

# Pharmaceutical lifelong learning program provided in human resources development projects

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## Abstract

**Objectives.** The objective of our study is to present the essential aspects of implementing a project developed as a result of a grant, oriented towards human resource development (Sectoral Operational Programme Human Resources Development HRD) and an analysis of the interest expressed for the improvement of pharmacists' training, quantified as the participation rate in the courses organized nationwide over a period of two years.

**Materials and methods.** The target group consisted of over 1000 pharmacists who work in all areas applicable to the profession of pharmacy: urban or rural pharmacies, pharmacy warehouses and production laboratories, hospital pharmacies, universities, distribution companies, etc..

Lifelong learning training programs were held nationwide and all courses were accredited by the Professional Committee of the College of Pharmacists of Romania. Topics covered in these programs were diverse: healthcare management, information and communication technology initiation and pharmaceutical-specific: in clinical pharmacology, pharmaceutical technology, applied pharmaceutical marketing and information and communications technology impact on pharmaceutical activity (case studies, technology presentations, comparative analysis of how technology influences the development of pharmaceutical activity).

**Results.** The goal achievement indicators were: participation in lifelong learning education programs a total of 1,000 pharmacists (including 750 women) and 100 pharmacists in pharmaceutical management program 70 of which were women.

The number of pharmacists who participated in the training programs exceeded all indicators (1,602 participants in total), demonstrating both the utility and their interest in lifelong learning activities.

**Conclusions.** Human resource development project for pharmacists managed to achieve and exceed all indicators originally proposed, both in terms of students certified in pharmaceutical management and skills improvement in using new technologies.

Project objectives of human resource development for pharmacists have been achieved, the aim being to enable training managers in the pharmaceutical field and pharmacists employed by specific programs (health management) or interest (new technological applications in pharmaceuticals). Undiscriminatory access for all members of the professional community, regardless of the environment in which they operates (rural or urban) or occupational program.

**Key words:** pharmaceutical lifelong learning, education, human resource development program, new pharmaceutical technologies

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## OBJECTIVE

For pharmacists, lifelong learning is a mandatory component of their professional activity. The premises are determined on the one hand by the legal aspects (Law 95/2006, Title XIV) and on the other hand, by the objective necessity of constant information on different domains: clinical pharmacology, pharmaceutical management, new technologies used in drug production, modern marketing techniques or the use of information and communications technology (ICT).

The project's goal was to increase the level of adaptability of pharmacists in the context of the introduction of new technologies, including ICT and new forms of management in their work activities.

## MATERIALS AND METHODS

The project preamble was the application form approved on a legal basis which included both the programs and the EC regulations which assess general provisions for the European Regional Development Fund, European Social Fund and the Cohesion Fund and also the government ordinance regarding financial management of Structural tools and their use for the Convergence objective, other orders of the finance minister, completed with applicable EC and national rules.

The specific objectives were: increasing the ability of pharmacists to work with toxic or dangerous substances; achievement of a correct management of the use and storage of toxic substances and environmental protection; increasing the adaptability of managers working in the pharmaceutical field; increasing the adaptability of pharmacists to new technologies, including ICT and its impact on the exercise of their profession.

The project also intended to promote the principle of equal opportunities and non-discrimination in the workplace by conducting an information campaign on these issues.

the partners involved in the project were: the "Carol Davila" University of Medicine and Pharmacy Bucharest as an applicant, and the College of Pharmacists of Romania and Siveco Romania SA as partners.

The College of Pharmacists of Romania, as the professional organisation of pharmacists, has a great experience in initiating, promoting, organizing and accrediting pharmaceutical lifelong learning programs, with the aim of increasing the professional competency of pharmacists. The College is equally authorized to provide lifelong learning programs to pharmacists

nationwide. Its role in this partnership was extremely complex, involving both the management level, and the implementation of activities in order to provide training and logistical issues, but also promoting all the activities, as well as supporting the human, material and financial resources needed.

Siveco Romania is one of the leading suppliers of IT solutions in Romania, equally providing accredited training programs in information communications and technology (ICT). The company has developed interactive course materials and innovative multimedia teaching materials, using ICT. Siveco was involved in the idea generation of the project, the project management and the implementation of all its activities, including the creation of a web portal through which multimedia teaching materials will be made available to the target group of pharmacists and will accompany the classic format.

The "Carol Davila" University of Medicine and Pharmacy, has developed a reputation in the projects implemented and funded by various non-budgetary financing lines. It had a role in generating the idea of the project, but also in the management activities and participation of its teaching and research staff. For this purpose, significant human resources (management team, key experts, lecturers for pharmaceutical education classes) and important material resources were assigned.

Three programs were provided:

1. Training program in health management
2. Initiation program in ICT
3. Training programs for pharmacists in new technologies.

The last category of programs included courses of applied pharmaceutical technology (program targeting familiarity with new technologies in the field), the use of new technologies in clinical pharmacology (this program discusses the latest technology used worldwide in clinical pharmacology), and pharmaceutical marketing and communication in the IT era (program discusses new methods of specific promotion and communication tailored to the IT technology and information society), The Impact of ICT on the pharmaceutical activity (case studies, technologies presentations, comparative analysis regarding the influences on the development of pharmaceutical activity).

## RESULTS

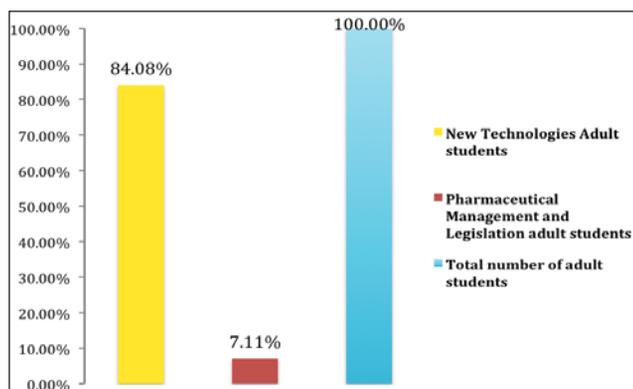
All the programs have received accreditation from the Pharmacists College (20 lifelong learning credits each).

Furthermore, the ICT initiation program (which included lectures on using a word processor, a spreadsheet application and a presentation graphics program) has received accreditation from the National Centre for Adult Training (CNFPA).

Upon completion, the web portal will be available for the university so it could be used further on the pharmaceutical lifelong learning education courses. If these courses will be accredited by the College of Pharmacists of Romania, will enable all pharmacists to have access to training programs without being forced to follow a mandatory schedule with displacement to a fixed course location. Instead, these course can be covered from any location in an online system, over a period of time that can spread between 4 to 8 weeks.

The goals' achievement indicators were: participation in the lifelong learning education programs of a total of 1,000 pharmacists, (750 of which women) and 100 pharmacists (70 of which women) in the pharmaceutical management program.

The adult student ratio certified in pharmaceutical management and the ratio of certified adult students that updated and improved their skills through organized programs in pharmaceutical lifelong learning education project are presented below:



## CONCLUSIONS

The human resource development project for pharmacists managed to achieve and even exceed all the indicators that were originally proposed, both in terms of the number of adult students certified in pharmaceutical management, but also in terms of the skills improvement in using new technologies. Initial objectives were met – managers were enabled to train in the pharmaceutical field, and also pharmacist were trained through specific programs (health management) or other programs of general interest (applications for new technologies in the pharmaceutical field). Moreover, the sustainability of the project through the web portal was achieved, making it possible for pharmaceutical education courses to be posted and accredited by the College of Pharmacists of Romania, allowing non-discriminatory access of all members of the professional community, regardless of the environment in which they operate (rural or urban), the work schedule, whether unemployed, on sick leave, postnatal or parental leave.

## RESOURCES

1. Sectoral Operational Programme Human Resources Development 2007-2013 (POSDRU), approved by the EC decision nr. 5811/22.11.2007
2. EC Regulation nr 1083/2006, regarding the general provisions for the European Fund for Regional Development, European Social Fund and the Cohesion Fund, with the subsequent amendments
3. Financing Contract E5254/30.06.2012
4. Technical and Financial Report nr 8/2013, part of the POSDRU Project 81/3.2/S/58708, entitled: Eficientizarea activității farmaciștilor prin formare în noile tehnologii, inclusiv TIC.