Planetary Health Education in Prescribing

[PlanED Prescribing]

Topic Area(s)

* Medicines;
* Sustainable models of care;
* Education and workforce;
* Community/public engagement;

Please specify your project approach

Mitigation only

Key message / aim

The aim of the international project PlanED Prescribing is to integrate planetary health considerations into pharmacotherapy education, addressing the significant environmental impact of medications and the urgent need to combat climate change. This international collaboration seeks to establish expert consensus on the environmental factors to take into account for prescribing, enhance transparency in available information, and develop innovative educational materials for (future) prescribers.

What was the problem?

The healthcare sector's environmental impact calls for urgent action. Medications contribute substantially to the environmental footprints of the healtcare sector, necessitating integration of planetary health into prescribing practices. Despite this, there's a lack of information and awareness among prescribers regarding the environmental impact of medications, hindering informed choices for environmentally friendly alternatives.

What was the solution?

PlanED Prescribing aims to tackle the described problem through a multi-step approach:

* Establishing a universally accessible framework encompassing expert consensus on all essential criteria for prescribers in determining the environmental impact of medications.
* Identifying essential information gaps in current literature and databases and recommending transparency improvements.
* Developing innovative and freely available educational materials and ""Teach the Teacher"" modules for seamless integration of planetary health into pharmacotherapy education.

For this project we have set up a collaboration between eight European universities, the Dutch National Institute for Public Health and the Environment, and various associate partners including among others Oxford University, WHO Europe, the European Society for Medical Oncology and the European Association for Clinical Pharmacology and Therapeutics.

With this consortium we applied for a Erasmus+ funding to cover the costs of the partners' working time in our project and for the creation of the educational materials and Teach the Teacher modules. We have received a funding of €400.000,- to work on this project for 3 years between October 2023 until October 2026.

What were the challenges?

A serious, but expected, challenge for our project is the absence of essential information about the environmental impact of medicines. Therefore our project aims to provide concrete recommendations to policymakers and manufacturers for transparency in relevant information. Also, the approach of our project is designed to help overcome this challenge. The order of the steps in the project will make sure that it will first be determined what information on environmental impact is essential for prescribing choices en then what essential information is missing in order for us to be able to empower our recommendations to policymakers and manufacturers. We hope that this will contribute to the availability of information and knowledge that we want to include in prescribing education in the future. Taking this challenge into account, we decided to already create educational materials with the information that is not lacking and mention in our education what extra information is needed for further possibilities so (future) prescribers will also learn about this challenge and may potentially contribute to the overcoming of this challenge.

What helped the intervention implementation/success?

The implementation of PlanED Prescribing's is being facilitated by:

* The collaborative international partnerships.
* Clear objectives in the project plan with an appropriate stucture.
* Engagement of various types of experts in the field and therefore valuable and broad input on all outcomes.
* Funding support from international organizations.
* Emphasis on transparency and open access for our project outcomes.

What were the results/Impact?

Patient outcomes:

Our project is only indirectly able to have impact on patient outcomes. Since the primairy recommendation in our education for all (future) prescribers to lower environmental impact of medicines is to not prescribe unnecessary medication, our education can make patient care safer on a large scale since this can also lead to less unnecessary side-effects of medicines.

If in the future more information is present about the total environmental impact of medicines and it will become possible to choose for the most environmental friendly option in the treatment of certain indications, our project will focus on ensuring rational prescribing in order to lower the environmental impact of medicines while retaining optimal patient care.

Environmental impact:

Quantifying the environmental impact of our project would be difficult, but the potential impact of this project could be considerable, given the significant contribution of medicines to the environmental harm of the healthcare sector and given the aim of this project to reach many (future) prescribers internationally with recommendations to lower the environmental impact of their prescribing choices.

Financial impacts:

If our project leads to lower unnecessary medication prescribing and waste, it could potentially result in lower healthcare costs.

What were the learning points?

The work of PlanED Prescribing offers insights into integrating planetary health considerations into (pharmacotherapy) education. The usefulness of the work will be evaluated in the upcoming years when the created educational materials are being used for medical education.

The complexity of obtaining all essential information on the total environmental impact of medicines is the biggest limitation in our project. We tried to deal with this limitation by designing our approach in a way to overcome this limitation on the long term and to be able to develop concrete recommendations that our project can provide for relevant stakeholders.

Key elements contributing to success in the project (and which we would recommend for others planning similar projects) include collaborative (international and interprofessional) partnerships, clear project objectives with a design that is suitable for tackling the problem in the broadest manner possible, engagement of various types of relevant experts, and (international) funding support.

Next steps

To ensure lasting change, the project's outcomes will be freely and openly shared on our platform(s) in order to promote the dissemination of the results, also for the long term. Furthermore, we will provide recommendations on how to include the educational materials in existing medical curricula, in order to have this topic integrated more persistently into medical education.

The project will last until the end of 2026 and after that various partners and associate partners in our project are likely to continue providing en improving educational materials for this topic, since many of the partners will remain working in medical education and/or research.

We hope that our project and its results can also inspire initiatives in other contexts to start a large project in order to lower the environmental impact of their working practices. Additionally, we hope that by teaching many (future) prescribers internationally to lower the environmental impact of their prescribing choices, we will inspire them to think about also lowering the environmental impact of other choices in their working and/or daily practices, what they can subsequently share with others in order to create a kind of snowball effect.

Feedback

When our educational materials will be used, we are going to ask for feedback from educators en from students in order to improve the materials. We will also do this for the Teach the Teacher modules.

Want to know more?

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Location & Region:Netherlands, Amsterdam

Partner organisations involved:
Partners:

* AmsterdamUMC (location VUmc)
* InHolland university of aplied sciences
* Radboud UMC
* Academisch ziekenhuis Groningen
* Universiteit van Maastricht
* Zagreb University
* Bologna University
* Transilvania university
* Lissabon university
* Dutch National Institute for Public Health and the Environment

Associate partners:

* WHO Europe
* Oxford University
* NFU
* European Society for Medical Oncology
* European Association for Clinical Pharmacology and Therapeutics
* NVKFB
* RECIPE
* Noordwest academie
* CO2-assistent

Has this case study or story been made public in any form before?Yes

On our website (<https://www.prescribingeducation.eu/planed_prescribing/>), in the article 'Reducing the environmental impact of medication; the role of the prescriber' (<https://pubmed.ncbi.nlm.nih.gov/38470248/>), on the website of Inholland (<https://www.inholland.nl/onderzoek/onderzoeksprojecten/planetary-health-education-in-prescribing-planed-prescribing/>), a communication about the project has been accepted for the AMEE 2024

Resources and Refereces

Educational materials that will be created within this project will be openly shared on the Open Platform via our website: <https://www.prescribingeducation.eu/>