Abstract
Digital Healthcare is a growing area of importance in modern healthcare due to its potential in helping individuals improve their behaviors so as to better manage chronic health challenges such as hypertension, mental health, cancer and so on. Digital apps and wearables, observe the user's state via sensors/self-report, deliver treatment actions (reminders, motivational messages, suggestions, social outreach,...) and observe rewards repeatedly on the user across time. This area is seeing increasing interest by reinforcement learning (RL) researchers with the goal of including in the digital app/wearable an RL algorithm that "personalizes" the treatments to the user. But after RL is run on a number of users, how do we know whether the RL algorithm actually personalized the sequential treatments to the user? In this talk, we report on our first efforts to address this question after our RL algorithm was deployed on individuals with hypertension.

Brief Bio
Susan Murphy is Professor of Statistics at Harvard University, Radcliffe Alumnae Professor at the Radcliffe Institute, Harvard University, and Professor of Computer Science at the Harvard John A. Paulson School of Engineering and Applied Sciences. Her lab works on clinical trial designs and online learning algorithms for developing personalized mobile health interventions. She is a 2013 MacArthur Fellow, a member of the National Academy of Sciences and the National Academy of Medicine, both of the US National Academies.