

Pharmacy students are challenged to take leadership roles in reducing pharmaceuticals in water.

The University of Groningen in the Netherlands recently launched a new education module, "Reducing pharmaceuticals in water" reflecting aspects/elements of environmental sustainability, particularly pharmaceuticals found in water.

Community pharmacists, together with general practitioners are the first line of care in direct contact with patients. Therefore, they can be crucial in promoting positive attitudes toward protecting the environment and water from pharmaceutical pollution. The current practice in the community pharmacy is limited to collecting unused medicines, as there needs to be more specific information concerning the environmental effect of pharmaceuticals. On the other hand, hospital pharmacists are essential in-patient care and medication management in hospitals.

Some pharmaceutical residues entering the sewer system from medical centers and hospitals pose potential environmental hazards and risks. Moreover, as the effect of pharmaceuticals found in water is getting more "popular", healthcare professionals should be aware of the correct facts and be able to distinguish speculation from facts. Based on that point, healthcare professionals, including pharmacists, shall make health-related decisions, from producing pharmaceuticals to dispensing them to their patients. Therefore, further knowledge and training are required to be implemented into the educational programs of pharmacists and allied healthcare professionals.

Why this educational module? To increase awareness among pharmacy students about environmental issues with the example of pharmaceutical contamination of water, and activate them to become leaders by developing strategies for green solutions concerning this problem.

The module is integrated into the innovative educational program "Pharmacy Game" at the University of Groningen, taught to final-year master's students in pharmacy. This module consists of lectures and interview videos showing the perspective of different stakeholders. Representatives from public health institute and water technology companies highlight the problem of pharmaceuticals in water. Other stakeholders give the view of the governing bodies, such as local municipalities, environmental experts, or the general practitioner's perspective, being the pharmaceuticals' first prescribers. The role of pharmacists in the processes is highlighted from the community and hospital pharmacy perspective. These materials shall help students solve a few dedicated cases and develop future strategies for minimizing the effect of pharmaceuticals in the water.

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Reducing pharmaceuticals in water

Introduction

by Prof. Dr. Katja Taxis

