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Category: Application and clinical integration

Workshop Title: Innovative approaches to assessing, intervening and implementing in rehabilitation: Integrating digital tools and gamified solutions to promote physical activity in older adults

Organizer(s): Kim Daniels

Speaker(s): Bonnechère, Bruno, Centre of expertise in Care Innovation, Department of PXL – Healthcare, PXL University of Applied Sciences and Arts, Hasselt, Belgium, REVAL Rehabilitation Research Center, Faculty of Rehabilitation Sciences, Hasselt University, Diepenbeek, Belgium, Technology-Supported and Data-Driven Rehabilitation, Data Sciences Institute, Hasselt University, Diepenbeek, Belgium

Workshop Time: 10:30 - 12:00

Attendee Engagement: We will engage attendees through several interactive methods:

1. Discussion rounds: Following demonstrations of digital assessment tools and mHealth/VR interventions, we will guide focused discussions on their benefits, limitations, and best practices.
2. Demonstrations and hands-on experiences: Attendees will have the opportunity to experience the tools and technologies firsthand, including mobile apps, force plates, digitsoles and VR applications, to understand their practical applications and usability.
3. Co-creation sessions: During the implementation section, attendees will actively contribute to co-creation exercises using the NASSS framework, focusing on sustainable technology integration in clinical practice.

For our workshop active participation is needed, allowing attendees to learn through both experiencing the tools themselves and engaging in meaningful discussions.

Abstract: Physical activity (PA) is crucial for enhancing the physical, cognitive, and psychological well-being of older adults. Despite this, PA levels remain low in this group due to barriers like motivation, and feasibility of interventions. Digital health technologies, such as mobile health apps, virtual reality, and sensor-based tools, offer new opportunities for assessing and promoting PA. However, their effective integration into clinical practice needs further exploration.

Objective: This workshop aims to explore digital tools for assessing and promoting PA among older adults, while tackling key challenges in their implementation.

Methods: The workshop includes three segments:

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Assessment: A demonstration and discussion of supervised vs. unsupervised tools, like mobile apps, force plates, and cognitive assessments, to measure balance, strength, mobility, and cognitive function, with a focus on accessibility for older adults.

Intervention: Practical demonstrations of digital interventions promoting PA, highlighting their scalability, cost, and adherence challenges.

Implementation: An introduction to the NASSS framework, with a co-creation session exploring best practices for integrating digital tools into rehabilitation workflows.

Results: Attendees will gain insights into the potential of digital tools to assess and promote PA in older adults through interactive demonstrations. The co-creation session will provide strategies for overcoming common barriers to adoption and scaling.

Conclusion: This workshop equips healthcare professionals and researchers with knowledge on using digital tools to enhance PA in older adults. By blending evidence with practical demonstrations, it aims to advance the sustainable implementation of innovative technologies for increasing PA levels in this population.