

The development of a mobile app to inform pregnant women and their healthcare providers about the safety of over-the-counter medicines during pregnancy and breastfeeding

Veronique Y.F. Maas¹, Maud de Feijter¹, Anneke Passier¹, Agnes C. Kant¹

¹ Netherlands Pharmacovigilance Centre Lareb, 's-Hertogenbosch, the Netherlands

Introduction

Information on the safety of medication use during pregnancy tends to be **too complicated, incoherent and difficult** to find for pregnant women.

>80% of pregnant women use any form of medicine at some point in their pregnancy. Hence, there is a need to make information on safe medicine use during pregnancy **more easily accessible**.

Particularly with regard to **over-the-counter (OTC)** medicines, it is very important to empower pregnant women to **actively look up** safety information since consultation with a healthcare provider is not required.

The aim of this project is to **develop a user-friendly E-Health tool (a mobile app)** with evidence-based information about the safety of primarily OTC medicines.

The mobile app will also automatically link with our digital **Knowledge Bank**, where information about the safety of prescribed medicines is displayed.

The desire is that it is both possible to search for safety information on **specific medicines** and also to search for **common pregnancy symptoms** were the app then provides

Methods

This two-year project will consist of five phases;

- 1. Preparation phase;** focus groups will be organised with both pregnant women and healthcare providers to perform a needs assessment (e.g. what facilities should the mobile app have?);
- 2. Development phase;** the mobile app will be built by an experienced IT company;
- 3. Pre-implementation phase;** a prototype of the mobile app will be tested intensively and final adjustments will be made.
- 4. Implementation phase;** the mobile app will be launched in accordance with an appropriate implementation strategy, e.g. by a large national promotional campaign.
- 5. Evaluation phase;** the usability and reach of the mobile app will be evaluated.



Figure 1. Design examples of the newly developed mobile app with safety warnings on OTC-medicines during the pregnancy in Dutch.

Results

Two sorts of data will be collected throughout the project; development data and evaluation data.

- As for the **development results**, data will be collected through the results of the focus groups, needs assessment for functionalities of the app, testing the mobile app (user-friendliness), and the feedback which the mobile app collects (satisfaction).
- **Evaluation results** include; the number of app downloads, most used search terms in the mobile app, increase in the number of visitors to our Knowledge Bank and increase in the number of participants in our pregnancy cohort study.

Conclusion

The grant proposal for this project has recently been approved and we aim to launch the mobile app in the **spring of 2024**. Our project has the potential to improve the safe usage of medicines during the pregnancy and breastfeeding period by improving the accessibility of health information everywhere, **to empower women to make safe choices** to improve their own health and the health of their offspring.