



CWPharma

Improved take-back and disposal of unused medicines and other waste containing pharmaceutical residues in Baltic Sea region



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Aim & method of study

Aim: spread good practices on management of pharmaceutical waste to Baltic Sea countries where such practices are not yet in place / inefficient
→ decrease pharmaceutical emissions to environment

Method:

- Evaluation of current national practices for take-back and disposal of unused medicines and other pharmaceutical waste in BS region
 - All 9 BS coastal countries; limited information LT and RU
 - identification existing good practices + development into BS region recommendations & good practices

CWPharma Report “Good practices for take-back and disposal of unused pharmaceuticals in the Baltic Sea region” (Mehtonen et al. 2020)

Table 21. Citizens ways to get rid of unused pharmaceuticals in the BSR.

Country / year of interviews or year when study was published	Share of the surveyed people that returned unused pharmaceuticals to pharmacies and hazardous waste collection points	Share of the surveyed people that flushed unused pharmaceuticals to sewer	Share of the surveyed people that disposed unused pharmaceuticals to mixed household waste
Finland / studies made 2009–2010	65% (60–80%)	3%	16%
Latvia / studies made in 2012 & 2014	6–10%	5–12%	41–62%
Lithuania / study made in 2013	10–13%	no info	50–64%
Poland / 2015 (study published)	5-8%	24–33%	57–60%
Sweden / studies made in 2011 & 2012	69–75%	≈ 17%	
Russia / 2013 (study published)	no info	15%	80%

collection functions quite well; e.g. Sweden & Finland

collection functions poorly; e.g. Latvia, Lithuania & Poland

collection not exist: Russia

No quantitative information from Denmark, Estonia & Germany!



21 recommendations /good practices identified

- National implementation does require careful consideration due to differences in national conditions and/or legislation – e.g. Russia vs. EU MS
 - nonetheless, provides a valuable starting point at national level
- Grouped to:
 - households (7 recs),
 - raising environmental awareness & education (6 recs),
 - hospitals + other health care institutions (2 recs),
 - animal farms & veterinarians (6 recs),
 - pharmaceutical industry (1 rec),
 - destruction of wastes (2 recs) and
 - other / preventive good practices (3 recs)



Households

- Rec 4: *“Studies about fate of unused household medicines in all BS countries should be regularly (e.g. every 3 years) made in order to follow up situation”*
- Rec 6: *“**Citizens** should be able to return all unused medicines to dedicated collection points”*
 - human & companion animal medicines
 - collection points: e.g. pharmacies or hazardous waste collection sites
 - sufficiently high density of collection points as well as location near citizens
 - free of charge
 - Etc...



Raising environmental awareness & education

- *“Recommended to arrange information campaigns on environmental effects of pharmaceutical emissions and how unused medicines can be handled appropriately to citizens, medical doctors, veterinarians and farmers (Rec 1, 5, 15, 18) as well as included to studies of medical doctors & veterinarians (Rec 1 & 17)”*



Hospitals + other health care institutions

- *Rec 11: **Hospitals** should collect their own pharmaceutical waste and send it directly to waste treatment facilities*
- *Rec 12: “**Other health care institutions**, such as facilities providing service housings, retirement homes, assisted-living facilities, private clinics ... etc. should have centralized collection for pharmaceutical wastes”*

Animal farms & veterinarians

- *Rec 13: “When the veterinarian is making check-up visits to animal farm, the **farmer** should have the option of returning unused veterinary medicines to the veterinarian, who should have a possibility to charge the collection costs”*
- *Rec 16: “**Veterinarian and veterinary practices** should collect the pharmaceutical waste produced by their own activities or returned to them by farmers or households and send it directly to waste treatment facilities”*

Other / preventive measures

- *Rec 1: “Unnecessary use of medications should be reduced”*
 - Human, companion animal and other veterinary medicines should only be prescribed and used when needed and based on the diagnostic.
- *Rec 2: “Instructions on the safe usage of medical products, should be given by pharmacy staff or veterinarians when handed out the pharmaceuticals to the customers”*



Destruction of wastes

- *Rec 20: “High temperature incineration (1 100–1 300°C) is recommended treatment method for unused medicines and other pharmaceutical waste,
 - ... unless a lower temperature is proven to irreversibly transform the active ingredients into non-hazardous substances”*
- *Rec 21: “All operators managing the disposal of wastes containing pharmaceutical residues must have the appropriate environmental permits required by national legislation”*



- Report finalized: Good practices for take-back and disposal of unused pharmaceuticals in the Baltic Sea region; <http://hdl.handle.net/10138/319009>



S Y K E

Good practices for take-back and disposal of unused pharmaceuticals in the Baltic Sea region

Clear Waters from Pharmaceuticals (CWPharma) Activity 4.1 Report

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Thank you!

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