



**The Canada-UK HIV and Rehabilitation Research Collaborative (CUHRRC) presents:
A Rapporteur Summary of the HIV and Rehabilitation Content presented at the 15th European AIDS Conference hosted by the European AIDS Clinical Society (EACS)**

Introduction on HIV and Rehabilitation

With more people living longer since diagnosis, HIV is now considered a chronic illness in developed countries such as Canada, Ireland, United States of America (USA) and the United Kingdom (UK). Many people with HIV are now aging with the health challenges of HIV, comorbidities and the side effects of treatment. Individuals may experience a range of health-related challenges known as disability, including symptoms and impairments (e.g. fatigue, weakness, pain), difficulties with day-to-day activities (e.g. household chores), challenges to social inclusion (e.g. ability to work) and uncertainty or worrying about future health over time living with HIV.

Rehabilitation is broadly defined as any service or health provider that may address or prevent impairments, activity limitations or social participation restrictions experienced by an individual. The role for rehabilitation is increasing in the context of HIV, comorbidities and aging and has the potential to improve health and quality of life outcomes for people living with HIV. As a result, the field of HIV and rehabilitation research is evolving to meet the current needs of people living with HIV in countries such as Canada, the UK, Ireland and USA where people may experience similar health-related challenges.

The Canadian Working Group on HIV and Rehabilitation (CWGHR)

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The CWGHR is a national, multi-sectoral organization whose aim is to improve the lives of people living with HIV by advancing HIV rehabilitation, care, treatment and support. CWGHR works to bridge the traditionally separate worlds of HIV, disability and rehabilitation to promote quality of life through rehabilitation research, education and cross-sector partnerships.

Canada-United Kingdom HIV and Rehabilitation Research Collaborative (CUHRRC)

cuhrrc.hivandrehab.ca/

CUHRRC is an international research collaborative comprised of researchers, clinicians, representatives from community-based organizations, policy stakeholders and people living with HIV from Canada, the UK, Ireland and USA. The aim of the collaborative is to build on the enthusiasm of individual members to facilitate the advancement of research ideas and activities related to HIV and rehabilitation research. CUHRRC believes that forming partnerships and exchanging knowledge is integral to building a synergy between the established clinical rehabilitation HIV knowledge in the UK and the strong HIV research foundation in Canada.

International Forums on HIV and Rehabilitation Research (2013, 2014 & 2016)

In June 2013, CUHRRC in collaboration with CWGHR held the first ever *International Forum on HIV and Rehabilitation Research* in Toronto. The aim of the Forum was to identify new and emerging research priorities in HIV, disability and rehabilitation from the perspective of people living with HIV, clinicians, researchers and representatives from community organizations.

The **Framework of New Research Priorities in HIV, Disability and Rehabilitation** developed from the Forum, reflects the increasing complexities of HIV associated comorbidities as well as the changing health system environment that influences rehabilitation care delivery (O'Brien et al., 2014). [Click here](#) to access the Framework.

This *Framework* may be used by researchers, clinicians, people living with HIV, and the broader HIV community, as a foundation to inform future HIV, disability, and rehabilitation research. Please visit the [2013 Forum on HIV and Rehabilitation and CWGHR Annual General Meeting \(AGM\) Knowledge Transfer and Exchange \(KTE\) Library](#) and view the [Forum Report](#) for more information.

In October 2014, CUHRRRC in collaboration with the Rehabilitation in HIV Association (RHIVA) held the *2nd International Forum on HIV and Rehabilitation Research* in London, England. The goal of the Forum was to facilitate knowledge transfer and exchange (KTE) on HIV and rehabilitation research, clinical practice and service delivery, among people living with HIV, researchers, clinicians on HIV, representatives of community organizations, and policy makers in Canada, UK and Ireland; and to foster new research and clinical partnerships in HIV and rehabilitation internationally.

The evidence presented at the Forum highlighted: 1) a need for further research in HIV, disability and rehabilitation as people live longer and age with HIV and multi-morbidity; 2) a need for research evidence to inform policy and programming; 3) an increase in collaborative approaches to research and practice; and 4) that the need for rehabilitation in the context of HIV continues to increase in demand and complexity as people age with HIV and concurrent health conditions (e.g. mental health conditions, cardiovascular disease). Please visit the [2nd International Forum on HIV and Rehabilitation Research Knowledge Transfer and Exchange \(KTE\) Library](#) and view the [Forum Report](#) and [Summary of Evidence](#) for more information and a summary of the research evidence presented.

In May 2016, CUHRRRC in collaboration with CWGHR and the Canadian Association for HIV Research (CAHR) will host the *3rd International Forum on HIV and Rehabilitation Research – HIV and Aging* in Winnipeg, Manitoba. Please [click here](#) to view the Program at a Glance and [click here](#) to view the Forum Poster.

Purpose of this Rapporteur Summary on HIV and Rehabilitation at EACS 2015

This purpose of this rapporteur summary is to report on the HIV and rehabilitation content presented at the 15th European AIDS Clinical Society (EACS 2015) in order to increase awareness of research in the field.

The rapporteur summary is broadly classified according to the six research priorities in the **Framework of New Research Priorities in HIV, Disability and Rehabilitation**: 1) episodic health and disability; 2) aging with HIV across the lifespan; 3) concurrent health conditions; 4) access to rehabilitation and models of rehabilitation service provision; 5) effectiveness of rehabilitation interventions; and 6) enhancing outcome measurement in HIV and rehabilitation research (O'Brien et al., 2014). There was no HIV and rehabilitation content presented specific to the sixth research priority at EACS 2015. The priorities are in no particular order of importance. Specific abstracts are referenced throughout, with a reference list available at the end of the summary. For a complete overview of all the abstracts and e-posters presented at EACS 2015, please see the links at the end of this report.

Research Priority 1 - Episodic Health and Disability

Understanding the broad range of physical, cognitive, and mental health challenges, social participation restrictions, and uncertainty about the future experienced as a result of HIV, comorbidities and aging, and how these health challenges (or disability) may be episodic in nature.

- Malagoli and colleagues conducted a cross-sectional study with 250 people living with HIV (PLWH) to examine the hypothesis that frailty mediates the relationship between multi-morbidity and disability. Investigators found that 29% of participants were living with more than 2 comorbidities, 27% of participants experienced frailty (evaluated by Frailty Index) and 8% experienced disability (as indicated by having one or more impairments in Instrumental Activities of Daily Living) (Malagoli et al., 2015). The hypothesis was confirmed by comparing the effect of multi-morbidity (OR=4.8 [1.6-15.7], $p < 0.01$) and the indirect effect of frailty (OR 1.05

[1.00-1.11], $p < 0.01$). Future research needs to further explore this relationship as well as methods to minimize frailty so that PLWH with multi-morbidity can reduce their disability.

Research Priority 2 - Aging with HIV across the Lifespan

Exploring factors that contribute to healthy aging with HIV.

- Underwood and colleagues examined cognitive function in older adults (>50 years of age) living with HIV. **Cognitive impairment (CI)** is common in PLWH however; different classification systems for CI are utilized and associations between CI and patient-reported outcomes remain unclear (Underwood et al., 2015). The three commonly used classification systems for CI include the Frascati criteria, the Global Deficit Score (GDS) and the Multivariate Normative Comparison (MNC). To describe the three commonly used classification systems of CI and patient-reported measures of physical and mental health, investigators administered the CogState cognitive battery with 387 participants of which 290 were living with HIV. Overall, there was a higher prevalence of CI among PLWH in all three classification systems however; associations between the three definitions of CI and patient reported measures and symptomology were weak as indicated by the mean c statistics (Frascati: 0.519, GDS: 0.543, MNC: 0.530). The weak relationship between CI and patient reported measures could be attributed to a variety of factors included over-reporting of symptoms and subjectivity of cognitive screening questions. These findings highlight the need for a stronger definition of CI in PLWH and a thorough understanding of its clinical implications and symptoms.
- PLWH are at an increased risk for **osteoporotic fractures (OF)**. Bedimo and colleagues assessed the prevention of OF in US Veterans living with HIV prior to the release of the 2010 guidelines recommending the evaluation of risk of OF in older adults living with HIV (≥ 50 years). Investigators conducted a retrospective analysis of 23,763 older Veterans living with HIV who received care at the US Veterans Affairs network from 1996 to 2010 for an OF (wrist, hip or vertebral fracture) (Bedimo et al., 2015). Specifically, investigators assessed the proportion of participants that received a bone mineral density test (DXA scan) or assessment of Vitamin D levels prior to OF (primary prevention); received a BMD or assessment of Vitamin D levels after OF (secondary prevention); or were prescribed Vitamin D, calcium or bisphosphonate therapy after OF (secondary intervention). Of the participants, 811 (3.4%) experienced an OF. Prior to the OF, only 1735 (7.3%) had a DXA scan and 3242 (13.6%) had an assessment of their Vitamin D levels. Following the OF, 139 (17.1%) participants received a DXA scan and 238 (29.4%) had an assessment of their Vitamin D levels. A further 295 (36.4%) were prescribed Calcium or Vitamin D supplementation and 89 (11%) were prescribed bisphosphonate therapy. Future research should focus on the impact of the [2010 guidelines](#) and their impact on fracture recurrence.
- Asher and colleagues conducted a retrospective cohort study with 418 PLWH who were **newly diagnosed with HIV** between 2004 and 2013. To characterize the clinical, virological and immunological status, investigators compared older adults (≥ 50 years of age at diagnosis) with younger adults (<50 years of age at diagnosis) at presentation and 53 ± 33 months after (Asher et al., 2015). Eighty-nine (21%) participants were diagnosed with HIV as an older adult. At diagnosis, compared to younger adults, older adults had a higher proportion of comorbidities ($p < 0.001$), lower CD4 cell counts ($p < 0.001$) and higher viral loads ($p = 0.02$). At follow-up, compared to younger adults, older PLWH had a higher mortality rate ($p < 0.001$), lower CD4 cell counts ($p < 0.001$) and higher viral load ($p = 0.03$). Participants diagnosed at an older age had less favourable outcomes than those diagnosed at a younger age. There is a need to focus on screening for HIV in older adults and routine follow-ups for older PLWH.
- The **HIV, Health and Rehabilitation Survey (HHRS)** aims to describe disability, comorbidities and rehabilitation services use among adults living with HIV in Canada. In this presentation, O'Brien and colleagues compared the number and type of comorbidities among older (≥ 50 years of age) versus younger adults (<50 years of age) (O'Brien et al., 2015). Nine-hundred and forty-one adults completed a cross-sectional web-based online survey that described disability, contextual factors, and concurrent health conditions. The majority of participants were taking ART (90%) and living with ≥ 2 concurrent health conditions (72%). Older adults with HIV had a higher median number of concurrent health conditions compared to younger adults and had lower maladaptive coping and stigma scores. Compared with younger adults, a greater proportion of older adults reported living with: joint pain, muscle pain, elevated triglycerides, high blood pressure, high cholesterol, bone and joint disorders and cardiovascular disease. Future research will explore the relationship between extrinsic

and intrinsic contextual factors and comorbidities among adults with HIV as well as the role and impact of rehabilitation interventions to reduce disability for adults living with HIV.

Research Priority 3 – Concurrent Health Conditions

Examining the health-related consequences of concurrent health conditions and multiple morbidities experienced by people with HIV. Understanding the complexity of disability experienced based on the number and type of conditions may help to inform ways to prevent or mitigate disability associated with HIV and concurrent conditions across the lifespan.

- To understand the **cost and epidemiology of common comorbidities** experienced by PLWH, Fitzgerald and colleagues conducted a systematic literature review. This systematic literature review included data on adults (≥ 18 years old) living with HIV and cardiovascular disease, renal disease, bone disease and risk factors (hypertension and diabetes) in the EU5 countries (France, Germany, Italy, Spain, UK) (Fitzgerald et al., 2015). A total of 142 records were included in this review. Investigators concluded that although these comorbidities are present and will continue to increase in prevalence as the PLWH population ages, there is a need for a standardized estimate of prevalence, incidence and cost of comorbidities in the EU-5 since a wide variation within and between countries was found. Further research needs to be conducted regarding incidence estimates and cost of these comorbidities.
- Alastrué del Castaño and colleagues conducted a retrospective analysis of **comorbidities** in 220 PLWH over 50 years of age in Spain. Common comorbidities included dyslipidemia (61%), Hepatitis C virus (35%), hypertension (25%), chronic kidney disease (14%) and lung disease (13%) (Alastrué del Castaño et al., 2105). Sixty (60) percent of participants over the age of 65 were living with three or more comorbidities. Investigators suggest that the aging PLWH population is at risk of developing a higher number of comorbidities and proper patient assessment needs to take place since these comorbidities play a role in morbidity and mortality.
- Current recommendations indicate that **bone screening** in PLWH who are less than 40 years of age is not necessary if there are no fracture risks (Guerra et al., 2015). Guerra and colleagues examined the bone status in 64 men living with HIV younger than 40 years of age who were not at risk for fractures. Participants underwent a bone mineral density test. Investigators found that 20 (31%) participants had a normal bone mineral density, 34 (53%) had osteopenia and 10 (16%) had osteoporosis. Overall, 44 (69%) had a bone disorder suggesting that screening for bone and joint disorders and education surrounding fractures should be a priority in the HIV population.
- PLWH often experience **neurological complications**. Angioni and colleagues assessed neurological complications in PLWH who visited the Infectious Diseases Unit of Cagliari, Italy between 2010 and 2015. Of the 5080 admissions during this time, 876 (17%) of the admissions were PLWH and 187 of these admissions (21%) were from 90 PLWH who showed neurological complications (Angioni et al., 2015). Common conditions in the 90 patients were HIV-associated encephalopathy (34 patients, 38%), cerebrovascular disease (16 patients, 18%) and toxoplasmosis (10 patients, 9%). PLWH without neurological impairments were hospitalized for 22 days while PLWH with neurological impairments were hospitalized for 37 days. During this period of chart review, there were 37 HIV related deaths of which 22 (60%) were affected by neurological complications. Investigators concluded that neurological impairment including HIV Associated Neurocognitive Disorder (HAND) has become prevalent in the HIV population. Early diagnosis is very important as neurological complications play a role in morbidity and mortality.
- To assess **neurocognitive impairment (NCI)**, associated factors and **function in activities of daily living (ADL)**, Haddow and colleagues recruited 448 participants living with HIV to participate in the CogState battery, pen-and-paper neuropsychological tests and questionnaires to assess mood and ADL. Investigators found that 156 (35%) had NCI of which 22 (5%) had mild cognitive and functional impairment and 91 (20%) had cognitive impairment but no functional impairment (Haddow et al., 2015). Participants with NCI were more likely to report depressive symptoms as well as more years since HIV diagnosis than those without NCI. By increasing early treatment and addressing associated factors, investigators suggested that the risk of NCI may be delayed or lowered.
- Investigators assessed the prevalence of **HIV Associated Neurocognitive Disorder (HAND)** using the CogState battery in 109 Swedish PLWH with a mean age of 46 years (Mellgren et al., 2015). Data regarding depression,

alcohol use and any trauma or disease related to the central nervous system was also collected. Investigators found that 30 (28%) were cognitively impaired of which 17 (16%) had Asymptomatic Neurocognitive Impairment (ANI). Of the 30 who were cognitively impaired, 13 (12%) reported cognitive symptoms, 3 reported depression, 2 reported alcohol abuse and two had previous head trauma. This report of HAND is lower than in other presented studies and suggests that HAND was not common in this sample. Further research needs to be conducted on the methods to detect the prevalence of HAND in PLWH.

- PLWH are at an increased risk of developing **Chronic Obstructive Pulmonary Disease (COPD)** partly due to substance use, pulmonary infections and higher prevalence of smoking (Ghadaki et al., 2015). To assess the effect of smoking on respiratory related symptoms and diseases, PLWH who exhibited symptoms of COPD were being properly screened, investigators conducted a cross-sectional cohort study with 247 participants. Participants were administered questionnaires surrounding smoking status, history of respiratory symptoms, diagnoses and management and demographics. Of the participants, 66% were current or former smokers, 40% met the Canadian Thoracic Society screening criteria for COPD and 12% reported that they were living with COPD. Smoking had a statistically significant effect on respiratory symptoms including wheeze (OR= 4.8 [95%CI 1.6-14.2]), current cough (OR= 7.0 [95%CI 3.0-16.2]) and on respiratory diseases including COPD (OR= 4.9 [95%CI 1.1-21.9]) and bronchitis (OR= 3.8 [95%CI 1.9-7.7]). These findings highlight the high prevalence of respiratory symptoms and diseases in PLWH. COPD screening and guidelines need to be further disseminated and smoking cessation programs need to become a routine part of HIV care.
- Fois and colleagues conducted a prospective observational study to examine the prevalence of **chronic respiratory symptoms** and to screen for **Chronic Obstructive Pulmonary Disease (COPD)** in 687 PLWH. Five-hundred (73%) were current or previous smokers and the most common symptoms reported were a chronic cough (131, 19%), sputum (148, 22%) and dyspnea (140, 20%) (Fois et al., 2015). From the screening for COPD, 215 (31%) participants presented with pneumonia in COPD (pCOPD). Those with pCOPD were more likely to be of older age, current or previous smoker, previous pulmonary infection and chronic hepatitis. Screening for COPD and smoking cessation programs need to be made a priority for PLWH.
- Kooij and colleagues compared the clinical implications of **frailty** in PLWH and individuals without HIV. Investigators assessed the Fried frailty phenotype in 1099 participants aged ≥ 45 at baseline and assessed the ability of frailty-status to predict mortality, fractures, hospital admissions and falls in the following 2 years (Kooij et al., 2015). Although, frailty was more common at baseline in the participants with HIV, the association between clinical implications and frailty did not significantly differ between the two groups. Overall, frailty-status was independently associated with an increased risk of hospital admissions, falls and mortality in both groups. Implementation of frailty assessments should become a routine part of health care visits in middle aged adults.

Research Priority 4 - Access to Rehabilitation and Models of Service Provision

Rehabilitation is broadly defined as any service or health provider that may address health challenges experienced by an individual due to HIV or other related concurrent conditions. This priority includes facilitators and barriers to accessing broad health and social services for people living with HIV as well as the development and evaluation of innovative models of health service delivery to better address the health-related needs of people living with HIV.

- The aging HIV population is facing an increasing amount of co-morbidities highlighting the need for an increase in rehabilitation interventions and access to rehabilitation services (Chegwidden et al., 2015). To examine the current **provision of HIV education in pre-registration physiotherapy and occupational therapy courses** across the UK, Chegwidden and colleagues conducted semi-structured telephone interviews with the Course Leader or equivalent at sixteen higher educational institutions (HEI). All respondents expressed interest in an online educational module for their staff and students and expressed the popularity of online resources among students. Investigators reported on a total of 26 courses (9 occupational therapy courses and 17 physiotherapy courses). Of these courses, ten (38%) included formal HIV teaching content. Among the other courses that offered no formal teaching content, nine reported an opportunity to learn about HIV in a project or work placement while seven did not have any planned HIV related opportunities. Barriers to include HIV education in the curriculum include no room in curricula, a move away from condition-specific teaching and a move towards self-directed teaching. Investigators recommendations include further surveying of HEIs on the

projected need for students to have knowledge of and training in working with PLWH and barriers to providing HIV related education.

Research Priority 5 - Effectiveness of Rehabilitation Interventions

*Evaluating the effectiveness of rehabilitation interventions in order to prevent or mitigate disability experienced by people living with HIV. *This section also includes information about clinical interventions or studies in addressing HIV infection and its health-related consequences.*

- Brown and colleagues evaluated “The Kobler Rehabilitation Class” which is an outpatient rehabilitation intervention that combines physiotherapy-led group exercise and education for PLWH to support the physical, mental and social challenges associated with HIV. Investigators measured functional capacity, flexibility, upper and lower limb strength and health related quality of life of 92 participants at baseline (0 months) and post-intervention (24 months) and administered the Goal Attainment Scale (Brown et al., 2015). Referrals were largely for musculoskeletal (25.0%), oncological (19.6%) or cardio-metabolic (18.5%) reasons. Adherence (defined as attending $\geq 8/20$ sessions) was achieved by 42 (46%) participants. Reasons for non-adherence included physical and mental health challenges. At post-intervention, investigators assessed 37 participants and found that there were improvements in 6 minute walk test (6MWT) distance ($p < 0.001$), flexibility ($p < 0.001$), strength in triceps ($p < 0.001$), biceps ($p < 0.001$), shoulder-press ($p < 0.001$), chest-press ($p < 0.001$), and leg-press ($p < 0.001$). Health related quality of life improved in total score ($p < 0.001$), physical ($p < 0.001$), emotional ($p < 0.001$) and functional ($p = 0.065$) subscales. These results highlight a need for widespread rehabilitation interventions for PLWH and a need for these interventions to be flexible in nature to suit the episodic nature of HIV.
- O’Brien et al., (2015) conducted an update of a Cochrane Collaboration systematic review to examine the safety and **effect of progressive resistive exercise interventions** on immunological and virological, cardiopulmonary, weight and body composition, strength, and psychological outcomes in adults living with HIV. Randomized controlled trials comparing progressive resistive exercise with no exercise or another intervention were included. Twenty studies met the inclusion criteria ($n = 788$ participants). Researchers found that exercisers showed statistically significant improvements in selected outcomes of cardiopulmonary status, body weight, body composition, and strength compared to non-exercisers. Researchers concluded that performing progressive resistive exercise (PRE) or a combination of PRE and aerobic exercise at least 3 times/week for at least 6 weeks is safe and beneficial for adults living with HIV who are medically stable.
- Members of CUHRRRC, the Rehabilitation in HIV Association (RHIVA), The European AIDS Treatment Group and UK-Community Advisory Board (CAB) were involved in an invited special session on HIV and rehabilitation entitled **Living Well When Living Longer: HIV and Rehabilitation**. To access the slides, please [click here](#). Patty Solomon (McMaster University), Tamás Bereczky (European AIDS Treatment Group (EATG)), Richard Harding (King’s College London), Kelly O’Brien (University of Toronto), Darren Brown (Rehabilitation in HIV Association (RHIVA)) and Colm Bergin (St. James’s Hospital) discussed the role and emerging evidence for rehabilitation in the context of HIV, ageing and comorbidities and provide concrete examples of rehabilitation in clinical practice for PLWH. Utilizing a case study, Tamás Bereczky discussed the major differences in health care systems, services, and cultural attitudes across the WHO Europe Countries. Richard Harding continued by discussing comorbidities, the implications of symptom burden, multidisciplinary management and living well when living with an episodic disability and multiple comorbidities. Kelly O’Brien went on to discuss the health-related consequences (disability) of living with HIV and comorbidities and the existing research evidence that supports rehabilitation interventions for PLWH. Darren Brown continued by discussing the Kobler Rehabilitation Class and how these rehabilitation interventions occur in clinical practice to assist in addressing episodic disabilities. Colm Bergin concluded the session by discussing the research studies occurring at the Clinical Research Facility at St. James’s Hospital and discussing the strategic considerations when increasing awareness and access to rehabilitation for PLWH.

On Thursday January 28th, 2016, a CUHRRRC membership meeting was held where Darren Brown (Rehabilitation in HIV Association (RHIVA), UK) led a webinar to provide updates on the HIV and rehabilitation content presented at the EACS Conference in October 2014. To access the webinar slides, please [click here](#).

EACS Abstracts and E-Posters Highlighted in the Summary (References)

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Angioni G, Bolliri A, Ligas M, Meloni G, Motzo M, Pilia O, Piga S (2015, October). Neurological Complications in HIV+ Patients. Abstract presented at the 15th European AIDS Conference (EACS), Barcelona, Spain. Code: PE15/66. Abstract: 741.

Asher I, Mahlab Guri K, Elbirt D, Rosenberg BS, Maldarelli F, Mor O, Grossman Z, Stoecker ZM (2015, October). Characteristics and outcome of patients diagnosed with HIV at older age. Abstract presented at the 15th European AIDS Conference (EACS), Barcelona, Spain. Code: PE15/24. Abstract: 417.

Bedimo R, Zhang S, Cutrell J, Drechsler H, Maalouf N, Tebas P (2015, October). Evaluation and Management of Fracture Risk of HIV Patients in the US Veterans Health Care System. Abstract presented at the 15th European AIDS Conference (EACS), Barcelona, Spain. Code: PE15/15. Abstract: 294.

Brown D, Harding R, Claffey A (2015, October). Evaluation of a physiotherapy-led group rehabilitation intervention for adults living with HIV: referrals, adherence and outcomes. Abstract presented at the 15th European AIDS Conference (EACS), Barcelona, Spain. Code: PE15/12. Abstract: 275.

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Fitzgerald A, Bartlett A, Giunta G, Patterson J, Cikalo M, Farmer S, Young V, Paton F, Aber M, Edwards M, Veale T, Aragao F, Glanville J (2015, October). Epidemiology and Costs for Comorbidities in People Living with Human Immunodeficiency Virus (PLWHIV) – A Systematic Review. Abstract presented at the 15th European AIDS Conference (EACS), Barcelona, Spain. Code: PE15/20. Abstract: 330.

Fois AG, Bagella P, Ricci E, Farenga M, Martinelli C, De Socio GV, Bellacosa C, Celesia BM, Menzaghi B, Franzetti M, Bonfanti P, Madeddu G (2015, October). Prevalence of Respiratory Symptoms and Screening for Chronic Obstructive Pulmonary Disease: Results from an Italian Multicenter Study. Abstract presented at the 15th European AIDS Conference (EACS), Barcelona, Spain. Code: PE15/75. Abstract: 838.

Ghadaki B, Kronfli N, Vanniyasingam T, Haider S (2015, October). COPD Symptoms and Screening in an HIV Population. Abstract presented at the 15th European AIDS Conference (EACS), Barcelona, Spain. Code: PE15/19. Abstract: 323.

Guerra E, Gargiulo M, Di Martino F, Baccaro F, Viglietti F, Colao A, Chirianni A (2015, October). The “bone status” in under 40 HIV positive patients. Abstract presented at the 15th European AIDS Conference (EACS), Barcelona, Spain. Code: PE15/60. Abstract: 703.

Haddow L, Daskalopoulou M, McDonnell J, Gilson RJC, Speakman A, Antinori A, Balestra P, Bruun T, Gerstoft J, Nielsen LN, Lundgren J, Vassilenko A, Collins S, Rodger AJ (2015, October). Neuropsychological Performance and Self-Reported Function in HIV Positive Patients in Five European Clinics. Abstract presented at the 15th European AIDS Conference (EACS), Barcelona, Spain. Code: PE15/82. Abstract: 929.

Kooij KW, Wit FW, van Zoest RA, Schouten J, van der Valk M, Stolte IG, Prins M, Reiss P (2015, October). Frailty Predicts All-cause Mortality, Hospital Admission and Falls in HIV-infected and Uninfected Middle-aged Individuals. Presentation conducted at the 15th European AIDS Conference (EACS), Barcelona, Spain. Abstract: 283.

Malagoli A, Garlassi S, Stentarelli C, Carli F, Menozzi M, Santoro A, Beghetto B, Nardini G, Mussini C, Guaraldi G (2015, October). How do Frailty Mediate and Moderate Pathway Leading to Disability. Abstract presented at the 15th European AIDS Conference (EACS), Barcelona, Spain. Code: PE15/64. Abstract: 715.

Mellgren A, Abdulle S, Tunback P, Nordlund A, Gisslen M (2015, October). Low Prevalence of HIV-associated Neurocognitive Disorder (HAND) in a Swedish Cohort of HIV-1 Infected Individuals. Abstract presented at the 15th European AIDS Conference (EACS), Barcelona, Spain. Code: PE15/36. Abstract: 470.

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O'Brien KK, Tynan A-M, Nixon SA, Glazier RH (2015, October). Effectiveness of Progressive Resistive Exercise for Adults Living with HIV: A Cochrane Collaborative Systematic Review. Abstract presented at the 15th European AIDS Conference (EACS), Barcelona, Spain. Code: PE15/48. Abstract: 621.

Solomon P, Bereczky T, Harding R, O'Brien K, Brown D, Bergin C. (2015). Living Well When Living Longer: HIV and Rehabilitation [PowerPoint Slides]. Retrieved from <http://cuhrrc.hivandrehab.ca/docs/EACS-Session-Slides-FINAL-Oct-23-15.pdf>

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For More Information

To view highlights from the EACS 2015 conference, please visit:
<http://www.aidsmap.com/eacs2015>

To view the final abstracts and e-posters presented at EACS 2015, please visit:
<http://www.professionalabstracts.com/eacs2015/iplanner/>
<http://www.abstractstosubmit.com/eacs2015/eoposter/>

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