

Using a mobile app to conduct process evaluation in a participatory ergonomics healthcare intervention

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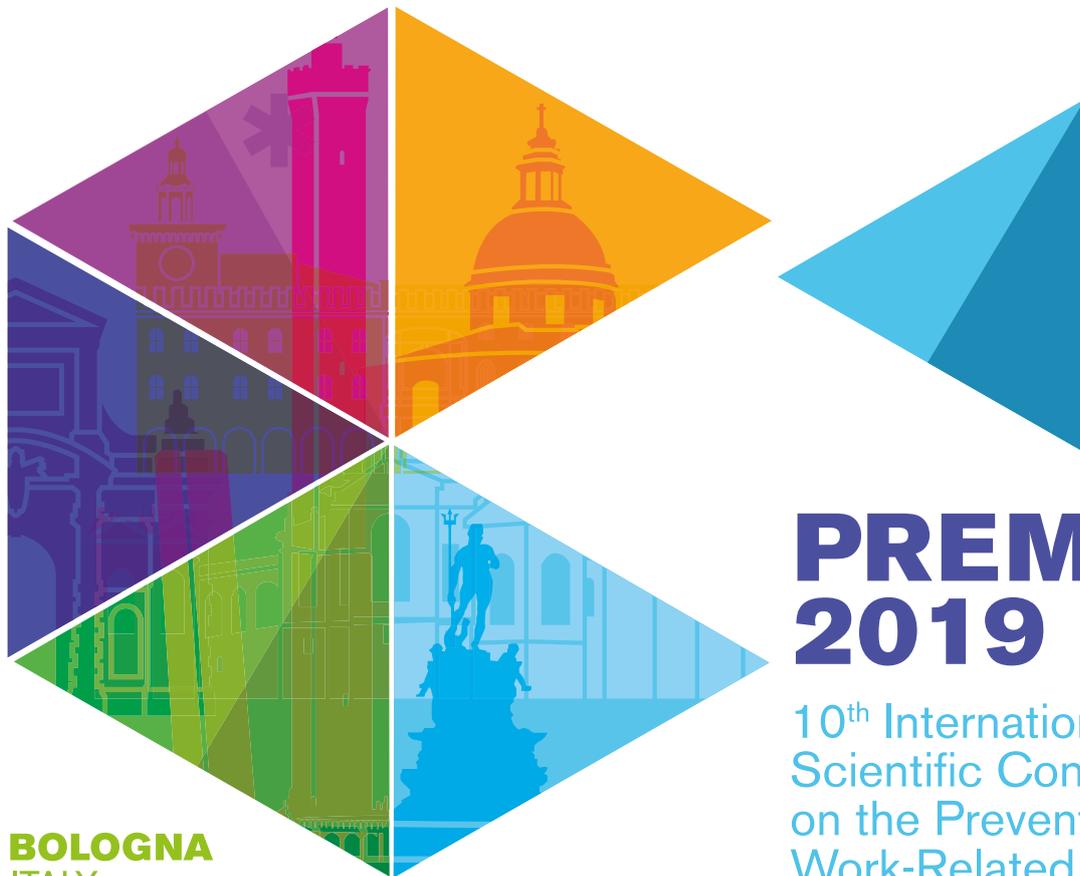
Background: Evaluation of effectiveness of participatory ergonomics interventions requires both outcomes and process metrics to examine whether goals are met and what factors contribute to success or failure. Mobile applications are an emerging medium to collect real-time data prospectively from study participants. The aim of this study is to examine process outcomes collected by a mobile app, for a participatory ergonomics intervention in six U.S. public sector healthcare facilities.

Methods: Study Design: Six healthcare facilities, paired by type of service, were recruited to the study and then randomized to immediate- or lagged-intervention status. Joint labor-management committees responsible for the environment of care are the locus of intervention. In the first period of this stepped-wedge study, three sites are being coached by researchers in a participatory workplace change process: Phase 1 involves initial brainstorming; Phase 2 explores root causes and solutions to a selected problem.

Data Collection: A mobile app was developed to record meetings held, attendance and attendee feedback, and time spent on project activities. Non-smartphone users were provided paper alternatives. Response rates and trends in responses over time were calculated. Comparisons were made between participant roles and sites as they progressed through the intervention.

Results: Meetings were 60-90 minutes every 1-4 weeks; 30-minute pre-meeting preparation and post-meeting debriefs were held between the study coach and committee co-facilitators. The first intervention site averaged 61% attendance per meeting, not including co-facilitators. Feedback response rates averaged 55%. During Phase 1 (6 meetings), more than half the respondents felt able to speak up and that their opinion was considered, while Phase 2 (6 meetings) neared universal agreement on both questions and additionally that facilitators effectively led meaningful discussions.

Conclusions: Engagement improved over time, but competing work demands affected meeting consistency and preparation time for co-facilitators, which may provide context for future intervention effectiveness.



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