EFFICIENT TREATMENT OF PHARMACEUTICAL RESIDUE AT SOURCE - EPIC

Conclusions of the seminar

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Global business with local effects

1. We know more about loads from different sources

Amounts of pharmaceuticals in wastewater from households and treatment facilities have been investigated

- Substances that should be removed from the waste stream before the municipal waste water treatment plant can be identified.

2. Monitoring only the API form may lead us wrong

Some of the pharmaceuticals are excreted into wastewater as active metabolites

- Both parent compounds and metabolites should be taken into account in monitoring and in impact assessments.

3. We know which techniques work

- It has been proven that waste water treatment, either at source (such as hospital waste water) or at the end of the pipeline (municipal waste water treatment plants) is technically feasible.

4. Additional treatment, of course, has a price tag

The treatment measures should be directed to the 'right' substances and the 'right' point to the waste stream

- It is important to identify nationally the most environmentally-friendly drugs and their most significant sources (households, healthcare institutions or the pharmaceutical industry).

5. Increasing knowledge plays a key role

Knowledge on concentrations, loads and environmental risks is vital

- For example, pharmaceutical drug emissions from industrial facilities should be more accurately measured or calculated.
- This should be done in order to assess the need for treatment and potential limit values for emissions.

6. The introduction of the environmental classification of pharmaceuticals in Finland is crucial

This is one of the most important actions that should be immediately promoted

- Alongside this, increasing the awareness and training of health professionals about the adverse environmental effects of medicines was seen as an extremely important work that should be done.

Work is not over!

1. **Follow**: EU Commission's Strategic approach to pharmaceuticals in the environment
2. **Contribute**: The production of information should be international or the information already produced
   - For example risk assessments of EMA marketing authorization process should be made public.
3. **Make a change**: At national level, the rigidity of the drug reimbursement system hampers the economic viability of pharmaceutical companies for the production of more environmentally friendly pharmaceuticals.

Work is not over!

4. **Include in monitoring**: Monitoring should take into account not only the aquatic environment, but also the land environment.
   - In this way, it would also be possible in future to set emission limit values or otherwise to control prescription and use of the most harmful substances and preparations.
5. **Broaden the perspective**: Research inputs are mainly for human medicines, but information is also needed on the environmental impact of veterinary medicines.
   - The possibility to include veterinary medicines in the classification system should be considered.

Thank you!

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