists' participation in drug distribution, drug information provision, and pharmacokinetic evaluation has decreased with the availability of sophisticated computerized systems, there remains a need for the application of drug use knowledge to increase the benefit of drug therapy in individual patients. therefore, the pharmacist's acceptance of responsibility for outcomes of drug therapy in each patient meets the needs of the patient and utilizes the expertise of the pharmacist.

Pharmaceutical care provides a base upon which practising pharmacists can build their professional activities. It provides a vehicle for promoting pharmacists' skills to patients and other health professionals while demonstrating a benefit to patient outcome.

3. HOW DOES PHARMACEUTICAL CARE DIFFER FROM "CLINICAL" PHARMACY SERVICES?

Efforts to prevent or remedy problems with drug therapy have been termed "clinical pharmacy" activities by many pharmacists. Different activities can be undertaken to address problems of drug therapy in individual patients.[7] Practitioners have identified drug monitoring as the most important activity in ensuring optimal drug therapy. The definition of drug monitoring varies between practitioners, for example, Stewart describes drug monitoring as "that process which ensures that a patient is treated with the least expensive, most effective therapeutic agent, in a manner that will maximize efficacy and minimize side effects".[8] In Canada, this process, widely promoted as patient pharmacotherapy monitoring (PPM), has been defined as "all those activities involved in the pharmacist's effort to optimize a patient's drug regimen. This means assuring appropriate, safe, efficacious and cost-effective drug therapy for the patient."[9] Thus, PPM can be viewed as an attempt to optimize drug therapy in the individual patient.

The emphasis, logistics, and frequency of any pharmacist's activities in the provision of PPM will be determined by the needs of the patient, the demands on the pharmacist's time, and the pharmacist's access to the information required to assess the patient's drug therapy. At a minimum, the pharmacist should review each medication order prior to initiation of treatment to check for appropriate dosing, allergy status, drug duplication, potential drug interactions, and hospital formulary requirements. For maximum potential benefit, the pharmacist should review all elements of the individual patient's drug treatment with the health care team before selection of any new treatment or revision of existing therapy. In addition, the pharmacist should independently monitor the effects of the drug treatment on the patient's well-

being, and recommend alterations to the drug therapy as required to improve efficacy and minimize toxicity.

The primary limitations of PPM as a process for optimizing patient care are the difficulty in determining objective endpoints, and the minimal patient participation in the process. Although PPM does not preclude the patient from participating in decisions of drug selection and use, the process does not require the patient's input. Patient disagreement or uncertainty may result in noncompliance with the drug therapy or with follow-up assessment. These potential difficulties can be avoided by involving the patient, through discussions regarding the purpose, options, potential toxicities, desired endpoints, and monitoring parameters of any drug therapy initiated. With patient participation, PPM can provide the scope of care required to meet the patients' needs.

The major enhancement with pharmaceutical care over PPM is the mandate that the pharmacist cooperates with the patient in assessment of the drug treatment, including need for drug therapy, and that the pharmacist is responsible directly to the patient for the quality of care and achievement of desired outcomes. The practice of pharmaceutical care is based on the development of a covenantal relationship between the pharmacist and the patient (or patient advocate, if patient unable). In such a relationship, the pharmacist has a responsibility to ensure that the patient receive accurate and relevant information regarding the potential benefits and toxicities of a proposed therapeutic solution. The patient has a responsibility to ensure the pharmacist has accurate and relevant information regarding their values, needs, and wishes. This allows the pharmacist and patient to mutually agree on a plan for therapy and follow-up monitoring. This is a positive development in health care since it responds to the desire of society to increase its participation and take more responsibility for health care. Pharmacists must respond to the increased sophistication and knowledge of patients by developing a more identifiable relationship with the individuals under their care.

4. WHAT IS REQUIRED FOR PHARMACEUTICAL CARE?

Evolution to the pharmaceutical care practice philosophy requires a thorough planning process to identify and address all issues associated with such a change.

4.1 Identification of Limitations with Current Pharmacy Services

Before individuals within and external to the pharmacy department can be supportive of this change in pharmacy service, an understanding of current shortcomings in patient care, with respect to drug therapy, is required. An estimate of the role/impact of all aspects of pharmacy services on sub-optimal outcomes of patient care would be enlightening to all participants in care within the institution. This will help individuals external to the pharmacy (e.g., administrators, physicians, nurses, third-party payers) understand deficiencies in current services. Without a clear understanding of these shortcomings, the need for change will be questioned.

4.2 Establishment of Goals of Pharmaceutical Care

A clear mission statement, including a description of the practice of pharmaceutical care within the institution, is required for internal and external forces to understand the intent of pharmaceutical care. This will foster a shared vision upon which all pharmacy activities can be based. It should reflect the pharmacists' responsibility for patient drug therapy outcomes, and for cooperation with the patient in identifying goals of drug use.

4.3 Commitment by Pharmacy Leaders to Pharmaceutical Care

All "leaders" within each individual institution, including the pharmacy director, supervisors, and role-model clinicians, must agree with the need for development of pharmaceutical care.[10] Hospital and departmental administration must be willing to do what is required, to allow pharmaceutical care to evolve, including the provision of adequate resources. Leaders must be enthusiastic and motivating if personnel are to commit to change. Leaders must support pharmacy staff in their efforts to improve patient outcome, regardless of the tension it may cause; acknowledge and convey that adoption of pharmaceutical care will alter all aspects of pharmacy services; take full advantage of opportunities resulting from new technologies; and must make a commitment to allow for continued revision of services as the patient care requires. Pharmaceutical care cannot be viewed as just "another clinical service".

4.4 Empowerment

Since each patient has unique needs, the pharmacist must be given the autonomy, authority, and time to alter their activities in order to develop a relationship with the patient and achieve the desired outcomes. The pharmacy department's organizational structure must have the flexibility to allow differences in practice as required by the individual patient. The pharmacists must be assisted to understand the consequences of their practice on health care within and external to the institution.

5. WHAT NEW PHARMACIST SKILLS ARE REQUIRED?

To achieve desired drug therapy outcomes in individual patients, the pharmacist must be aware of the individual patient's expectation. This can only be achieved when the pharmacist develops a relationship with the patient whereby the patient allows the pharmacist to accept responsibility for drug therapy outcomes. To facilitate the transfer of responsibility of drug therapy outcomes to the pharmacist, each practising pharmacist will need to develop the following skills.

5.1 Proficiency in Establishing Relationships with Patients

The pharmacist must demonstrate a sincere interest in helping the patient address the problems of drug therapy if the individual is to extend trust and responsibility to that pharmacist. The pharmacist must display competence and empathy in communicating with the patient.

5.2 Proficiency in Methods of Interviewing the Patient

To facilitate provision of pharmaceutical care to a large number of patients in a limited time period, the pharmacist must be efficient in obtaining the necessary information from the patient. The identification of drug-related problems requires the pharmacists to obtain information from a variety of sources using skills of observation, communication, and physical assessment. The pharmacist must develop the skills in extracting the necessary information to establish the patient's baseline status and therapeutic endpoints for treatment in conjunction with the wishes of the patient. Compilation of relevant patient data could occur through utilization of the Pharmacists Workup of Drug Therapy[11] or similar training programs developed by practitioners. Although such complete documentation of patient data is cumbersome and time-consuming, it provides good instruction in the identification of drug-related problems and possible solutions. This model could be used in the training of the pharmacist. Once the pharmacist becomes proficient, documentation could be reduced

consistent with practice needs. It should be realized that provision of pharmaceutical care is not synonymous with completion of a monitoring or patient data form. Pharmaceutical care requires application of knowledge to ensure optimum drug therapy for a patient. On-going communication with the patient is required to ensure that drug therapy is achieving its desired effects.

5.3 Triage of Time and Efforts

Pharmaceutical care is an integral part of total care of the patient, as are medical and nursing care. However, the sophistication and resource utilization of the care (pharmaceutical, medical or nursing) varies with the patient's medical conditions and drug problems. Each patient admitted to a hospital will receive pharmaceutical care warranted by their diseases, therapy, and wishes. Provision of pharmaceutical care begins with an initial interview to establish the patient-pharmacist relationship and to identify drug-related problems. Therefore, every patient admitted should have an initial interview. The pharmacist then determines when follow-up interview(s) will be necessary based on the patient's medical conditions, symptomatology, and therapy, to evaluate for new drug-related problems and monitor outcomes.

In the transition period from current pharmacy practices to pharmaceutical care, an individual pharmacist or pharmacy department may not have adequate time available to provide pharmaceutical care to all patients. If resources are inadequate to allow an initial interview of all patients, the pharmacist should use selective criteria to identify patients in greatest need of such care. These criteria should be based on characteristics that would place the patient at high risk of experiencing drug-related problems. Such characteristics could include the diseases present, the number or types of drugs received, abnormal physiologic parameters, such as organ dysfunction, or scope of previous medical and pharmaceutical care of the patient. Knowledge of the pattern of drug-related problems in any given institution's patient population will be a useful guide to determining those patients which will benefit most from comprehensive pharmaceutical care.

Minimally, all patients cared for by a pharmacist should have a drug regimen assessment during drug order review (Level I PPM).[9] Other patients within an individual institution may require and receive increased depths of PPM. Individual pharmacists and pharmacy departments should not abandon current efforts to ensure optimum drug therapy through all levels of PPM. Rather, pharmacists should incorporate patient participation into decision-making on aspects of drug therapy planning, regardless of the level of PPM provided. This will allow the pharmacist to build a relationship with patients that is required for provision of pharmaceutical care. As interaction with patients increases, the pharmacists will enhance their communication skills required for efficient provision of pharmaceutical care to increasing numbers of patients.

5.4 Recording Patient Information for Easy Retrieval

The pharmacist should maintain a profile on all individuals with drug-related problems to include: drug-related problems, desired outcomes of therapy, the action/interventions recommended or initiated, goals of therapy, monitoring plan, and the ultimate outcomes achieved. Recording in a format as suggested in the Pharmacist's Work-up of Drug Therapy is one potential method.[11] This profile must be up to date and accessible to all pharmacists within the institution to allow continuity of care.

5.5 Documentation of Drug-related Problems in the Patient Health Record

The pharmacist should document any information pertaining to the drug-related problem (actual or

potential) in the patient's health record. The Canadian Society of Hospital Pharmacists has published Guidelines for Documentation of Pharmacist's Activities in the Patient's Health Record.[12] Information to be documented could include, but not limited to:

a) Actual or potential drug-related problems with the patient's therapy;
b) Patient, drug or disease data that confirm the validity of the drug-related problem. This could include information obtained from a medication history, including description of compliance and patient understanding of disease(s) and therapy, or information from a physical or pharmacokinetic assessment of the drug therapy and patients' clinical status;
c) Recommendation(s) for changes in drug selection, dosage, duration of therapy, and route of administration;
d) Recommendations for monitoring of response to drug therapy including appropriate clinical or laboratory parameters, frequency of monitoring, results of tests, and interpretation of data;
e) Description of the activities and follow-up that will be conducted by the pharmacist. This could include the drugrelated patient education and counselling provided; and/or
f) Identification of the pharmacist and a phone or pager number for contact.

5.6 Continuity of Care

The pharmacist's acceptance of responsibility of outcomes from drug therapy includes acceptance for insuring continuity of care. Each pharmacist must ensure that other health care workers, including pharmacists, are aware of the patient's drug-related problems and the methods in progress to rectify these problems. This involves documentation in the health care record and transfer of information, verbally or written, to other health care workers participating in the patient's care. This would include transfer of responsibility of care from one pharmacist to another; the patient and other health care workers must be notified of such a transfer.

When a patient is discharged from hospital, continuity of care can be provide by forwarding relevant information to the community health professional, including community pharmacist, if the patient provides consent.

6. WHAT IMPACT HAS PHARMACEUTICAL CARE HAD ON OUTCOME?

A process for evaluating the effects of pharmaceutical care on patient outcome should be in place. Methods for identifying suboptimal outcomes should be established to determine which components of pharmacy services are inadequate.[13] For individual patients, the identification of goals of drug therapy and the ability or failure to achieve these desired outcomes can be an initial evaluation tool. Such an ongoing system will guide subsequent developments in pharmacy services.

7. WHAT IS REQUIRED OF PHARMACY LEADERSHIP?

Each individual pharmacist must attain, enhance, and retain the skills necessary to provide pharmaceutical care of individual patients. If pharmaceutical care is to become the practice standard of a Pharmacy Department, the institution must provide the support for the pharmacists in making the transition in practice. This would include providing instruction, resources, and clear direction to the staff in the context of a changing work environment. The leadership of the pharmacy department would be responsible for obtaining the necessary resources, such as technical or mechanical support, and authority to provide pharmaceutical care within the institution. The pharmacy department would require a management structure, culture, and support system that allows the pharmacists to have professional autonomy in the

care of their patients. Professional autonomy would enable transfer of responsibility for patient outcomes completely to the individual pharmacists. Instruction to the pharmacists would also be needed to ensure their understanding of the institutional organizational structure and plans, corporate culture, rules of professional etiquette, and institutional expectations to allow effective integration with the health care team.

8. HOW CAN PHARMACEUTICAL CARE BE IMPLEMENTED?

To facilitate the transition from current services to a pharmaceutical care based practice, the director of pharmacy must carefully plan each step of the transition. The strengths and weaknesses of the pharmacy department, the available resources, and understanding of pharmaceutical care within the hospital must be considered. A template for planning is provided below, but individualization to the specific institution is required. Some of the steps below can be performed concurrently:

a) Education of director (and leaders within the Department) on the pharmaceutical care process and methods to facilitate "change";
b) Identify strengths and deficiencies in current services and resources;
c) Educate all pharmacy staff on the concept, requirements, and potential organization of pharmaceutical care within the individual facility. Includes development of mission statement;
d) Educate "key" individuals within the hospital administration, medical staff, and professional staff to obtain their support of the service;
e) Obtain authority for documentation in the health record;
f) Empower staff to accept responsibility for improving patient outcomes;
g) Train role model pharmacists on the specific process of pharmaceutical care;
h) Initiate pilot site(s) with role model pharmacists;
i) Revise mission/goals/methods based on initial experience;
j) Obtain additional or reallocate resources as needed;
k) Educate remainder of staff and schedule implementation dates; and
l) Initiate continuous quality improvement assessment of patient outcome.

9. SUMMARY

In the transition to pharmaceutical care, pharmacists and pharmacy departments are encouraged to maintain the skills and methods developed with patient pharmacotherapy monitoring. Pharmacists are urged to include the patient in the decision-making process on aspects of their drug therapy. This will allow the pharmacist to establish the relationship with the patient necessary for the co-operative efforts to achieve the desired outcomes from drug therapy. Patient participation is obtained through open communication between the patient and pharmacist of needs, desires, potentials, and limitations of drug therapy. Once this relationship has been established, the pharmacist can proceed, with guidance and support from effective pharmacy leadership, to assume the responsibilities required of pharmaceutical care.

10. LITERATURE CITED

1. Hepler CD, Strand LM. Opportunities and responsibilities in pharmaceutical care. Am J Hosp Pharm 1990;47:533-543.

2. Anon. Can J Hosp Pharm. 1992;45:256-7.

3. Anon. Am J Hosp Pharm. 1993;50:126-8.

4. Mission Statement, Canadian Pharmaceutical Association, 1993

5. Anon. What is the mission of pharmaceutical education? Am J Pharm Educ 1993;57:374-376.

6. Manasse HR. Medication use in an imperfect world: Drug misadventuring as an issue of public policy. Am J Hosp Pharm 1989;929-944, 1141-1152.

7. Lee MP, Ray MD. Planning for pharmaceutical care. Am J Hosp Pharm 1993;50:1153-8.

8. Stewart RB. Drug therapy monitoring. In: McLeod DC, Miller WA, eds. The Practice of Pharmacy. Cincinnati: Harvey Whitney Books. 1981

9. Clinical Pharmacy Advisory Committee, CSHP. A white paper on the establishment and elaboration of clinical pharmacy services. 1990.

10. Pierpaoli PG, Hethcox JM. Pharmaceutical care: New management and leadership imperatives. Top Hosp Pharm Manage 1992;12(3):1-18.

11. Strand LM, Cipolle RJ, Morley PC. Documenting the clinical pharmacist's activities: Back to basics. Drug Intell Clin Pharm 1988;22:63-67.

12. Guidelines for the documentation of pharmacist's activities in the patient's health record. Canadian Society of Hospital Pharmacists; 1993.

13. Farris KB, Kirking DN. Assessing the quality of pharmaceutical care: Application of concepts of quality assessment from medical care. Ann Pharmacother 1993;27:215-23.