

Clinical Sciences Oral Abstract Session / Sciences cliniques présentation orale d'abrévés

Theme: Aging with HIV / Thème : Vieillissement avec le VIH

Abstract #114

Dual Trajectories of Disability and Physical Activity in Adults Aging with HIV: Insights from a Population-Based Longitudinal Study in Ontario, Canada

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Objectives: Disability and physical activity are dynamic, interconnected processes that evolve over the life course. This study aimed to examine the interrelationships between disability and physical activity trajectories among adults aging with HIV.

Methods: We analyzed longitudinal data from adults enrolled in the Ontario HIV Treatment Network Cohort Study (OCS) who had between one to four annual disability and physical activity assessments from 2020–2023. Disability was measured using the short-form World Health Organization Disability Assessment Schedule (WHODAS 2.0; range=0–48, higher scores indicating greater disability severity). Physical activity was measured as the number of days engaged 30 or more minutes of moderate or vigorous physical activity in the last week. We performed group-based dual-trajectory modeling to estimate disability and physical activity trajectories simultaneously. We examined the linkage between trajectories using conditional and joint probabilities.

Results: In 2020, 76% of 1,709 participants were men and 59% were White; the mean age was 52.2 years (standard deviation: ±12.1). We identified four disability trajectories— no disability (36.2%), low disability (39.3%), medium disability (18.0%), and high disability (6.6%) – and four physical activity trajectories— barely active (17.2%), decreasing activity (16.3%), increasing activity (21.2%), and highly active (45.3%). We observed within- and between-person variability across all trajectories. Sixty-three percent of participants in the no disability trajectory were in the highly active trajectory, whereas 64.5% of the high disability trajectory were in the barely active or decreasing physical activity trajectories. The most frequent combinations were no disability plus highly active (22.1%) and low disability plus highly active (17.1%).

Conclusion: Disability and physical activity were each characterized by four distinct trajectories over four years among adults aging with HIV. Our results highlight the intertwined nature between disability and physical activity over time. Further work is needed to identify common factors or mechanisms underlying these trajectories.