

- lack of internal competition between pharmacy employees;
- responsibility for defining, evaluating and improving quality;
- possession of necessary medical and pharmaceutical information;
- knowledge of potential environmental hazards through the disposal of medicines waste;
- Responsibility for maintaining and evaluating one's competence.

Our plan to improve the pharmacy institution's activities includes a number of measures aimed at implementing the principles and provisions of Good Pharmacy Practice presented in the table:

Improvement principles	Suggested actions
Interaction with doctors	Development of information sheets for doctors on the existing product range.
	Developing proposals for friendly seminars on patient self-treatment.
Consumer interaction	Expanding the range of pharmacy services.
	Expanded counseling on disease prevention and medication management.
	Development of methodology for interaction with consumers.
Work with staff	Ensuring availability of up-to-date information on regulatory regulation of pharmaceutical activity and updating the pharmacy's assortment policy (creating a database of up-to-date information)
Staff training	Introducing the practice of regular training of staff to the modern requirements of the legislation (trainings, seminars).
	Development of internal staff training methodology.
Increasing the level of promotion	Development of intangible employee rewards procedure.
Working with internal documental	Development of procedures for specific activities of a pharmacy institution (e.g. risk assessment including environmental hazards through the disposal of medicines waste).

Conclusions. Based on the analysis, we propose a number of measures to improve the competitiveness and quality of pharmaceutical services, namely: the introduction of methods of interaction with consumers in the pharmacy; methods of internal training of pharmacy staff; non-material promotion of pharmacy staff and risk assessment. Today, the main task of the pharmacy should be compliance with the provisions of Good Pharmacy Practice, which will give benefits to the organization in the market of pharmaceutical services in Ukraine.

PHARMACEUTICAL WASTE MANAGEMENT PROBLEMS

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Introduction. The unfavorable situation in Ukraine in the field of pharmaceutical waste management can pose a real threat to public health.

Consumers are forced to throw medicines unsuitable for use together with household waste or sewage.

Medicines after entering sewage can enter the surface water through sewage treatment plants, since many of them are not biodegradable.

Drugs that enter the landfill of household waste first fall into the ground, and then, together with precipitation, into surface water. This water enters the water supply. It is used by various farmers to water vegetables and fruits, which are then consumed by the population.

Scientists confirm: after some time, antibiotics can be found in soil, water, and even food. Small concentrations of antibiotics form bacteria resistance *in vitro* and *in vivo*.

Separation of waste into medical and pharmaceutical should be carried out properly.

The processing of medical (biological) waste is largely regulated. Pharmaceutical waste requires special attention and other methods of collection and processing.

Aim. Analysis of existing methods for the disposal of pharmaceutical waste and development of a scheme to optimize waste management.

Materials and methods. As materials of research and development used the regulatory documentation mentioned above.

As above, the regulatory documentation mentioned above.

Results and discussion. In 2011, Belgian pharmacies collected approximately 572 tons of unused medicines, an average of 111 kg per pharmacy or 208 grams per family. In terms of the population of Ukraine, this can only amount to 3 thousand tons of collected pharmaceutical waste.

"Hazardous waste" means waste that falls into any of the categories listed in Annex I of the Basel Convention, the so-called "Yellow List". Waste falling into any of the categories listed in Annex II shall be considered as "other waste" for the purposes of this Convention.

Table 1. Categories of substances to be regulated under the Basel Convention and relevant to the pharmaceutical industry

<i>Waste groups</i>	<i>Annex I</i>	
	<i>Categories of substances to be regulated</i>	
1	2	
Y1	Medical waste from patient care in hospitals, clinics and clinics	
Y2	Wastes from the production and processing of pharmaceutical products	
Y3	No pharmaceuticals, medicines and drugs needed	
Y4	Wastes from the production, production and use of biocides and phytopharmaceuticals	

Annex 1 to the Convention lists wastes including toxic classes of compounds as constituents.

The problem of medical and pharmaceutical waste management for Ukraine is only partially resolved. Today there is no holistic debugged system that would ensure all stages of the treatment of this waste. According to various legislative norms, only waste disposal of pharmaceutical plants and factories is established. The issue of collecting and rendering harmless the expired medicines or unused medicines in Ukraine is absolutely not resolved.

Waste removal operations, in accordance with the legislation of Ukraine, can be carried out only by specialized organizations in the presence of documents (licenses) in accordance with the Law of Ukraine "On the basic principles of state supervision (control) in the field of economic activity" and the Law of Ukraine "On licensing of types of economic activity". The Law of Ukraine "On Medicines" provides for verification of compliance with the requirements of the legislation on the rules of implementation of good practices at all stages of treatment of drugs, in particular during their disposal and destruction.

The volume of medicines to be collected and disposed of for each pharmacy is not large. It is economically unprofitable for each pharmacy to obtain a license for the collection and disposal of medicines. According to the GPP, pharmacists must provide appropriate information to patients on how to safely dispose of expired or unnecessary medicines and create conditions for their collection and disposal.

Conclusions. Despite its enormous scale, the problem of pharmaceutical waste can still be solved. But this cannot be done without legislative regulation of the collection of unused drugs in pharmacies.

Disposal of expired or unusable medications is an important step towards maintaining the safety of people and the environment by both drug companies, hospitals, and households.