Pharmaceutical care, the future of pharmacy
Mil, Jan Willem Foppe van

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9 THE SITUATION OF PHARMACEUTICAL CARE AROUND THE WORLD

In this chapter the status of the practice of pharmaceutical care and pharmaceutical care research in different countries is outlined, based on a literature review and several conference proceedings. More detailed descriptions of projects are added to this dissertation as Appendix 5. As stated before in many countries pharmaceutical care has become the buzzword in community pharmacy practice. But what is actually happening?

9.1 Introduction

The different interpretations of the term pharmaceutical care lead to major differences in the use of the terminology in research and practice. For instance, in the United States most researchers seem to concentrate on influencing the clinical and economic outcomes when studying pharmaceutical care and not on the content of the care process or humanistic outcomes. In Great Britain the term pharmaceutical care was used for all processes in a pharmacy, only very recently has the focus on the patients and outcomes become clearer (see Chapter 1 and 2). Because the development of pharmaceutical care is relatively new, there is little published and peer reviewed information available. Kennie et al. only could identify 12 articles on research projects, which met their scientific criteria, out of 979 citations found in Medline and the International Pharmaceutical Abstracts between 1988 and 1996. When searching literature, their opinion on the presumed misuse of the term pharmaceutical care was also confirmed. The term pharmaceutical care is often used when actually clinical pharmacy services are described or evaluated.

Plumridge and Wojnar-Horton tried to find articles with sound pharmacoeconomic data on pharmaceutical care, published between 1970 and 1997 by performing searches in Medline and International Pharmaceutical Abstracts. They could not identify one single article. In this chapter the focus lies on pharmaceutical care according to the Dutch definition. If there are doubts about the character of a project, this is mentioned. However, in this chapter it is tried to investigate the major research and implementation projects which are being conducted world-wide under the term ‘pharmaceutical care’.

9.2 Method

Data for this of the chapter have been derived from literature (Medline search with keyword pharmaceutical care, from 1985 till 1998) and the Internet. On the Internet a special discussion forum exists in the FIP mailing list on Pharmaceutical care. This moderated list is especially useful for exchange of practical information and philosophical discussions. A call
for projects was placed on this list in December 1997. Eight responses were obtained, 3 about European projects and 5 about non-European projects. Other projects mentioned in this chapter and its appendix were found in national and international (non-peer reviewed) journals, supplements and conference reports.

To complete this overview of pharmaceutical care activities, some personal information from ‘frontrunners’ in the field therefore is also used in this chapter, of which the printed email messages are available to the interested readers.

Table 9-7 gives an overview of the number of existing projects in different countries at the beginning of 1998. In the mean time the number of projects has increased, but becomes more difficult to assess because there are many publication platforms now, including national conferences.

<table>
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<tr>
<th>Country</th>
<th>Identified Research projects</th>
<th>Identified Implement. projects</th>
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<td>United Kingdom</td>
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<td>Australia</td>
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A description of selected projects in individual states or countries can be found in Appendix 5 to this Dissertation.
9.3 The results per country

9.3.1 The United States
Pharmacy in the United States is a mixture between forces towards pharmaceutical care and other forces towards managed care. Sometimes these forces merge and certain aspects of pharmaceutical care are implemented through managed care organisations. Although managed care organisations incorporate pharmaceutical care into their services, these forces will probably be economically driven. The economic pressure on individual pharmacists in the United States seems to leave little room for extra services to their clients in practice. Hepler also stated in 1997, when receiving the Remmington award (an award of the American Pharmaceutical Association) that 'pharmaceutical care studies are difficult to set up and impossible to sustain. Because the market has squeezed so much excess capacity out of the community pharmacy, practically nobody has time to play around with pharmaceutical care'.

Pharmaceutical care in the US is stimulated by universities, the American Pharmaceutical Association (AphA), individual pharmacists or pharmacists’ companies. The latter provide independent assistance to colleagues or patients, as a kind of intermediate between the patient and the patients’ own doctor and pharmacist. The Pharmaceutical Care Associates is an example of such a service and can be found on the Internet. However, many research projects are under way. The most integrated study which was found in literature was described by Park and Carter and dealt with a limited number (26) of hypertension patients receiving drug therapy monitoring and educational services in a series of 4 consecutive personal consultations. The study showed a significant increase in the energy/fatigue scale of the Health Status Questionnaire (an extended SF36) in the intervention group but no significant overall difference between intervention and reference group. For unknown reasons this article was not mentioned in Kennies overview.

Preliminary reports of research projects can now frequently be found during the short communications or poster sessions of American pharmaceutical conferences. The professional body of pharmacists, the American Pharmaceutical Association, created the American Center for Pharmaceutical Care (ACPC). They constructed a curriculum consisting of a series of learning modules providing comprehensive hands-on instructions in practice reengineering. They also created the AphA foundation, which strongly co-operates with the pharmaceutical industry and helps the profession to re-engineer itself for the future by advancing the proliferation of pharmaceutical care integration and research into the practice setting.

As described in Chapter 1, the first definition of Pharmaceutical Care was invented in the United States, around 1988 and published in 1990. The implementation of pharmaceutical care into practice after this ‘invention’ however seems to be rather limited for such a large country. In 1993 the American Association of Hospital Pharmacists (ASHP) issued a statement on pharmaceutical care. But at a Health Outcomes and Pharmaceutical Care conference in 1995, Maine and Pathak stated that the vast majority of pharmacists in the

1 http://www.wnwcorp.com/pharmca
United States are still working in the drug distribution model of pharmacy practice. And in 1996 Carter and Barnette still concluded that there are only few pharmacists providing the full scope of pharmaceutical care. A search on the Internet (Health Infonet) in July 1997 rendered around 80 sites dealing with the subject. But these sites were mainly published by university-pharmacy departments, the American Society for Health System Pharmacists or Pharmweb and did not deal with applying pharmaceutical care in everyday practice.

In the literature one finds descriptions on implementation models for pharmaceutical care programs in hospital and community pharmacy. Since 1992 some results have been published of different projects in different states. Some articles describe the impact on therapy outcomes only, while others also focus on the economic impact. Only a few researchers describe results directly related to the influence on the patient, like quality of life or increase in knowledge.

9.3.2 Australia and New Zealand

According to a report distributed through the Internet and written by Alistair IK Lloyd, the development of pharmaceutical care in Australia was started by two events. First the launch of the Quality Use of Medicines arm of the National Medicine Drug Policy in August 1992. Second the presentation of the concept of Pharmaceutical Care by Prof. Doug Hepler at the PAANZ conference in Perth. The Victorian Branch of the Pharmaceutical Society discussed the continuing professional development of pharmacists with officials of Glaxo Australia. They concluded that pharmacists could develop a more effective role in achieving quality use of medicines. In 1994 the Victoria Branch prepared an initial outline of a major project to have pharmaceutical care accepted by Australian pharmacists as their normal standard of practice. In June 1994 this outline became a major national project for the profession through the National Council of the Pharmaceutical Society of Australia. A management committee and a National Advisory Group were to develop a project based on the outline. A survey of pharmacists in Australia found that they saw their future role as follows:

- as being involved in the management of patients’ condition, in association with other health professionals
- as working in large multi-pharmacists pharmacies and
- as providing counselling and consultations for a fee.

The greatest constraints were seen to be the lack of remuneration incentive and/or time, and the failure of others to recognise pharmacists’ ability in providing patient care.

A firm called Health Care Affinity was formed in December 1994 which since has provided limited resources and considerable energy, encouragement and professional help to develop the project. Co-operation with New Zealand is under construction.

Through a strategic plan and discussions with Linda Strand it was found that the Minnesota model of practice (comprehensive pharmaceutical care) could be used as the basis of the Australian version of the practice of pharmacy. The American Pharmaceutical Association then offered to train a number of Australian pharmacists in Iowa in 1996, as a means of giving them experience in the training program of the Iowa Pharmacists Association. Four strategic plan implementation working parties were founded which started meeting in 1996. These working parties are: Practice development and standards,
promotion, data collection and information technology, and training and practice support. The Iowa training program has now been made available for all Australian pharmacists in a slightly adapted version, to make up for the national differences in pharmacy practice and remuneration between the US and Australia.

Several universities in Australia (e.g. Sydney and South Australia) have concluded successful projects on pharmaceutical care in community practice, supported by the government. To date no peer-reviewed publications about those projects have appeared.

According to the messages in AusPharmList, pharmacy in New Zealand closely resembles pharmacy in Australia and there is co-operation in the development and implementation of pharmaceutical care. In New Zealand a research project into the effects of pharmaceutical care in asthma is ongoing and implementation projects are being designed by the Pharmaceutical Society of New Zealand.

9.3.3 Canada
Canadian pharmacy seems to be less driven by managed care than in the US. In 1996 the Canadian Medical Association and the Canadian Pharmaceutical Association published a joint statement on enhancing the quality of drug therapy. The goal of the statement is to promote optimal drug therapy by enhancing communication and working relationships among patients, physicians and pharmacists. From discussions on the Internet it also becomes clear that mail-order pharmacy in Canada is less developed than in its neighbouring country. Different authors attribute this fact to the better-developed individual approach of Canadian pharmacy, where more pharmaceutical care elements are said to be present in daily practice. In general, Canadian pharmacy practice shows more resemblance to Northern European pharmacy than to pharmacy in the United States. A remarkable element is the joint use of data by pharmacies in some states. In Ontario and British Columbia there is a system of medication surveillance by on-line connections to a central database, which includes the surveillance of prescriptions delivered in other pharmacies. In Quebec and British Columbia different aspects of pharmaceutical care are already being remunerated.

9.3.4 Japan
Physician dispensing is practised extensively in Japan and pharmacists supply medicines to only a limited part of the population. Nevertheless certain developments in the field of pharmaceutical care are also recognisable in this country one of which is that Japanese pharmacists are paid for a variety of services in addition to dispensing drug products.

9.3.5 The current situation in Europe
The situation regarding pharmaceutical care in Europe is almost as variable as it is around the rest of the world. Some countries just have started to think about the concept, but in other countries research centres have been established and the new philosophy of practice is being advertised nation-wide. In the UK, through structural changes in the NHS, pharmaceutical care like activities are now being performed by pharmacists in some GP practices and clinics.
National pharmaceutical associations in many countries are implementing pharmaceutical care projects and funding research in the area. Some universities are carrying out or developing research programs. More details on individual projects in Europe can be found in Appendix 5.

The Pharmaceutical Group of the European Community (PGEC) is involved in the development of an OTC supporting telematics system, which will incorporate some pharmaceutical care modules in the field of OTC care, in co-operation with 15 national European pharmaceutical associations. In the field of implementation, EuroPharm Forum is active (a co-operation between national pharmacists’ organisations and the European WHO office).

The Pharmaceutical Care Network Europe Foundation (PCNE) co-ordinates most of the European research in the field of pharmaceutical care. The active European countries in the field of pharmaceutical care established an informal platform organisation for co-operation in 1993. This platform is called the PCNE, the Pharmaceutical Care Network Europe. The Network generates projects, offers a framework for international co-operation and generates funds. It is also up to the PCNE to keep an open eye for the possible conflicts of interests and the agendas of national professional bodies. Europharm-forum and FIP support the Pharmaceutical Care Network Europe Foundation.

**Aim of the co-ordination**

The aim of the co-ordination is to enable comparison of the results of the different projects over Europe and to generate new European co-ordinated research and implementation projects. To that purpose the participants are requested to use the same instruments for evaluating the national studies and to use roughly the same implementation protocols. However, methods used have to be adapted to national circumstances and local pharmacy practice. The overall interest of all participants is always to study the outcomes of patient centred pharmaceutical care provision and to compare those results on an international level.

The basic intervention and research method is laid down in a European protocol. A regular consultation between the participating countries ensures exchange of information on the progress of the national studies and the level of adherence to the European protocols. PCNE is the umbrella that supports the co-ordination of the fund-raising and brainstorming.

**International projects**

Currently two research projects are being co-ordinated by the PCNE and three more are under development.

The TOM-project, Therapeutic Outcome Monitoring in asthma, is a project based upon the TOM-concept as it has been developed by Hepler in Florida. The project (in different formats) is currently being performed in Belgium, France, Iceland, Malta, Northern Ireland and the Netherlands. Finland has stopped the project because all pharmacies got involved in

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† A modified form of this section appeared as an article in Int Pharm J 1997;11:10-11
asthma education. Austria is preparing to implement a similar project. Denmark, Germany and The Netherlands have concluded their asthma projects. The results of the Danish project were presented at the FIP conference in Jerusalem in 1996. The Danish research centre is now studying the possibilities of evaluating data on the implementation of the project in different participating countries.

The second project is entitled ‘Pharmaceutical Care in the Elderly’. A European protocol has been established based upon the Dutch OMA study, developed by van Mil and Tromp. Participating in this project are currently Denmark, Germany, Ireland, the Netherlands, Northern Ireland, Portugal and Sweden.

A project on self care using OTC-drugs is currently under development, as this field seems to be well suited for pharmaceutical care\(^2\). Several of the countries mentioned above are participating in this development as well, and Spain is also involved. Since 1997 there is also some co-ordination between countries involving a study in the field of angina pectoris, i.e. Germany, Northern Ireland and the Netherlands. Spain is in addition looking for partners to become involved in their TOMCOR programme (pharmaceutical care in coronary disease).

Finally a study into implementation barriers for pharmaceutical care in different countries has been carried out under supervision of Dutch researchers (see report in Chapter 7).

Finances
The PCNE also attempts to find funding for the co-ordination of the pharmaceutical care projects. Usually the individual countries must raise the funding for their national implementation. Biomed, a European funding authority, supplies the money for the co-ordination of the Elderly projects, after a successful application co-ordinated by the PCNE and Prof. J. McElnay in Belfast.

Because developing new protocols is essential as well, sources are sought to find seeding money to enable new projects to be started. FIP provided the money for the development of the OTC-project, which is currently being developed. As long as there is no funding for the international co-ordination of a specific project, each participating national organisation pays its own expenses for the international meetings.

Current structure of PCNE
Within PCNE organisations, which perform, research or promote Pharmaceutical Care co-operate. Participants are both representatives of universities and representatives of national pharmacist organisations.

Political considerations of course play a role. If the value of pharmaceutical care can be clearly demonstrated, this will provide an extra argument to the legitimate claims for an increased role of pharmacists in the field of drug provision and selection. The results of the PCNE co-ordinated projects provide data to support and indeed defend the professional content of pharmacists’ work. It is for this reason that other pharmaceutical organisations are involved, like Europharm Forum\(^2\) and FIP.

\(^2\) Europharm Forum is a co-operation between the European Professional Pharmacist Organisations and the European Office of the World Health Organisation, based in Copenhagen, Denmark
Besides the central organisation, working-groups exist in which the projects are co-ordinated. There are currently working groups on TOM asthma (co-ordinated by Hanne Herborg, Denmark), the Elderly (co-ordinated by James McElnay, Northern Ireland) and OTC (co-ordinated by Peter Noyce, United Kingdom). Every new project will have its own working group in which the (potential) participants discuss the protocol and exchange data. Because the group is growing, the current structure is subject to debate.

9.4 Conclusion, what is the situation of pharmaceutical care around the world

There are activities in many countries in the field of pharmaceutical care. The leading stimulating organisations in research are the University of Florida in Gainesville, the University of Minnesota in Minneapolis and the Pharmaceutical Care Network Europe. Other bodies, especially universities in Australia, Canada, Germany, the Netherlands, Northern Ireland, Spain, the United Kingdom, and the USA are active as well. A number of practice implementation projects are also ongoing, mainly initiated by national pharmacist organisations.

In Africa, Asia, South America and the former Eastern European countries (excluding former East Germany and Czech Republic) very few activities in the field of pharmaceutical care can be identified, either in research or in practice.

Many studies are ongoing, especially in Northern America, Australia, New Zealand and Europe, however, very little published quality data are available. The influence of pharmaceutical care on health-related outcomes and pharmacoeconomics has therefore not yet been established through publications in major peer reviewed biomedical journals.

If pharmaceutical care is to be the worldwide practice philosophy of pharmacy in the future, there is still a lot to be done. In this chapter it has been shown that there are implementation and research projects ongoing, but only on a limited scale. The published results of research projects in general show the need for pharmaceutical care, but the positive effects on outcomes has not yet been satisfactorily demonstrated in a major peer reviewed journal. This will influence the level of acceptance of pharmaceutical care by other health care providers.

9.5 References to Chapter 9

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