

## A chatbot-based nutritional coaching intervention for pregnant women

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**Objective.** Maternal nutrition can influence the health of mothers and unborn children and their long-term well-being. To support and maintain a healthy pregnancy, a chatbot-based nutritional coaching intervention was designed for the TreC\_Mamma project. The intervention considers different dietary patterns, Mediterranean, vegetarian and vegan diets, according to each individual nutritional needs.

**Materials and Methods.** TreC\_Mamma is an app designed to offer digital health interventions to support pregnant women from conception to the first 1,000 days. On demand, it is possible to activate a personalized nutritional coaching path via chatbot. This digital intervention requires an initial profiling to detect health problems, drugs or supplements intake, protein sources consumed and activity level. A microlearning course on food education and hygiene is proposed. The ac-

quired knowledge is verified through tests. It is possible to keep a food intake diary that provides a customized report after at least 7 days of use.

**Results.** TreC\_Mamma counts about 3,000 activations with more than 500 daily accesses. The nutritional coaching intervention is currently being implemented. All contents have been defined and validated by a group involving obstetricians and nutritionists. An evaluation phase through pre-post validated questionnaires (adherence and knowledge of the Mediterranean Diet) and usage data collected from the food intake diary will be performed. Usability and satisfaction will be assessed.

**Conclusions.** The innovative aspects of our nutritional digital intervention are the interaction via chatbot, the extension to vegetarian and vegan diets, and the personalized evaluation of each individual nutritional needs.