



# Safe disposal of waste pharmaceuticals – medicine take back programs

(Resource ID: 301)

## Mimoza Pira

mimoza.pira(at)riinvest.net

This teaching resource is allocated to following University:

**RIINVEST – Riinvest College**

Institution:

**Riinvest**

<http://www.sustainicum.at/en/modules/view/301.Safe-disposal-of-waste-pharmaceuticals-medicine-take-back-programs>



**Group work**



**11 to 30  
students**



**up to 1 semester**



**English, Shqip**

Please note: module with excess length – more than  
7 lecture units required!



The aim of this resource is to raise awareness of the problem of expired and unwanted drugs, we to figure out what happening with the expired drugs that are accumulating at the central warehouse of MoH, Central pharmacies, Community pharmacies and we are asking what the consumer does with their expired and unused pharmaceuticals. The pharmaceutical industry develops, produces, and markets drugs or pharmaceuticals for use as medications. When this medicine is not used by the patients it becomes a waste

that has to be disposed ensuring to find the best possible way of doing it. The teaching method to figure out what is done with unwanted waste is fieldwork. Students will give their opinions during pre-field stage, will get information during the field-stage and will present their findings and results during post-field stage.

Supply chain management is a topic that is well described and taught to students during their studies. In relation to the pharmaceutical sector, supply chain management is well organized starting from the Public sector (Central warehouse of MoH, Hospital Pharmacies and MFMC Central Pharmacies) and private sectors ( Kosovo Medicines Agency, Distributors, Community pharmacies) to the consumer.

The pharmaceutical industry develops, produces, and markets drugs or pharmaceuticals for use as medications. When this medicine is not used by the patients it becomes a waste that has to be disposed ensuring to find the best possible way of doing it.

The idea is to raise the awareness to the safe disposal of pharmaceuticals, among institutions and individuals as well.

### **What are FDA's recommendations for removing unused medicines from the home?**

The best solution is the **medicine take-back program** or using authorized collectors such as the U.S. Drug Enforcement Agency (DEA). Authorized collection sites may include retail pharmacies, hospital or clinic pharmacies, and law enforcement locations. Some pharmacies may also offer mail-back envelopes to assist consumers in safely disposing of their unused medicines through the mail. After collection, these pharmaceutical will be disposed of. There are a lot of methods, for each form of medication, but each country decides what methods will work best for them.

The take-back or mail back program is not available in our country. Most unused or expired medicines can be disposed of in household trash. Reducing the risk of harm from accidental exposure to this small country is essential, the FDA and Environmental Protection Agency in the US. prescribe different methods that are safer to humans and environment.

These stakeholder are identified as the Ministry of Health, Pharmaceutical manufacturer, Community pharmacies and random consumers. A visit will be had to a pharmaceutical manufacturer in Kosovo to discuss about their

ways of disposing of waste pharmaceuticals. The same will be done at Central Warehouse at the Ministry of Health. Instead of getting information on the disposal methods they apply, we will promote the take back program that is applicable in developed countries.

The plan is to go through all stages of fieldwork. There are typically three stages involved in Fieldwork: pre-field stage, field stage and post-field stage. Participants will be provided with clear expectations and will be motivated to take an active role in the process.

During post-field stage the data obtained from the group work will be gathered and analyzed. In small groups students will present the findings using graphs/charts and supporting literature. In their groups participants should identify constraints and barriers and suggest potential stakeholders that could get involved in the future.

---

## Teaching Tools & Methods



Mini-project



Field study



Case study



Written material

## Integration of Social Stakeholders

The role of all stakeholders on this module is to provide us with information to change the way of disposing unwanted pharmaceuticals.

- Ministry of Health, Head of the pharmaceutical department
- Pharmaceutical manufacturers in Kosovo ( TrepHarm, Gentipharm)
- Community pharmacist
- Random consumers

## Strength

- It allows students to be exposed to new environments in order to increase their depth of understanding;
- Hands-on experience that is critical for skill development
- Encourages students to appreciate diverse landscapes and helps to recognize the importance of conserving and preserving the environment
- Demonstrates relevance
- Students will have some idea of waste pharmaceuticals, what they should do in the future, and they will be a great source of information for others as

well,

## Weakness

- Difficulties to arrange an appointment with stakeholders;
- Lack of willingness from stakeholders to cooperate and be involved;
- Difficult to work around the student timetable

## Learning Outcomes

- Understanding how unwanted pharmaceuticals (expired and unused ) are being disposed,
- Raising awareness of safe methods that are being used in developed countries,
- Raising awareness of the safe disposal on household trash,
- Foot print of pharmaceutical waste
- Collect and analyze data
- Identify constraints in the implementation of pharmaceutical waste protocols
- Present finding to audiences
- Appreciate sustainability issues in companies supply chain in the pharmaceutical sector

## Relevance for Sustainability

It is directly related with safety and environmental protection:

- Prevents poisoning of children and pets
- Deters misuse by teenagers and adults
- Avoids health problems from accidentally taking the wrong medicine, too much of the same medicine, or a medicine that is too old to work well
- Keeps medicines from entering streams and rivers when poured down the drain or flushed down the toilet

## Related Teaching Resources

No specific previous knowledge / related resources required

## Preparation Efforts

Medium

## Preparation Efforts Description

It needs a medium effort, we need to arrange it according to the stakeholders' schedule.

## Access

Free

## Assessment

There will be an assessment.

## Credit/Certification Description

25% of the final grade.

## Sources and Links

<http://water.epa.gov/scitech/swguidance/ppcp/upload/ppcpflyer.pdf>

<http://www.fda.gov/Drugs/ResourcesForYou/Consumers/BuyingUsingMedicineSafely/EnsuringSafeUseofMedicine/SafeDisposalofMedicines/ucm186188.htm>

<http://www.earth911.com/recycling-guide/how-to-recycle-unwanted-or-expired-medications/>

## Funded by

This teaching resource, realised within the project ConSus, has been funded with the support of the TEMPUS of the European Union. The contents reflect the views of the authors, and the European Commission cannot be held responsible for any use which may be made of the information contained therein.