

How to compare the (cost-) effectiveness of self-management interventions: using network meta-analysis to include both direct and indirect assessments of multiple treatment options

Pablo Alonso-Coello^{1,2}, Marta Ballester^{3,4,5}, Ena Niño de Guzmán¹, Oliver Gröene⁶, Monique Heijmans⁷, Carola Orrego^{3,4,5}, Dimitris Marvidis^{8,9}, Pieter Van Baal¹⁰, Carlos Canelo-Aybar^{1,2}, Ana Isabel Gonzalez^{3,4,11}, Claudia Valli¹, Hector Pardo^{1,2}

1. Iberoamerican Cochrane Centre Barcelona, Biomedical Research Institute San Pau (IIB Sant Pau)
2. CIBER de Epidemiología y Salud Pública (CIBERESP)
3. Avedis Donabedian Research Institute (FAD), Barcelona, Spain.
4. Universitat Autònoma de Barcelona, Barcelona, Spain.
5. Red de investigación en servicios de salud en enfermedades crónicas (REDISSEC), Spain.
6. OptiMedis AG
7. Netherlands institute for health services research (NIVEL)
8. Department of Primary Education, University of Ioannina,
9. Paris Descartes University, Sorbonne Paris Cité, Faculté de Médecine
10. Erasmus School of Health Policy and Management, Erasmus University Rotterdam
11. Institute of General Practice, Johann Wolfgang Goethe University

PARTNERS



This project has received funding from the European Union's Horizon 2020 research and Innovation Programme under grant agreement No 754936.



contact@self-management.eu
www.self-management.eu



Background/Importance

Population ageing and increasing chronic illness burden has sparked interest in SMIs (1). However, the evidence of SMIs effectiveness is mostly based on pairwise meta-analysis, which has limited capacity to aid clinical, organisational, and policy decision-making.

Methods/Process

COMPAR-EU has so far developed a validated taxonomy of SMIs and a Core Outcome Set for each condition. Those steps will inform the development of systematic reviews and network meta-analysis (NMA) about the effectiveness of SMIs. NMA will allow the comparison of intervention effectiveness across multiple treatments even if these have never been compared head-to-head (2, 3). Additionally, we will carry out cost-effectiveness analysis of the most effective SMIs and evaluate contextual factors that influence their implementation. We will use this information to develop decision-making tools (including interactive summary of findings, evidence to decision frameworks, decision aids) and make them available in a single online platform to patients, clinicians, managers, policy makers, guideline developers or the industry.

Objectives/Aim

COMPAR-EU is a five-year European project that aims to identify, compare, and rank the most effective and cost-effective self-management interventions (SMIs) for adults living with one or more of four high-priority chronic conditions: type 2 diabetes, obesity, chronic obstructive pulmonary disease, and heart failure.

Figure 1. COMPAR-EU methods

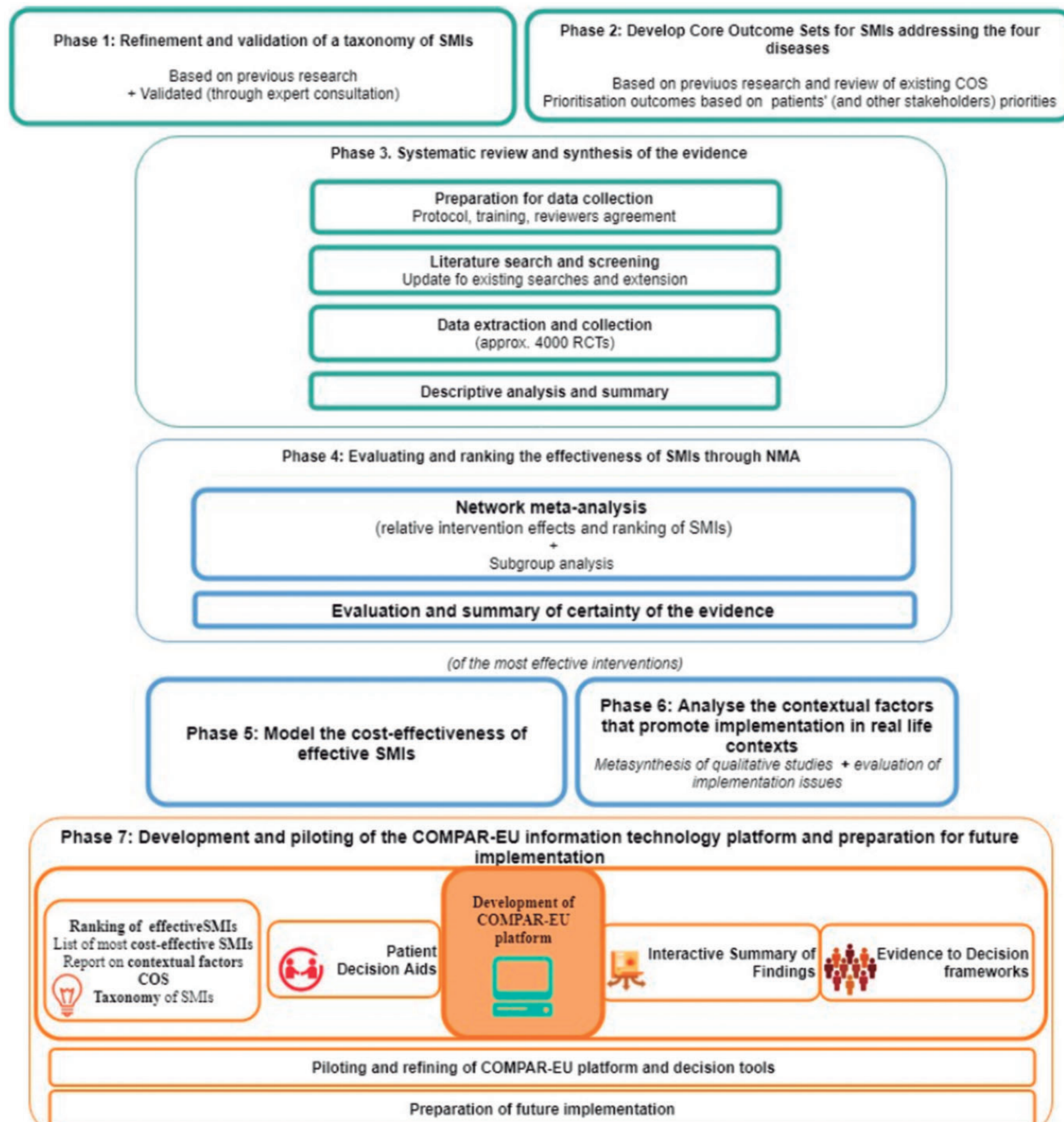
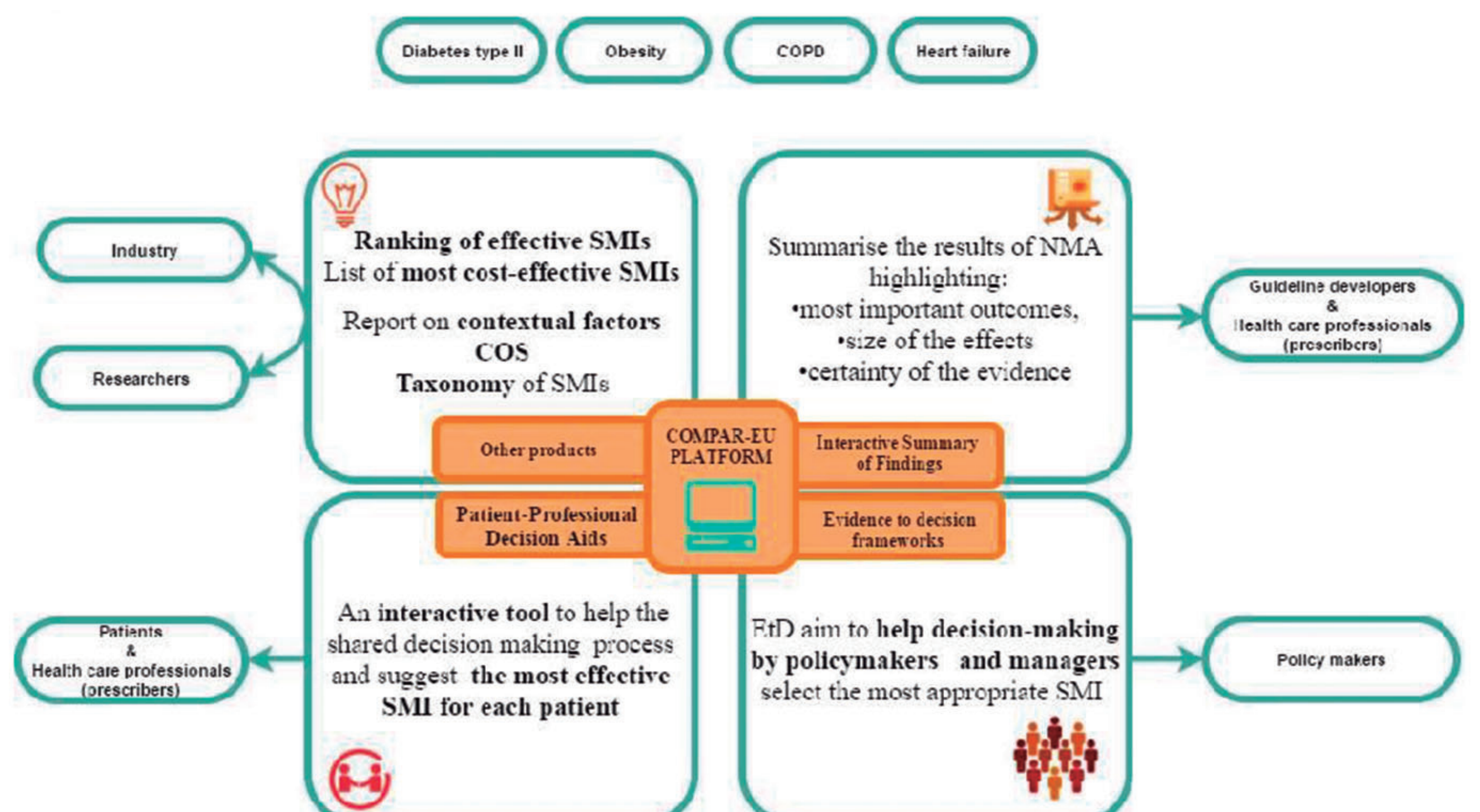


Figure 2. COMPAR-EU platform



Results/Lessons Learnt

So far we have:

- Develop an externally validate a Taxonomy of self-management interventions
- Develop 4 Core Outcome Sets with the participation of patients and patients representatives

Discussion

COMPAR-EU will be a landmark project, informing a wide range of stakeholders about the most cost-effective SMIs in four important chronic conditions. The methodology will be of interest to a wide range of decision makers, including guideline developers.

Strengths and limitations of this study:

1. The project will result in the largest NMA of complex SMI interventions.
2. SMIs are inconsistently defined across the literature potentially generating a high level of heterogeneity for the NMA, which we will mitigate by developing a validated a taxonomy.
3. The development of COSs with input from patients and other stakeholders for each chronic condition will ensure that outcomes assessed in the NMA are relevant to the target users.
4. The comparative effectiveness analysis via NMA, cost-effectiveness, and contextual factors evaluation will provide new knowledge that should facilitate future implementation of successful SMIs.

An interactive platform will facilitate access to decision making tools relevant to the specific needs of the different target users.

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Corresponding author
Marta Ballester
mballester@fadq.org