

## 5.6 Country case study: Uruguay

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### Summary

- The Asociación de Química y Farmacia del Uruguay (AQFU), led a modernization process in pharmacy practice and pharmaceutical education
- A pharmacist taskforce played a key role in this process, transforming the pharmacy curricula's focus from product to patient.
- Changes targeted education reform, international collaboration and implementation of Good Pharmacy Practice (GPP).
- For these purposes, close cooperation of the national pharmacist association with University, Ministry of Health and Pan American Health Organization (PAHO) was established.
- Pharmacy Practice Standards were approved and projects regarding pharmaceutical care and GPP implementation have been launched, first at the national level and now in association with Paraguay.
- The visibility of pharmacists among stakeholders has increased.

The process of GPP implementation, which included conferences, seminars, post-graduate education, training courses and improving daily pharmacist practice is ongoing. This case study will describe the challenges and outcomes and also further actions to develop the pharmacy workforce.

### 5.6.1 Background and challenges

Uruguay is a small country located in the south-eastern part of South America. It is divided in 19 administrative regions, including the capital. It has a population of 3,400,000 inhabitants, mostly of European origin. Half of the population is concentrated in the capital city, Montevideo. In the last 50 years

there has been an important international migratory tendency due to political and economical reasons. It is now estimated that half a million Uruguayans live abroad.[1]

Uruguay is placed in the 46th position of the human development index (2007). Adult literacy is at 96%; the average life expectancy is 76 years, one of the highest in the Americas.[2] Services such as telecommunications, electricity and drinking water are available throughout the country.[3]

### Health system

Uruguay provides health coverage to all of its inhabitants through public hospitals and Social Care Institutions. The health system is based on intergenerational solidarity, accessed through the payment of a monthly fee. Workers have access to assistance in these institutions for themselves and their children through Social Security. In January 2008, the Integrated National Health System introduced a major reform to emphasize integrity, service coordination and strengthen primary health care, amongst other principles. New goals and indicators were introduced by the Ministry of Health. Hospital and community pharmacies are the mainstay of medicines providers to the public. There are 1200 community pharmacies and 70 hospitals, half of which are in Montevideo.[4, 5] Regulatory framework

The Ministry of Public Health is responsible for the regulation of medicines, therapeutic devices, medicinal foods and. Any citizen, with the exception of doctors and dentists, can own a pharmacy. Each pharmacy must have a pharmacist as Technical Director, although it is not necessary for this Technical Director to be present or have a fixed time load. [6,7]

The regulation and control of pharmacist and pharmacist assistant education is performed by the Central Directive Board of the Universidad de la República (UdelaR) and the Ministry of Education and Culture.

Prior to 2005, there were minimal requirements for professional activities of pharmacists and pharmacist assistants. There were no legislated codes, standards or policies to govern pharmacy practice and the professional conduct of pharmacists (such as an ethical code of practice).

### *The Association of Chemistry and Pharmacy of Uruguay (AQFU)*

In Uruguay, the membership of health workers in professional associations is not compulsory and their aim is to promote professional development. The Association of Chemistry and Pharmacy of Uruguay (Asociación de Química y Farmacia del Uruguay [AQFU]), which includes 80% of pharmacists in its membership, has played a key role in the development of qualified pharmaceutical human resources. AWFU has served as a facilitator in the progression and integration of new trends and methodologies in pharmacy sciences and practice in Uruguay such as specializations in quality assurance for industrial pharmacy, clinical pharmacy and pharmaceutical care.

### *Good Pharmacy Practice*

In the year 2000, the Ministries of Health of the MERCOSUR (Southern Common Market), Bolivia, Chile, Colombia, Ecuador, Peru and Venezuela reached an agreement to implement Good Pharmacy Practices (GPP) across the region. However, pharmacies of the signatory countries, such as Uruguay, still do not adhere to the WHO guidelines for GPP.

### *Pharmacy education*

At present there is only one school of pharmacy, the Faculty of Chemistry of the Universidad de la República, which trains pharmacists by awarding the Pharmaceutical Chemist's degree. In the 20th century, the curriculum was geared towards preparing pharmacists for mainly industrial roles, oriented to work in the pharmaceutical and food industries. This focus produced a deficit in qualified pharmaceutical human resources in health care.

Until 1994, there were no continuing education courses or post-graduate degrees for professional specialization. The sole avenue for continuing education for pharmacists was courses given by professional associations like AQFU or courses in other countries.

Patient follow-up as well as medicines information services have become relevant to the health team, the patient and their family. This change generates and pushes modifications in the structures of the pharmaceutical services, resulting in the integration of pharmacists in a health care team that has to be multidisciplinary. A needs-based education, which takes into account scientific, social and practical knowledge is needed

in order to be able to fulfil this role and adequately prepare pharmacists with competencies to perform throughout their career.

### *Pharmacist assistants*

Before 1990, there were no courses for pharmacist assistants of appropriate academic quality. There were some short courses given by the Ministry of Health and the Uruguayan Pharmacy Centre (the Chamber of pharmacy owners of Montevideo). In most of cases, vendors that worked for more than five years in a pharmacy obtained the level of "idóneo" (technician suitable for pharmacy) through a letter of competence given by the Technical Director of the Pharmacy.[8] That situation had led to significant variations in the competencies of pharmacist assistants.

## **5.6.2 Strategies used and lessons learned**

The status of pharmacy practice in 1990 was inadequate and there was an urgent need for change. Pharmacists were the driving force for this change by coordinating actions with different stakeholders (professional association, consulting organs at the University, Ministry of Health, International Organizations like Pan-American Health Organization, FIP, etc) to reform practice to meet contemporary needs.[9-13] The changes were focused on education development, but also international pharmacy collaboration, and implementation of GPP.

### *Implementing Good Pharmacy Practice*

The 1993 Tokyo Declaration provided the reference framework for us to be able to define where we were and where we had to go. The formation of networks and collaboration between stakeholders within Uruguay and the Pan-American Region were key to enabling dialogue, building consensus and fostering progress in GPP implementation.[9] In that same year, the first South American Pharmaceutical Federation Congress took place in Montevideo. This facilitated the establishment of a relevant pharmacist network within the South American region. By this time, pharmacists also began to organize themselves into professional groups according to fields of work and consequently started the annual Hospital Pharmacy Meetings (1994), and then the biannual Community Pharmacy Meetings (1998).[14] The Academic Conferences of the Hospital Pharmacy Diploma arose from the combined

efforts of the Hospital Pharmacy Specialist Diploma and AQFU (2006).[15,16] These conferences have become a high-level platforms where best practices and other relevant subject are shared.

In 2005, AQFU submitted a Project of Good Practices in Community Pharmacy to the FIP Foundation for Education and Research. The project, called "The patient in the focus," was approved. It allowed AQFU to work together with the authorities of the Ministry of Public Health, the Pan-American Health Organization and the University for the first time. The National Technical Group (GTN), a work coordinator group, was created by a decree of the Ministry of Public Health.[17] Between 2005 and 2007 the GTN, with the support of the FIP Foundation, developed this pilot project of implementation of GPP in 3 strategic areas: regulation, education and pharmacy practice. [18-22]

AQFU, along with the Pharmaceutical Chemists Association of Paraguay (Asociación de Química y Farmacia de Paraguay [AQFP]), proposed a new project on Good Practices to be developed in the Hospital and Community settings in 2008. The American Association of Health-System Pharmacists (ASHP), the Portuguese Association of Hospital Pharmacists (Asociação de Farmacias del Portugal), and Spanish pharmacists association (Consejo Oficial de Farmacéuticos de España) also gave their support to this project. This project on GPP development will be implemented in phases; the first phase consists of a national survey to measure our current situation.

The survey consists of two components, community and hospital pharmacy, and has been validated in both countries. In Uruguay it will be conducted on a representative sample of the country, taking demographic distribution into account. The survey results will allow for the identification of specific issues that need specific training in order to implement GPP framework. The training will be focused on pharmacists, expecting that they can motivate pharmacist assistants and pharmacy owners.[23]

A delegation from Paraguay, ASHP and the Brazilian National pharmacist organization participated in the 6<sup>th</sup> Academic Conferences of the Hospital Pharmacy Diploma on 31 July 2009. Survey data and information on the impact of GPP in different countries were presented. In the following phase, national seminars will be developed on the issues where the need for greater training was detected (planned for September-October 2009). Then, at the 15<sup>th</sup> Conference of Hospital

Pharmacy, which will be held in November 2009, representatives from AQFU and AQFP will hold a joint symposium on the education of pharmaceutical human resources. A follow up phase will monitor indicators that will allow for an evaluation the impact of these interventions.

### *Pharmacy education reform*

The current pharmacist degree curricula, approved in the year 2000 after 13 years of discussions within the faculty, is a great sign of contemporary pharmacy education development that will support pharmacists for diverse professional directions. [24,25] The objective of the five year degree program is to prepare pharmacists to be a health service provider and an expert in medicines.

At this moment, the needs of the graduates converged with the vision of a small group of professors who were motivated by the impact of the pharmaceutical services on health system and patient outcomes. These professors, in turn, having studied in reference centres abroad, started developing actions to establish links between the University, hospital and community pharmacies, communities and other settings where pharmacist played a role.

The key features of the current curriculum are:

- The subjects are organised by field of knowledge;
- 20% of the education is comprised of elective subjects. These subjects allow specialization. For example, students that prefer pharmacy practice may choose Public Health or Pharmaceutical Care, or choose only industrial subjects depending on their desired profile of competencies;
- 12% of the education consists of compulsory pharmacy practice;
- There is a link between the theoretical and practical contents with students having greater independence in their learning. For example, students interested in paediatric pharmacy practice, can choose electives subjects closely related with that and also the compulsory practices can be coordinate in paediatric services.

### *Continuing education*

In 1994, the University established the "Permanent Education" (continuing education system) in the Faculty of Chemistry, and within this framework, up to date courses were introduced.[26,27] These courses have enabled the professional growth of the graduates. Pharmacists have supported

this initiative by enabling the incorporation of hospital and community pharmacies as pharmacy practice centres accredited by the University.

#### *Pharmacist assistant training*

From 1994, AQFU has taken up the challenge of training pharmacist assistants, for whom a formal education program had not previously existed.[28] Each year AQFU offers a one year course for pharmacist assistants. The previous two courses were coordinated with the Association of Pharmacies of the Countryside (Chamber of the owners of the Pharmacies that are not in Montevideo).[29]

### **5.6.3 Outcomes**

Significant progress has been made in addressing each of the four priority issues relating to pharmacy workforce development in Uruguay. In using a combination of strategies such as building networks and collaboration between stakeholders, instituting reforms in regulation, practice and education and building capacity for training of pharmacy workforce, outcomes such as improvements in pharmacy workforce levels and practice standards were achieved.

#### *Good Pharmacy Practice*

Through the GPP activities between 2005-2007 it was possible to:

- Establish national standards for dispensing, rational use of medicines, pharmaceutical care and ethics in pharmacy practice;[30-34]
- Introduce new subjects in the pharmacist curriculum such as public health, pharmaceutical care and social pharmacy;[35]
- Support a number of community pharmacies to develop their own projects of Good Pharmacy Practice in their specific setting; and
- Organize two drug policy seminars, which allowed an unprecedented visibility of the pharmacists from all stakeholders related to medicines and the health system.

#### *Pharmacy education reform*

The education reform helped to reduce the student attrition rate (close to 70% in the previous curriculum, and approximately 50% now) and the average length of the degree (now

six to seven years in contrast with eight years previously). The changes in the curricula led to an influx of highly qualified pharmacists trained as health professionals into the job market. Now there are more pharmacists working in pharmacies, particularly hospital pharmacies. The profile of professionals that join pharmaceutical industries also has changed. The new professionals are better qualified in quality assurance but are less specialised in chemical analysis. This is a drawback of the curricula reforms.

#### *Continuing education*

In 2003, pharmacists in the Uruguayan branch of Ibero-Latine American Organization of Pharmacists (OFIL) put forth the need for a post-graduate education for the hospital field. The diversification and specificity of responsibility within this area exceeded the scope of the existing courses. In 2004 the Hospital Pharmacy Specialization Diploma (DEFH) was founded. Each year, the Faculty of Chemistry approves the diploma's calendar of courses, with the participation of national and visiting professors. To complete the diploma, the pharmacist must complete three internships in fields of his/her interest in accredited services, with qualified tutors (Associate Professors).

#### *Pharmacist assistant training*

In 2009 there were 350 students. These training courses have already been implemented in 15 of the 19 administrative regions of Uruguay (Figure 1). As 2003 was the first year for course implementation outside Montevideo, there was an important previously unmet demand which led to spike in student numbers (Figure 2).

Figure 1. Regions where the AQFU pharmacist assistant course is offered



Figure 2. Number of students enrolled in pharmacist assistant courses 1994 – 2009

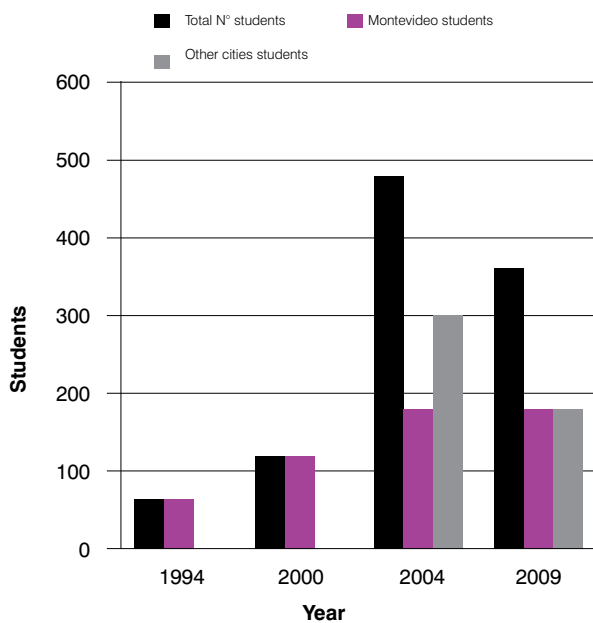


Figure 3. Pharmacist assistants from 2008 course in Tacuarembó.



In 2003, the authorities of the Ministry of Public Health acknowledged the academic value of the course managed by AQFU and gave it official recognition by decree.[36] These courses are offered in partnership with the University, which validate the academic level and review the examinations. The practical lessons of the course are given in the Faculty of Chemistry facilities. As the result of this partnership, the Pharmacist Assistant Certificate given by AQFU is jointly issued by both the President of AQFU and the Dean of Faculty of Chemistry (UDELAR).

#### 5.6.4 Conclusion

Paraguay and Uruguay have been working in agreement with the statements that emerged from the Global Conference on the Future of Hospital Pharmacy (Basel, Switzerland, August 2008), which serve as a new reference tool for the introduction of pharmaceutical services complying with the principles of GPP.

At the same time, all our present efforts are also orientated towards the medicines-patient relationship and the patient as the most important actor in the health system.[37-40] There is great hope that the new GPP project could also play a key role in introducing GPP in hospital and community settings.

The professional association, AQFU, has played a critical role in partnership with the Ministry of Public Health, the University, hospital and community pharmacies and other stakeholders to coordinate, support and lead pharmacy workforce development to meet patient needs. Change will only be possible if there are competent pharmacists that are committed to playing their role in the health care of the population.

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