



### **Workshop 1:**

## **Implementation science as a driver for eHealth-powered complex interventions Applying the Behavior Change Wheel (BCW) to develop an eHealth-powered complex interventions to change a behavior**

### **Faculty:**

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### **Introduction:**

The 2019 ESPACOMP annual meeting in Porto will be preceded by a day-long workshop on 21 November addressing the intersection of implementation science and eHealth. More specifically, we will discuss theory-driven development of eHealth powered complex interventions. We will address the significance of implementation science methods to drive successful implementation of eHealth interventions in real life settings. While we will build upon prior ESPACOMP implementation science workshops, this advanced workshop will delve deeply into how theory-based intervention development is an essential step in successful adoption, implementation and sustainability of eHealth powered interventions. The goal is to create eHealth interventions that can be adapted to local context, disseminated or translated to other settings, and sustained over time. To accomplish this goal, we will learn to apply knowledge and understanding using an international best practice case study. The case study will be an eHealth tool. It is a medication adherence module developed as part of an implementation science project in stem cell transplantation, the SMILE study (see below). The workshop will be facilitated by an international, multidisciplinary team: Sabina De Geest (Switzerland & Belgium), Janette Ribaut and Lynn Leppla (Switzerland & Germany), Bart van den Bemt (The Netherlands), Leah Zullig (USA).

This workshop is intended for health services researchers, clinicians, educators, and policy makers who have some experience in the design, implementation, testing and/or dissemination of (adherence-/eHealth-) interventions. Participants should have knowledge of evidence-based behavioral and organizational theories relevant to intervention development and implementation. Balancing theoretical discussions and practical hands-on learning, the workshop will comprise interactive presentations, group work, and discussion. The case study on the eHealth powered medication adherence module for stem cell transplant patients (SMILE study) will provide concrete examples to guide and stimulate the application of new content learned.

### **Learning objectives:**

- To understand the relevance of implementation science for the successful development, implementation and evaluation of an eHealth powered complex behavioral intervention (SMILE study as an example)
- Applying behavioral science (i.e. Behavioral Change Wheel) in the development of a medication adherence module ready to inform the Agile Software Development process
- Reflect the SMILE example lessons learned for student's own ongoing projects

### ***Learning methods:***

Interactive presentations; case study analysis; critical reflection; discussion; small group work.

### ***The SMILE medication adherence module: our example***

We will focus during this preconference on the methods used to develop the **SMILE medication adherence module**. The SMILE medication adherence module is one part of an eHealth-powered integrated care model for follow-up of patients after stem cell transplantation (*SMILE study*). We will show how theory (i.e. Behavior Change Wheel (BCW) and the Capability-Opportunity-Motivation-Model (COM-B) guides intervention development of the medication adherence module. We will also show how the development of users' stories provides a final step to integrate the medication adherence module for agile software development.

### ***Bibliography:***

Participants must be well prepared in order to get the maximum benefit from the workshop. A limited list of journal articles and workshop case studies (mandatory reading) will be sent to participants approximately one month prior to the meeting.

### ***Maximum number of participants: 50***

***Requirements for participation:*** Knowledge of implementation science methods, behavioral science and medication adherence interventions. Reading of preparatory materials.

**All participants need to print out the pre-reading materials themselves.**

## AGENDA

<b>08:45-09:05</b>	<b>Welcome and Review of the Workshop Program</b>	Bart van den Bemt
	General overview and welcome.	
<b>09:05-09:45</b>	<b>Implementation science as a driver for an eHealth powered integrated care model (including a medication adherence module) in stem cell transplantation: the SMILe study</b> Overview of SMILe study methodology. We will showcase how implementation science methods drive the development, implementation and evaluation of an eHealth-powered integrated care model (including a medication adherence module) in alloSCT follow up care.	Lynn Leppla Sabina De Geest
<b>09:45-10:00</b>	<b>Discussion</b> Clarification of open question Sharing the participants' experiences in view of eHealth and implementation science	
<b>10:00-10:30</b>	<b>Developing the SMILe medication adherence module using the Behavior Change Wheel (BCW) and Capability-Opportunity-Motivation-Model (COM-B) as well as user stories to prepare for agile software development</b> We will provide an overview of each step in the theory-based development of the SMILe medication adherence module (steps of the BCW / user stories) to prepare for Agile Software Development. This overview will provide a basis to review each step in the rest of the workshop and to do exercises to gain deeper insight what each of the steps entails.	Janette Ribaut Sabina De Geest
<b>10:30-10:45</b>	<b>Discussion</b> Clarification of open question Sharing the participants' experiences in view of theories and methods applied in developing behavioral interventions to be powered by eHealth	All
<b>10:45-11:00</b>	<b>BREAK</b>	
<b>11:00-11:30</b>	<b>EACH STEP OF THE SMILE MEDICATION ADHERENCE MODULE DEVELOPMENT WILL BE DISCUSSED IN THE REST OF THE WORKSHOP TO DEEPEN KNOWLEDGE AND UNDERSTANDING.</b>  ----- <b>BCW stage 1 (Understand the behavior):</b> How to define the problem in behavioral terms, select the target behavior based on a systematic approach, how to specify the target behavior and identify what needs to change via the COM-B	Janette Ribaut
<b>11:30-12:45</b>	Team work: Groups work on provided case examples and receive fictional quantitative and qualitative data. This enables participants to map information from different sources (patients and clinicians) to the BCW.	Bart van den Bempt Leah Zullig Lynn Leppla Janette Ribaut Sabina De Geest

12:45-13:45	<b>LUNCH</b>	
13:45-14:05	<b>BCW stage 2: <i>Identify intervention options</i></b> Introduction in how to identify intervention functions and policy categories	Sabina De Geest Lynn Leppla Janette Ribaut
14:05-15:15	Team work: Groups work further on their examples and use the APEASE criteria to choose adequate intervention functions and policy categories.	Bart van den Bemt Leah Zullig Lynn Leppla Janette Ribaut Sabina De Geest
15:15-15:30	<b>Break</b>	all
15:30-15:50	<b>BCW stage 3: <i>Identify content and implementation options</i></b> Introduction in how to identify behavior change techniques, mode of delivery, how to write user stories and how implementation strategies can facilitate the implementation process.	Sabina De Geest Lynn Leppla Janette Ribaut Leah Zullig
15:50-17:00	Team work: Groups will work with the previous example and work out stage 3 of the BCW. They can write 1-3 user stories and discuss which implementation strategies would fit their context if they would implement this intervention in their clinical setting.	Bart van den Bemt Lynn Leppla Janette Ribaut Sabina De Geest
17:00-17:30	<b>Discussion, lessons learnt and Evaluation of Workshop &amp; Conclusion</b>	Sabina De Geest Leah Zullig Bart van den Bemt