



## Hospital pharmacy in Luxembourg over the last 20 years

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### A bit of history ...

This year, the Luxembourg Association of Hospital Pharmacists (APHL) is celebrating its 20th anniversary. The APHL was created in 1990 by a handful of pharmacists, who did pioneering work in this relatively new domain and environment for pharmacists. Many hospitals in Luxembourg until the late eighties assigned nurses and technicians to manage the supply of medicines – others were simply supplied by external public pharmacies. The APHL is a not-for-profit organisation and its mission consists of defending and promoting the various tasks and duties of a hospital pharmacist. Initially the association worked very hard in order to create a legally-based official status for hospital pharmacists. This goal was finally achieved in 2002 by the publication in the statute book of a legislative bill detailing the mission, rights, duties and obligations of hospital pharmacists. Once the context and the scope of our work had been fixed, the number of hospital pharmacists working every day in Luxembourg rose rapidly, from 10 in

1998 to 32 pharmacists in 2010. At the same time, the number of hospitals in Luxembourg decreased sharply through a variety of mergers reaching the number of five general hospitals in 2010.

### The challenges of the last decade ...

During the years surrounding the millennium changes, one of the main issues of hospital pharmacy in Luxembourg was the centralised preparation of cytotoxic drugs by the pharmacy itself. As in many neighbouring countries, Luxembourg hospitals were following the same trend in transferring the preparation of anti-cancer drugs by nurses on the ward to dedicated pharmaceutical technicians under the responsibility of a hospital pharmacist in a well-separated restricted working environment. With that change, the hospital pharmacist was suddenly facing a handful of challenges. First of all, he had to face resistance by the nursing staff, unhappy at least at the beginning about this new situation. He had to train first of all himself and then his staff; quality management and standard

operating procedures were relatively new to our profession, but essential for this critical domain. Last but not least, the pharmacist was exposed to much 'hype' surrounding this topic, as pharmacists and other scientists all around the world assessed the different risks of handling cytotoxic drugs. At that time, the distinction between common sense measures and exaggerated precautionary measures was not easy to make. Even though this whole discussion proved to be necessary and useful to protect our staff and us, unfortunately in my opinion we lost the focus of our main mission, to serve our patients by taking responsibility for the appropriate use of medicines in order to achieve optimal therapeutic outcomes. It is therefore very important in this particular domain too, that we are finally moving towards the implementation of pharmaceutical care for our cancer patients.

As a main player in the hospital supply chain, we eventually became exposed to the increasing financial pressure of exploding healthcare budgets. The pharmacists of the different hospitals decided to work together and combine purchases of a number of drugs and medical supplies through a 'virtual' central purchasing department. Due to Luxembourg's small size and in consequence that of its hospitals, this step was absolutely necessary to put some price pressure on the suppliers. In recent years, the annual savings have amounted to a few million Euros mainly due to the arrival of generic anticancer drugs. At present the main barrier to increasing our financial impact remains the lack of standardisation within and across the different hospitals as well as the slightly absurd situation that in a unified Europe and European market prices of drugs, medical devices such as implants and prostheses vary sharply in price from one country to another.



## The challenges as of today ...

Clinical pharmacy, pharmaceutical care, CPOE (computerised physician order entry) as well as unit-dose (UD) drug distribution are today's key words in hospital pharmacy not only in Luxembourg, but also across large parts of Europe. CPOE and UD distribution were launched over 10 years ago by a single hospital in Luxembourg. The experience proved to be successful so the other hospitals started similar projects a few years ago. There is unanimity that CPOE is the entry ticket, the foundation for nearly every future-oriented hospital pharmacy project. Currently we are debating the different models of UD distribution, some people favouring centralised drug distribution by the pharmacy, others preferring decentralised distribution on the wards by semi-automated distribution systems.

Whatever the final choice of drug distribution system in a hospital may be, the decision should always be taken in respect to one single factor, patient safety. Therefore, as stated before in analogy to the preparation of cytotoxic drugs, our main focus is to optimise the use of the medicines. It is important not to waste too much energy and effort on a single element of the chain, but to emphasise the real value that can be added by the activities of a hospital pharmacist.

## The unique challenge of tomorrow ...

The APHL has declared clinical pharmacy the key challenge and focus for the next 10 years. Clinical pharmacy as well as pharmaceutical care offers our profession a unique opportunity, which in our opinion cannot be wasted. The challenge however is huge, and we have to move in small steps according to the Japanese philosophy of 'Kaizen' describing a process of continuous improvement.

The first challenge is education. The 'usual' pharmacy studies are insufficient if we are to deliver clinical pharmacy on a daily basis at a high level, so some universities across Europe are starting to offer special courses or even Master's degrees in clinical pharmacy. As the Luxembourg University does not offer any degrees in

medicine or pharmacy, we need to rely on their development in our neighbouring countries. Especially for hospital pharmacists who have already experienced a professional career for some years, clinical pharmacy represents on the one side a great change in their working habits, and on the other side the need to go back to the university bench to refresh and enhance their scientific knowledge. Some of our colleagues have already bravely taken this road, whereas a few of the 'new' young hospital pharmacists are already trained in clinical pharmacy when entering their jobs. The second challenge is the professional and public relations requirement to



demonstrate the evident benefits of clinical pharmacy for the patient. The understanding and necessary collaboration of physicians and nursing staff can only be reached through increasing and non-aggressive direct contact. One hospital started a small pharmaceutical care project two years ago:

The first step of the project was the systematic validation of all the drug prescriptions written in the hospital by the team of hospital pharmacists, based on a CPOE system.

The second step is the in-depth analysis of prescriptions on particular wards taking into account not only drug-drug interactions, but also laboratory data and further elements. Pharmacists trained in clinical pharmacy with a more regular contact with physicians do this job.

The last step at the moment is the intervention of a pharmacist at patient dis-

charge. The pharmacist will see the patient in his room on the day of his discharge to explain the whole drug treatment, prescribed doses, administration routes as well as possible precautions. When necessary an explanatory handout is provided.

The feedback, especially on the last part of this pilot project, has been positively impressive. Physicians, nurses and particularly patients were very satisfied with this new service. Although this is only a small step in a long process, it offers many opportunities to reach a common understanding of all healthcare professionals of the benefits of clinical pharmacy.

Recently confronted by the necessary reform of the healthcare system in Luxembourg, the APHL took a clear position on the future of hospital pharmacy by demonstrating what skilled pharmacists have done in recent years, and by having a clear vision for the future. The details of this reform are still to be revealed, but major players in the healthcare sector have hinted that the development of clinical pharmacy will be allowed, so that we are strongly hoping to be able to follow the chosen path.

To conclude I would borrow the 'Panta Rhei' expression, often used by our colleague Mr Klaus Meier to describe the fact that everything flows and changes constantly. Hospital pharmacy not only in small Luxembourg, but also in large parts of Europe, is probably going to see a silent revolution with the development of clinical pharmacy, based on and adapted from the Anglo-Saxon countries. Let us not forget that CPOE, UD distribution, automated systems and robots are only instruments, and that our mission and goal is optimal drug therapy individualised for every single patient.

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