

Pharmaceutical Care, the Future of Pharmacy

Pharmaceutical Care, the Future of Pharmacy

Farmaceutische Patiëntenzorg

Theory, research, and practice

J.W.F. van Mil

Dissertation

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INTRODUCTION

The subject of pharmaceutical care appeared on the agenda of many pharmacists and policy-makers in the beginning of the 1990s under the influence of American philosophies. The concept was embraced by the FIP, the International Pharmaceutical Federation soon after its introduction. At that time society was (and still is) questioning the general role of pharmacists in the provision of medicines in many countries and as a result pharmacists are looking for new roles and ways to prove their added value to society. Moreover, individual patients increasingly demand attention and proper care from all health care professionals, including the pharmacist.

The basic reason for care by pharmacists around pharmaceuticals can be found in the fact that drugs are used in a certain context. Physicians, pharmacists, patients, in fact the whole community expect them to heal. But drugs are just chemical substances and must be properly used in order to have their full beneficial effect otherwise they turn into intoxicating substances, as already recognised in 300 BC.

'Medicines are nothing in themselves, if not properly used, but the very hands of god, if employed with reason and prudence.' (Herophilus approx. 300 BC, a Greek physician)*

Pharmacists deal with medicines all the time. They help to select them, also in the management of self-limiting illness, and dispense them on physicians' prescriptions.

How can the pharmacist more fully contribute to patient care? Apart from very local or national attempts in different countries to extend clinical pharmacy, not many integral co-ordinated efforts have been made by pharmacy to contribute to the patient's well-being, apart from through the dispensing process.

Pharmaceutical care was the first integrated philosophy of practice to combine the expertise of pharmacists with influencing prescribing and evaluating drug regimens on one side and counselling on the other side to improve the patients' outcomes, including quality of life.

This dissertation consists of 4 parts. The first part introduces the different concepts of pharmaceutical care globally and explains why and how the topic emerged in the eighties in Dutch pharmacy. The second part describes the OMA and TOM projects. The third part describes pharmaceutical care practice and research from a more international point of view and the fourth part contains the conclusions of this dissertation. In the fifth part (the Appendices) some questionnaires and additional information for certain chapters are presented.

* From: Compton's Reference Collection [CD-ROM] Comptons New Media Inc.;1996.

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- The Stichting Pharmaceutical Care (Pharmaceutical Care Foundation)
- The Dutch Pharmacist Organisations KNMP and VNA
- The Dutch wholesale companies Brocacef, Interpharm and OPG

Peak flow meters for the TOM study were provided by the generic producer Pharmachemie, and the evaluation study of PAS[®], a system for coding pharmacists' activities which is briefly mentioned in this dissertation, was funded by the Dutch pharmacy-software company Pharmacom.

Paranimfen: Corinne de Vries
 Roelof Bijleveld

In the epilogue all people who contributed to the research and content of this dissertation are mentioned.

OVERVIEW OF CONTENTS

Part I, Introduction

In *Chapter 1* the philosophy of pharmaceutical care is outlined and an explanation is given as to why the definition (and the concept) of pharmaceutical care differs in different countries. This chapter has been accepted for publication in the Millennium Edition of the International Journal for Pharmacy Practice.

Chapter 2 deals with the history of the pharmaceutical profession in the Netherlands and answers questions about the professional development of pharmacists. It traces the merger of social pharmacy, clinical pharmacy and provision of drug information into a concept that is now called pharmaceutical care, or in Dutch, farmaceutische patiëntenzorg (FPZ). A slightly altered version has already been published in the Journal of the American Pharmaceutical Association in 1999.

Part II, The TOM and OMA projects

Chapter 3 considers the structure and methodology of two Dutch pharmaceutical care research projects, TOM and OMA, and outlines the pharmacist interventions and the research and intervention instruments used.

Chapter 4 and 5 provide the results of the OMA and TOM studies at the patient level. Both chapters deal with different aspects of the process indicators and outcomes of the interventions. Findings which did not match expectations, are reported together with the more positive results.

In *Chapter 6* the influence of pharmaceutical care on the health-care professionals e.g. GPs, pharmacists and assistant-pharmacists are considered based upon results from the TOM and OMA studies. Part of this chapter has been submitted for publication to the Pharmaceutisch Weekblad.

Part III, Pharmaceutical care in world-wide perspective

Chapter 7: Assuming that it is worthwhile to adapt pharmacy practice to the pharmaceutical care philosophy, the work presented in this chapter describes the implementation barriers in everyday pharmacy in a number of European countries.

In *Chapter 8* the results of a comparative study into community pharmacy provision around the world, conducted in co-operation with the community pharmacy section of FIP are presented. This section is especially aimed at looking at aspects, which might enhance or inhibit the provision of pharmaceutical care by community pharmacists in their respective countries. The best opportunities to develop pharmaceutical care currently seem to exist in the Netherlands, Japan and the United States.

In *Chapter 9* (and Appendix 5) the current situation with regard to pharmaceutical care projects and research in countries around the world are catalogued and discussed. In this chapter the activities of the Pharmaceutical Care Network Europe (PCNE) are also described.

Part IV, Conclusion and summary

Chapter 10 focuses on the conclusions that can be drawn from the totality of the research undertaken. Special emphasis is given to the challenges of research in practice, and the role of the definition of pharmaceutical care in the interpretation of both implementation and research projects.

In the *Summary* an overview of the total dissertation can be found, in an English and Dutch version. This section also contains the *Epiloque*.

Part V, Appendices

The appendices contain a number of questionnaires used during different projects and additional information on certain chapters.

This part also contains the curriculum vitae and a list of publications and presentations of the author.

SOME ADDITIONAL REMARKS

This dissertation is especially meant for researchers and practitioners who are interested in social pharmacy, pharmacy practice, and the evolution of the pharmaceutical profession and community pharmacy.

The dissertation is not only a collection of published or unpublished scientific articles, but also a philosophical examination of the historical and future development of pharmacy within the primary care sector.

ABBREVIATIONS

To improve readability a number of abbreviations have been used throughout this dissertation. An alphabetical list of these abbreviations is as follows:

- AFTO Pharmacotherapeutic consultation between GPs and pharmacists in The Netherlands
- ATC Anatomic Therapeutic Chemical classification index
- COPD Chronic Obstructive Pulmonary Disease
- DDD Defined Daily Dose
- FIP International pharmacist federation
- FTO Pharmacotherapeutic consultation between general practitioners and pharmacists

- GP General practitioner (in Dutch: 'huisarts')
- HMO Health Maintenance Organisation
- HRQL Health Related Quality of Life
- ICPC International Classification for Primary Care
- LHV The Dutch association for GPs
- KNMP The Royal Dutch Association for the Advancement of Pharmacy
- MMSE Mini Mental State Exam
- OMA Elderly Medication Analysis, one of the projects described in this dissertation

- PAS® Problems-Assessment-Solutions tool for assessing and drug related problems

- PDD Prescribed daily dose
- PEF Peak Expiratory Flow
- Prn. Take when necessary
- PhC Pharmaceutical Care
- TOM Therapeutic Outcome Monitoring. TOM in asthma is one of the projects described in this dissertation

- WINAp The Dutch scientific institute for pharmacy

Throughout this dissertation the terms 'drugs' and 'medicines' are used indicating substances, which potentially heal or prevent disease. The terms 'physicians' and 'doctors' are both used for people who hold a medical degree and who are practising medicine. The term 'professional' is used to indicate a health-care professional.

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