

Title:

Design of digital health interventions with the open source platform MobileCoach

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Abstract:

Introduction: MobileCoach (www.mobile-coach.eu) is an open source behavioural intervention platform for scalable digital health interventions (DHIs). Based on personalized data streams, MobileCoach uses communication services (e.g. text-messaging) and sensor data (e.g. on physical activity) to monitor behaviour via ambulatory assessment techniques on a regular basis and to provide individual feedback. With its rule-based approach, MobileCoach guides participants based on explicit knowledge from domain experts (e.g. health psychologists and health professionals) with the help of a simple chat dialog in combination with interactive elements like games, health exercises or social challenges.

Methods: The workshop will consist of short presentations, live demonstrations and discussions (1) to provide an overview of the platform and various MobileCoach-based DHIs (e.g. in the context of physical activity, diet coaching, childhood obesity, problem drinking, life skills, intentional personality change and health literacy), (2) to showcase the design of DHIs with a focus on the intervention setup, costs, rule-based intervention flow, user management, simulation of interventions, intervention export and maintenance (3) to identify and discuss novel features and open research questions with the workshop participants and, (4) to motivate DHI designers to join the open source community and to exchange ideas about innovative DHIs and potential collaborations.

Results: Novel technical features will be gathered from the participants to guide the future development of the platform and thus to increase its adoption either by researchers for pilot studies and clinical trials or by healthcare professionals.

Discussion: Challenges at the intersection of research prototypes, i.e. not certified medical apps and certified DHIs will be discussed. It will be also discussed to which degree personalized data collected during clinical trials can be reused for certified DHIs by means of electronic health records, and other health data initiatives (e.g. midata.coop and healthbank.coop). Finally, open questions from the participants will be discussed.