Evidence-Informed Recommendations in Rehabilitation for Older Adults Aging with HIV: A Knowledge Synthesis

OHTN Conference

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Background

- As adults age with HIV, many live with physical, social and psychological challenges of HIV, consequences of treatment, and comorbidities associated with aging.

- Rehabilitation can assist in managing the health challenges (or disability) associated with HIV, and complex comorbidities.

- Evidence-informed guidelines can be used by clinicians, educators, and adults living with HIV to enhance HIV rehabilitation care, treatment and support.

Purpose

To describe the process of developing evidence-informed recommendations to enhance rehabilitation for older adults living with HIV

Methods – Knowledge Synthesis

- Combining research evidence…
  - A) specific to HIV, rehabilitation and aging
  - B) rehabilitation interventions for common comorbidities experienced by older adults with HIV.

- Step 1 – Search and Abstract Review for Inclusion

  Stream A) Any published evidence on HIV, rehabilitation and aging

  Stream B) High-quality evidence (systematic reviews and meta-analyses) on the effectiveness of rehabilitation interventions for comorbidities commonly experienced by older adults aging with HIV
    - bone and joint disorders, cancer, stroke, cardiovascular disease, mental health, neurocognitive decline, cardiopulmonary disease, diabetes

Methods – Knowledge Synthesis

- Step 2 – Data Extraction
  - Extracted relevant data from included studies
- Step 3 – Synthesis and Drafting Recommendations
  - Synthesized available evidence to draft evidence-informed recommendations on rehabilitation for older adults with HIV
- Step 4 – GRADE rating and Review #1
  - Draft recommendations circulated among interprofessional team using GRADE principles for rating and suggestions for refinement.

GRADE

A - fully endorse (strongly recommend)

B - moderately endorse (recommend)

C - minimally endorse (weak recommendation)

D - do not endorse (do not recommend at all)

Methods – Knowledge Synthesis

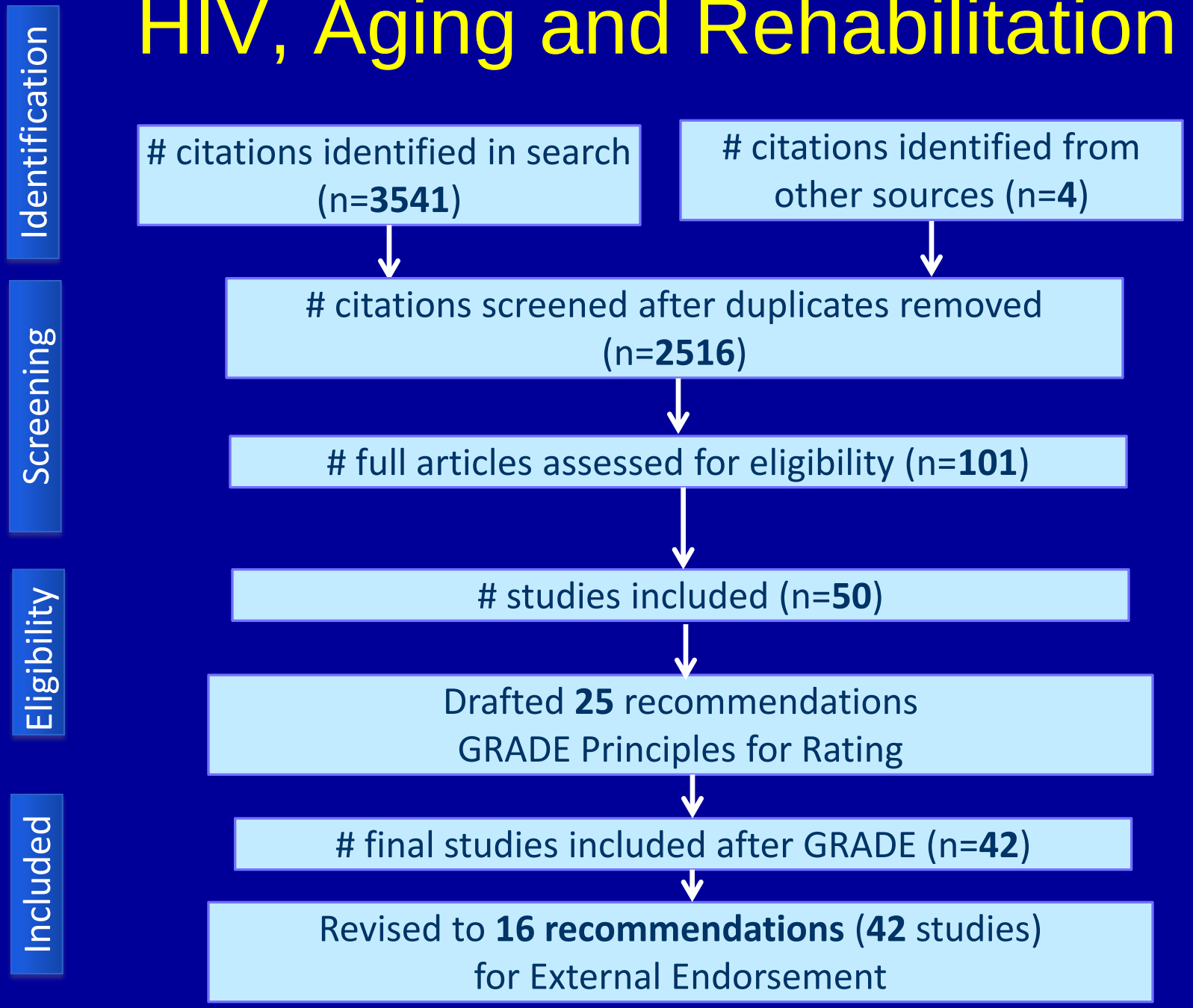
- Step 5 – Revision of Recommendations
  - Revised recommendations based on GRADE principles
- Step 6 – Review #2 by Interprofessional Team
  - Recommendations reviewed and revised
- Step 7 – External Endorsement
  - Circulated recommendations electronically to 14 PHAs and 25 clinicians across Canada and asked for each whether they:

    A) endorse (approve) the recommendation

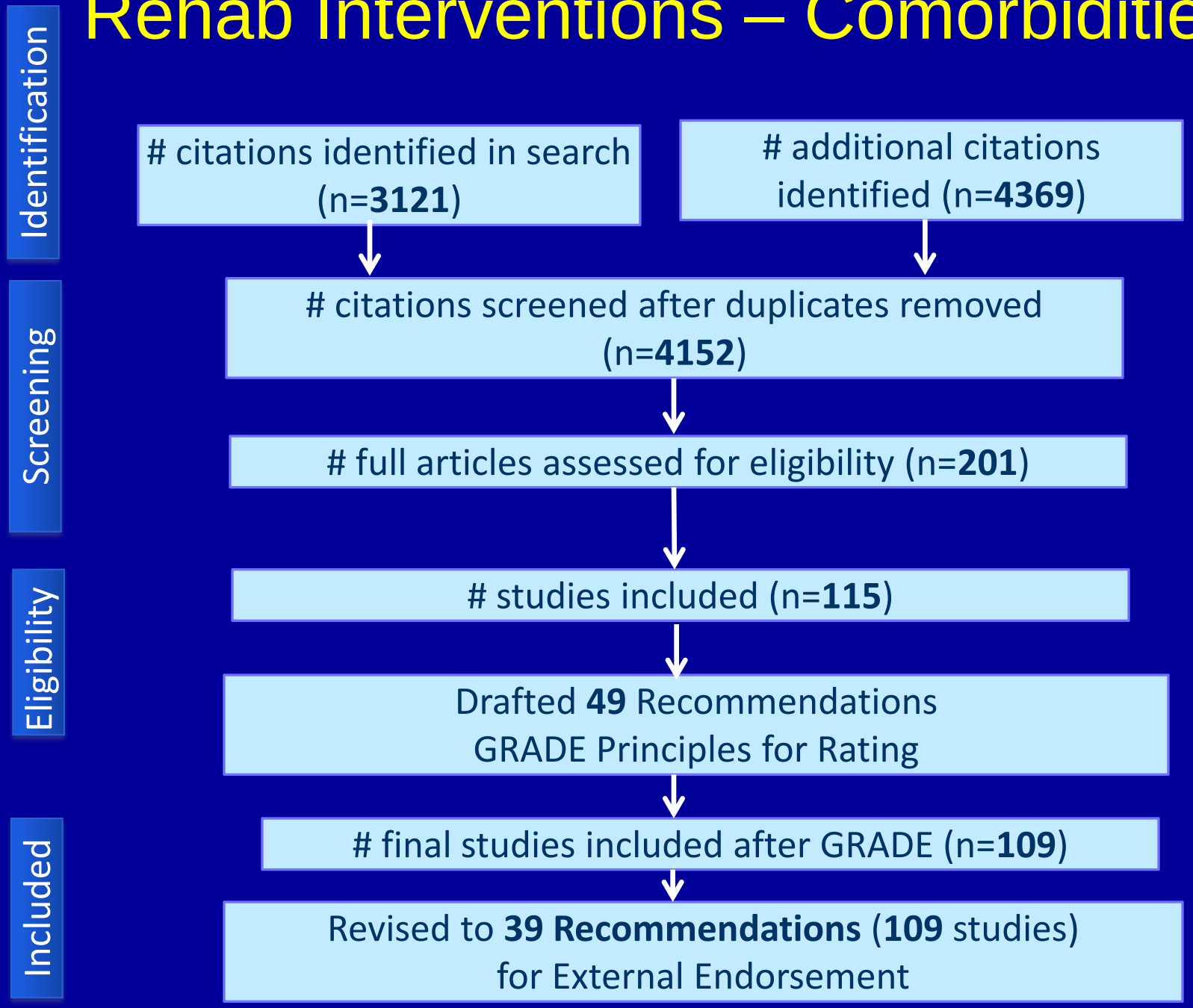
    B) do not endorse (do not approve) the recommendation

    C) have no opinion on the recommendation

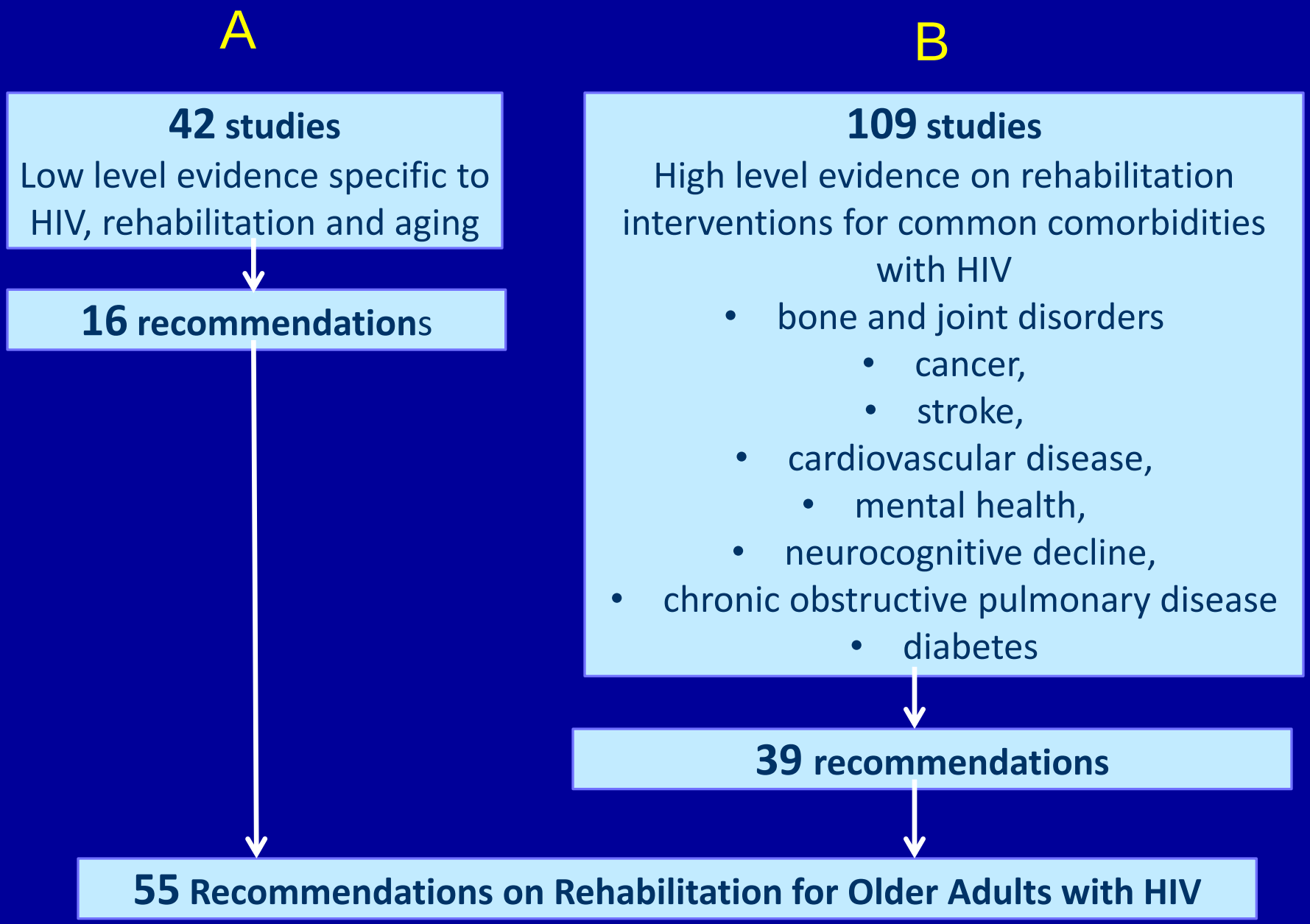
HIV, Aging and Rehabilitation



Rehab Interventions – Comorbidities



Results


A
B
42 studies
Low level evidence specific to HIV, rehabilitation and aging
16 recommendations
109 studies
High level evidence on rehabilitation interventions for common comorbidities with HIV
• bone and joint disorders
• cancer,
• stroke,
• cardiovascular disease,
• mental health,
• neurocognitive decline,
• chronic obstructive pulmonary disease
• diabetes
39 recommendations
55 Recommendations on Rehabilitation for Older Adults with HIV

Results – Stream A

Recommendations Derived from Evidence Specific to Rehabilitation for Older Adults with HIV (HIV, Aging and Rehabilitation)

- 16 recommendations derived from 42 research evidence articles specific to rehabilitation for older adults living with HIV

- Level of evidence
  - low or very low - mostly narrative reviews or descriptive studies (either qualitative or quantitative) with small sample sizes.

- Clinician and People with HIV Values and Preferences:
  - Even though derived from low level evidence, recommendations were endorsed if felt that it makes good clinical and experiential sense.

Classification: HIV, Aging and Rehab (n=42 studies)

Classification Theme	Number of Included Studies	One recommendation developed in each of the following areas…. (16 recommendations)
Preparedness of rehabilitation professionals	9	Overall preparedness
Approaches to rehabilitation assessment and treatment of older adults living with HIV	22	Overall approach to rehabilitation Physical and mental health assessment Physical health (aerobic) Mental health Neurocognitive screening Uncertainty Social inclusion
Extrinsic factors to consider with rehabilitation of older adults living with HIV	12	Ageism and stigma HIV disclosure Social support
Intrinsic factors to consider with rehabilitation of older adults living with HIV	6	Self management Spirituality
Rehabilitation approaches	3	Interprofessional practice Complementary and alternative medicine
Rehabilitation interventions	2	Exercise

Recommendations –Stream A

Approaches to Rehabilitation Assessment and Treatment

2. Rehabilitation professionals should adopt an individualized approach to assessment and treatment of older adults living with HIV to fully understand the **unique and complex needs of older adults with HIV.** This approach should consider the intersections between **personal and social attributes** and **the broader determinants of health.**

Neurocognitive Screening

6. Rehabilitation professionals should conduct regular **neurocognitive screening** with older adults living with HIV, and where indicated, conduct complete assessments to identify early signs of HIV-associated executive functioning deficits and interventions to effectively reduce or prevent cognitive impairments.

Uncertainty

7. Rehabilitation professionals should be aware of the potential impact of **uncertainty** among older adults with HIV and the psychological importance for some older adults to know the source of their symptoms.

Results – Stream B

Recommendations for Rehabilitation Interventions for People with HIV with Common Concurrent Health Conditions with HIV

38 recommendations derived from 109 high level research evidence - specific considerations when applying rehabilitation interventions for adults living with HIV

Level of evidence

- High (systematic reviews published in the Cochrane Library) or moderate (other systematic reviews or meta-analyses) - none specific to older adults with HIV

Clinician and People with HIV Values and Preferences: integral to determining the strength of the recommendation – whether recommendation made sense clinically and experientially and the intervention posed minimal risk or harm to older adults living with HIV

Wording of Recommendations: depended on how well or to what extent we could leap from the condition-specific evidence to a recommendation for rehabilitation specific to older adults living with HIV and these conditions

Classification: Rehab Interventions in Comorbidities (n=109 studies)

Classification Theme	Number of Included Studies	Topic of Recommendations (n=39 recommendations)
HIV/AIDS	2	**1** recommendation for **exercise** specific to older adults living with HIV
Older adults	11	**3** recommendations for **exercise, rehabilitation** and **occupational therapy** for older adults living with HIV.
Bone and Joint disorders	11	**4** recommendations for **exercise, rehabilitation** and **self-management** interventions for older adults living with HIV and bone and joint disorders.
Cancer	16	**5** recommendations pertaining to **exercise** for older adults living with HIV and general, lung, breast or metastatic cancer.
Stroke	31	**9** recommendations for **rehabilitation, cognitive rehabilitation, exercise** and **therapeutic modality interventions** for adults with living with HIV and stroke.
Cardiovascular Disease (CVD)	16	**6** recommendations for **rehabilitation** and **exercise interventions** for older adults with HIV and cardiovascular disease, myocardial infarction, heart disease, or heart failure.
Mental Health	4	**4** recommendations for **models of care, exercise, psychotherapy,** and **housing interventions** for older adults living with HIV and varying forms of mental health issues.

Classification: Rehab Interventions in Comorbidities (n=109 studies)

Classification Theme	Number of Included Studies	Topic of Recommendations
Cognitive Impairment	10	**3** recommendations for **cognitive rehabilitation** and **exercise interventions** for older adults living with HIV with varying levels of neurocognitive impairments.
Chronic Obstructive Pulmonary Disease (COPD)	7	**3** recommendations for **pulmonary rehabilitation, exercise,** and **inspiratory muscle training (IMT)** interventions for older adults living with HIV and COPD.
Diabetes	4	**1** recommendation for **exercise** for older adults living with HIV and diabetes.

Recommendations – Stream B

HIV/AIDS

1. Aerobic and resistive exercise may be recommended for at least 20 minutes at least 3 times per week for at least 5 weeks for older adults living with HIV who are medically stable with the potential to maintain or enhance outcomes of cardiopulmonary fitness, weight and body composition, strength, and quality of life.

Bone and Joint Disorders

5A. Supervised exercise sessions should be recommended to older adults living with HIV with knee and/or hip osteoarthritis (OA) who are medically stable to improve pain and physical function.

Cognitive Impairments

33. Cognitive interventions including cognitive training, cognitive stimulation, and cognitive rehabilitation should be recommended for older adults living with HIV with **mild cognitive impairment** because they are associated with significant improvements objective and subjective measures of memory, quality of life and mood / anxiety with benefits translated to improvements in daily functioning and mood. Specifically, **errorless learning** may be recommended for a potential positive effect on recall for older adults with HIV and cognitive impairment.

Conclusions

- Paucity of high level evidence exists on rehabilitation interventions for older adults with HIV
- Referring to existing systematic reviews and meta-analyses for common comorbidities may be helpful for clinicians working with older adults with HIV
- Knowledge synthesis resulted in 55 recommendations derived from 151 research studies from two different areas of literature and clinician and PHA values and preferences
- These recommendations should be considered in combination with patient values and preferences to ensure an individualized approach to HIV rehabilitation assessment and treatment

Strengths

Innovative approach to synthesize two streams of research evidence to develop evidence-informed recommendations on rehabilitation for older adults with HIV

Other strengths included:

- Incorporating PHA and clinician values and preferences
- Incorporating high level evidence on rehabilitation interventions
- GRADE principles used for rating evidence and informing revisions to recommendations

Challenges and Potential Limitations

- Defining ‘common comorbidities’ for inclusion in our scope
- Paucity and low level of research evidence on rehabilitation specific to older adults with HIV
- Combining two areas of research evidence that differ in quality and context
- Span of recommendation from ‘motherhood’ statements to specific frequency, intensity, time and type of intervention
- Drafting recommendations that would highlight specific considerations for older adults with HIV (instead of reiterating results from high level evidence)

Current and Next Steps

Currently: Analyzing external endorsement results from PHAs and clinicians

Next Steps:
Refinement and finalize recommendations

Dissemination and Knowledge Translation

- CWGHR website
- Conferences
- Publications

Any questions or for more information?

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