



# Pharmaceutical Practice, Pharmaceutical Care and Pharmacy Education in Bulgaria

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**This paper describes the changes in the pharmaceutical sphere in Bulgaria and, in particular, those that led to an improvement in the curriculum of the Faculty of Pharmacy-Sofia. In the beginning of 2000, a new course in pharmaceutical care was introduced in its Department of Social Pharmacy as a free, eligible subject. The course's lectures and seminars were held during the first semester of the fifth year of the studies. It was subsequently learned that students were greatly interested in all the topics of the course, a finding that led to a change in its status from free to compulsory. This paper presents the main topics in the course's lectures and seminars curriculum. The initial outcomes from this new discipline are described.**

*Keywords:* Pharmaceutical care; Bulgaria; Pharmaceutical education; Curriculum

## INTRODUCTION

The economic, political and social changes in Bulgaria since 1989 have had an important impact on all aspects of social life, including those in pharmaceutical activities. Until 1989, the Bulgarian pharmaceutical system was centralized; community and hospital pharmacies, wholesalers, pharmaceutical works and institutes were in possession of the state, as was the import and export of drugs.

After 1989, the Bulgarian pharmaceutical system changed towards privacy. Most of the community pharmacies, the wholesalers and many drug manufacturers are private. The first Bulgarian Law of the drugs and pharmacies in the human medicine was introduced in 1995, attempting to harmonize Bulgarian drug regulations with those of the European Union. All these changes, together with new drug discoveries, technologies and

methodologies, constantly challenge us to reconsider our roles as pharmacists in the healthcare system. Before these changes, Bulgarian pharmacists used skills to artfully manufacture drugs in the pharmacy. Now, pharmacists apply skills that require a detailed knowledge of communications and human behavior to scientifically dispense medications, to counsel patients about their health and the proper application of their prescribed and OTC drugs, to monitor patients against adverse drug reactions and to achieve maximum benefit from the treatment.

The implementation of the concept "pharmaceutical care" as a factual part of pharmacy practice is one of the more recent changes. In this regard, the Faculty of Pharmacy-Sofia initiated a "Pharmaceutical Care Program" in the curriculum of the Bulgarian pharmaceutical education.

## THE ESSENCE OF PHARMACEUTICAL CARE

Pharmaceutical care, what it is, and how and where it should be provided has sparked an enormous amount of debate around the world (Mason, 2001). Since being first defined in the 1980s, it has taken a variety of meanings to both researchers and practitioners. Strand and Cippole stated that the reason why so many pharmacists have been attached to the idea of pharmaceutical care is obvious: "because pharmacists feel free to use the term to mean whatever they want it to" (Strand and Cippole, 1993). Hepler supported that idea, saying that "some people seem to attach meanings to the idea (pharmaceutical care) that are not there" (Hepler, 1993).

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Pharmaceutical care is an important element of healthcare, connected with all its elements. This conception means safe, effective and human drug therapy. According to its creators (Hepler and Strand, 1990), pharmaceutical care is the responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient's quality of life. These outcomes include the curing of disease, the elimination or reduction of a patient's symptomatology, the arresting or slowing of a disease process or the preventing a disease or symptomatology (Hepler and Strand, 1990). Pharmaceutical care embraces a co-operation of a pharmacist both with the patient and with the doctor in order to make and implement a healing plan and to monitor the therapy, thus rebounding to the patient's advantage.

Before, pharmacists used skills to artfully manufacture a healing potion. Now, pharmacists use skills that require a detailed knowledge of communications and human behavior to scientifically dispense medications, to monitor patients and to counsel patients on their health (Bosk, 1979). There are four criteria that have to be met before the pharmacist can provide pharmaceutical care: adequate knowledge and skills in pharmaceutics and clinical pharmacology; mobilization of the drug distribution through which drug-use decisions are implemented; communication with the patient and other health-care professionals and a practical approach towards the patient's needs (Hepler and Strand, 1990).

### THE PLACE OF PHARMACEUTICAL CARE IN THE CURRICULUM

The Medical University, Sofia, Bulgaria consists of three faculties: Medical faculty, Stomatological faculty and Pharmaceutical faculty. The Pharmaceutical faculty is the only Bulgarian high school that educates high pharmaceutical specialists: the pharmacists. The duration of the education is five years for both the general and industrial profile. All the graduated students obtain the degree "Master of Pharmacy." One-hundred to 120 Bulgarians and 25–30 foreign students are accepted for training every year. There are seven departments in the Faculty of Pharmacy:

1. Pharmaceutical Technology and Biopharmacy.
2. Pharmacognosy and Pharmaceutical Botany.
3. Pharmaceutical Chemistry.
4. Organic Chemistry.
5. Chemistry.
6. Pharmacology and Toxicology and
7. Social Pharmacy.

The graduated students can specialize for three years. They work at their working place, fulfill their study program and, two-weeks per-year, they are called for courses in the Faculty of Pharmacy. After the third year, they pass a State examine for specialty. The specialties are:

1. Organization and Economics of the distribution and pharmacy practice.
2. Drug technology.
3. Organization and economics of the pharmaceutical practice.
4. Drug analysis.
5. Clinical pharmacy.
6. Clinical laboratory and.
7. Herbal affairs and drug plants.

Since 1989, there have been many changes in the curriculum of the Faculty of Pharmacy to harmonize it with the curricula of and to equalize the diplomas with the other pharmaceutical schools in the EU. Many new aspects and study areas have been introduced since then, such as Biopharmacy, Clinical Laboratory, Biology and many others. Many new study areas have been further introduced in the Department of Social Pharmacy's curricula: History of Pharmacy, Pharmacoepidemiology, Pharmacoeconomy, Pharmaceutical Law, Pharmaceutical Marketing and Pharmaceutical Management.

In 2000, a new course in pharmaceutical care was introduced as a free, eligible subject. The lectures and seminars of this subject were led during the first semester of the fifth year of the studies. The lectures contemplate applying the knowledge taught during the whole process of education. It further focuses on teaching new communicational skills and logical thinking on the different stages of the enclosure of pharmaceutical care in the pharmacy. University lecturers, together with the help of pharmacy practitioners, provide the training.

### The Initial Results

The initial results were four-fold:

1. The university teachers based their lectures and seminars on the experience of several pharmacy practitioners.
2. The information is the start for creation of new guidelines for the pharmacy practitioners.
3. The subject will be compulsory from the next school year and
4. There will be introduced a postgraduate specialized course in pharmaceutical courses for pharmacy practitioners.

All this leads to changes in the way of thinking of the pharmacists. It results in an improvement in

TABLE I New course's main lecture topics

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1. Communication in the context of patient care
2. Basic principles and elements of the interrelations
3. Perceptions and communication
4. Nonverbal communication in the pharmacy; barriers for the communication pharmacist-patient
5. Listening and appropriate answering
6. Standing patients' and pharmacists' ground
7. Interviewing, asking and assessment of the patient
8. How to construct better understanding from the patient
9. Communication in special cases—elderly patients, disabled patients, deaf patients and other
10. Ethical care for the patients
11. Essence of the conception "pharmacy care"
12. Integration of pharmaceutical care with the pharmacy practice
13. Pharmacy care and self-medication
14. Pharmaceutical care for improvement of the treatment benefit of the patients; the model Nimmo
15. Documentation and cost evaluation of the pharmaceutical care

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the quality of the pharmaceutical activities in the pharmacy, a reduction of the communicational gap between the patient and the healthcare givers and a strengthening of the connection between the academy staff and the practitioners.

#### Pharmaceutical Care Curriculum Content

The curriculum of the pharmaceutical care course was developed on the basis of this experience. Its main goal is to provide a pharmacy staff that possesses skills and knowledge adequate to ensure effective, safe and convenient drug therapy for patients.

The duration of this resulting course is 15 weeks, with one lecture (two academic hours) and one seminar (two academic hours) weekly. The main topics of the lectures are shown in Table I.

The seminars emphasize the most widely spread chronic diseases and different types of patients, discussing the most frequent drug problems and giving examples from the practice. The aim of the seminars is to increase student ability to solve different problems in the pharmacy and to design plans for pharmaceutical care. The main topics of the seminars are listed in Table II.

After the lectures and the seminars, the course ends with an oral and written test examination in order to assess the students' acquired knowledge and skills.

#### CONCLUSIONS

The concept "pharmaceutical care" is a necessary approach that should be implemented in

TABLE II New course's main seminar topics

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1. Consultation with the patient in the pharmacy—creation of a record; analysis of the prescription
2. Pharmaceutical care for patients with chronic diseases
3. Communication abilities and tactics
4. Marketing of the pharmaceutical care
5. Pharmaceutical care for elderly patients
6. Pharmaceutical care with OTC treatment
7. Pharmaceutical care with diabetes patients
8. Pharmaceutical care with arthritis patients
9. Pharmaceutical care with asthma patients
10. Pharmaceutical care with patients with cardio-vascular diseases
11. Pharmaceutical care with patients with depression
12. Pharmaceutical care for children (special attitude towards the patients for achieving compliance)
13. Strategies for bettering patient's compliance
14. Improvement of the communication chain between physicians, patients and pharmacists
15. Sources of pharmaceutical information

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pharmaceutical practice. In order to train highly qualified pharmacists—those who can deal with all the problems in the pharmacy—and to provide effective, safe and convenient drug therapy for the patients, a new course on pharmaceutical care was developed in the Department of Social Pharmacy, Faculty of Pharmacy, Sofia, Bulgaria. The lecturers found a great deal of interest among the students on all the topics of the course. That interest led to a change of course's status from free to compulsory.

During the lectures and seminars, we try to cover the most important problems during the drug therapy, to provide the skills to deal with them based on the experience of the practitioners and to develop abilities to plan pharmaceutical care plans. We thus hope that the essence of pharmaceutical care will be introduced to the practice as soon as possible.

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