Promoting Wellness for Aging Adults with HIV: Exercise, Nutrition, and Beyond

Insights from the Ryan White HIV/AIDS Program Special Projects of National Significance (SPNS) Aging with HIV Initiative

July 28, 2025

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Acknowledgment

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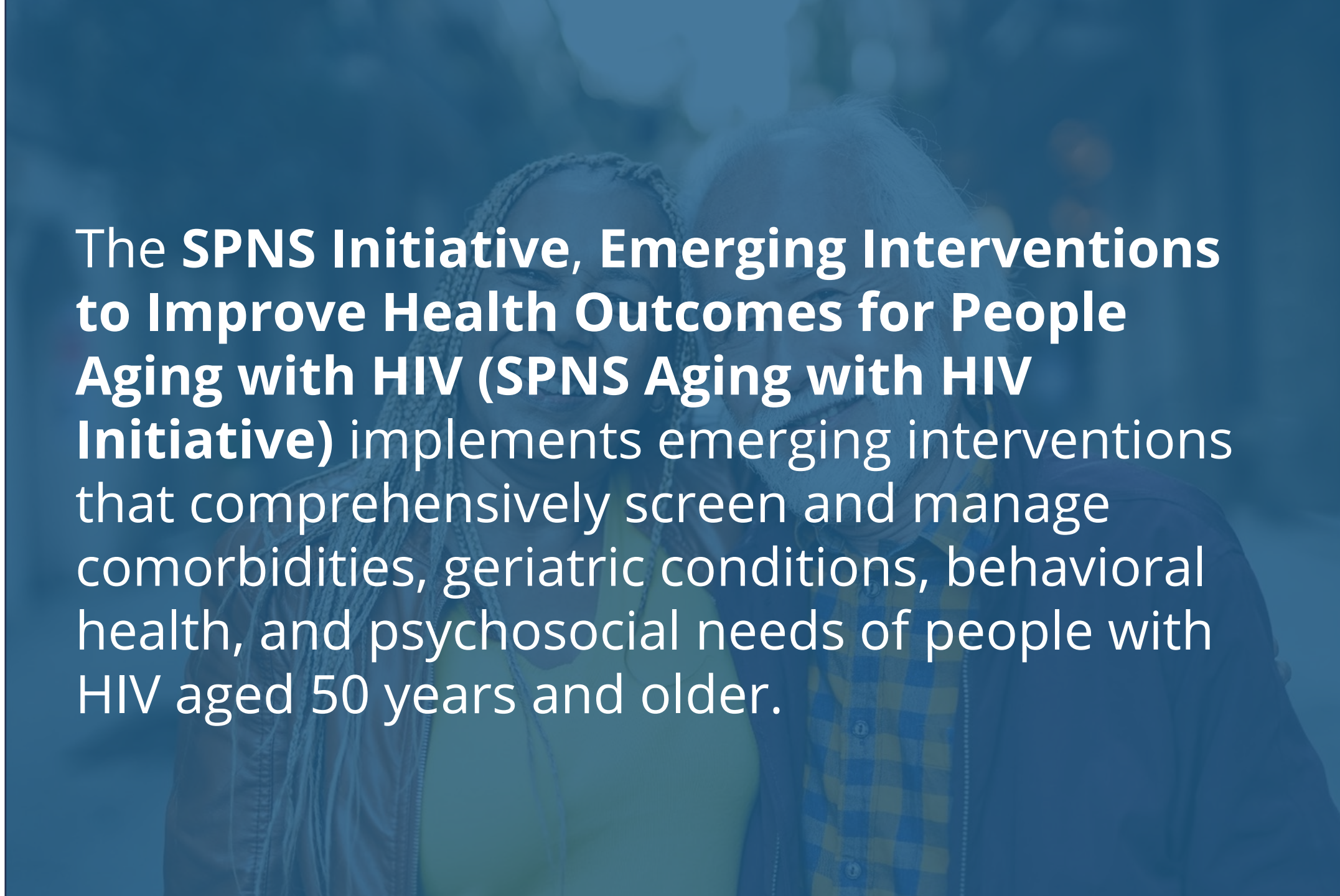
Zoom Reminders

- This webinar will be recorded.
- There will be 20 minutes for questions and answers at the end of both presentations.
- Please enter all questions in the chat.

Agenda

1. Welcome and Introduction
2. Presentation by Caryn Morse, MD, Wake Forest University Health Sciences
3. Presentation by Gemima Charles & Resha Mehta, MD, Empower U, Inc.
4. Question and Answer Session
5. Thank You & Closing



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The **SPNS Initiative**, **Emerging Interventions to Improve Health Outcomes for People Aging with HIV (SPNS Aging with HIV Initiative)** implements emerging interventions that comprehensively screen and manage comorbidities, geriatric conditions, behavioral health, and psychosocial needs of people with HIV aged 50 years and older.

The Aging with HIV Initiative's goals include:

Implementing emerging interventions that screen and manage comorbidities, chronic conditions, geriatric conditions, behavioral health, and psychosocial needs of people with HIV ages 50 and older;

Assessing the uptake and integration of emerging interventions; and

Evaluating the impact of the emerging interventions.

Demonstration Sites

Addressing Frailty in People Aging with HIV: Role of Activity and Nutrition

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Wake Forest HIV Program

- Provides care to ~2,200 people with HIV in western North Carolina and southern Virginia
- 55% of patients ages 50 years and older
- 72% Ryan White HIV/AIDS Program eligible
- High rates of comorbidities (heart disease, diabetes, kidney disease, etc.)
  - 57% of age 50 years and older with 3+ major comorbidities

Wake Forest Intervention

Implement frailty screening for people with HIV age 50 years and older using the electronic frailty index

Further characterize persons with frailty and pre-frailty using comprehensive geriatric screening

Pilot a customized intervention to increase activity and improve diet

What is frailty?

- Reduced function and health in older individuals
- Increased vulnerability resulting from age-associated declines in reserve and function across multiple physiologic systems
- Predicts falls, disability, hospitalization, nursing home placement, and death
- HIV infection increases the risk of frailty
  - HIV associated with faster immunologic aging
  - HIV accelerates trajectory of aging-related diseases and risks
  - People with HIV live fewer years free of comorbid disease

How is frailty measured?

Phenotype (Fried et al.)

- Exhaustion
- Low physical activity
- Slowness
- Weakness
- Unintentional weight loss

Accumulation of deficits

- **Counts aging-related deficits**
  - Medical conditions
  - Physical and cognitive impairment
  - Psychosocial risk
  - Geriatric syndromes (falls, etc.)
- **Examples:**
  - Rockwood Frailty Index
  - NHS electronic frailty index (eFI)
  - Wake Forest eFI

Wake Forest electronic frailty index (eFI)

- Includes more than 50 items pulled from EMR
- Requires two outpatient visits in the past two year that include a blood pressure measurement
- $\text{eFI} = \dfrac{\text{number of conditions}}{\text{number of total possible conditions}}$
- eFI predicts healthcare encounters, emergency department (ED) visits, hospitalizations, and falls in adults age 65+ enrolled in accountable care organization

Medical Diagnoses
(e.g., HTN, DM)

Laboratory Tests
(e.g., glucose, eGFR, lipids)

Weight/BMI
Blood Pressure
Smoking status

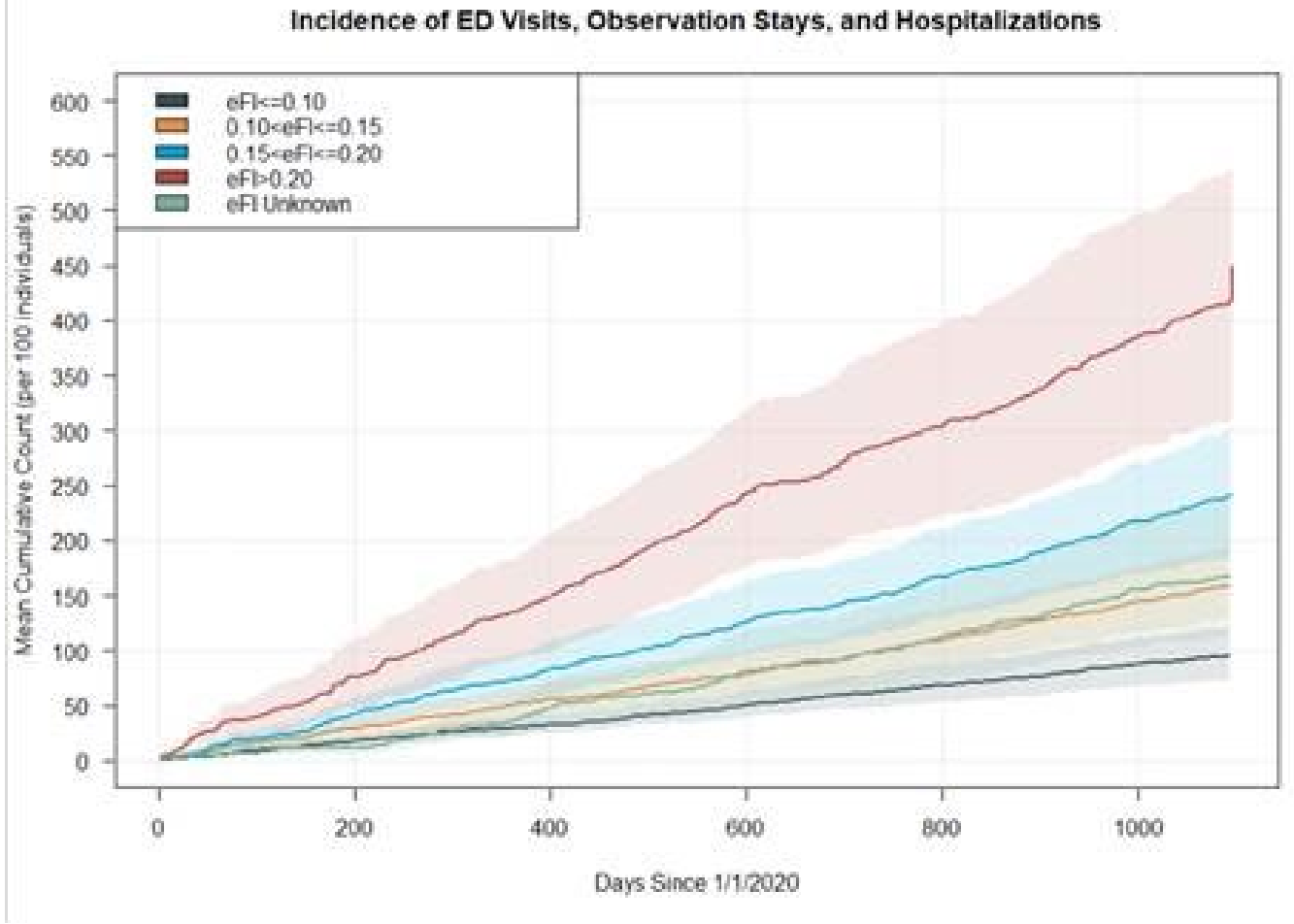
Medication List

Function from Medicare AWV
(e.g., daily activities)

Adapted from Kathryn Callahan, MD, MS. Pajewski et al. J. Gerontol. A Biol. Sci. Med. Sci. 2019 10; 74(11):1771-1777

Wake Forest eFI Predicts Events in People with HIV, 50 years and older (n=1,032)

Category	eFI definition	N (%)
Robust	eFI<0.10	367 (36%)
Prefrail	0.10<eFI≤0.20	454 (44%)
Frail	eFI>0.20	111 (11%)
Missing	No value	100 (10%)



Unpublished data

Wake Forest SPNS Intervention Design (1)

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Status	Pended Orde	Unsigned Ord	Time ▲	Patient	MRN	Type	Frailty Index Risk Score
Scheduled			1:20 PM			RETURN VIDEO VISIT OTHER	
Scheduled			2:00 PM			RETURN PATIENT	
Scheduled			2:20 PM			RETURN PATIENT	"0.189 (Percentile = 80)"
Scheduled			2:40 PM			RETURN PATIENT	
Scheduled			3:00 PM			RETURN PATIENT	0.187 (Percentile = 85)
Scheduled			3:20 PM			RETURN PATIENT	"0.084 (Percentile = 30)"
Scheduled			3:40 PM			RETURN PATIENT	"0.061 (Percentile = 22)"
Scheduled			4:00 PM			HNEW	

Wake Forest SPNS Intervention Design (2)

People with HIV, **50 years and older** eFI screen for frailty

Frail

Pre-frail

Geriatric screening assessments

- Questionnaires on mood, energy, activity, social determinants of health, and quality of life
- Mini-cog dementia screen
- Physical performance battery
  - Grip strength, 4-minute walk, chair stand, and balance tests
- Results summarized and recommendations for next steps placed in EMR

Activity Intervention

- Intervention team and participant select activities and exercise interventions and establish weekly milestones
- Telephone check-ins at weeks 2, 4, and 8
- Repeat questionnaires, physical function assessments at week 12

Nutrition Intervention

- Nutrition consult and development of personalized dietary recommendations
- Assessments as above; weight and body mass index at week 12

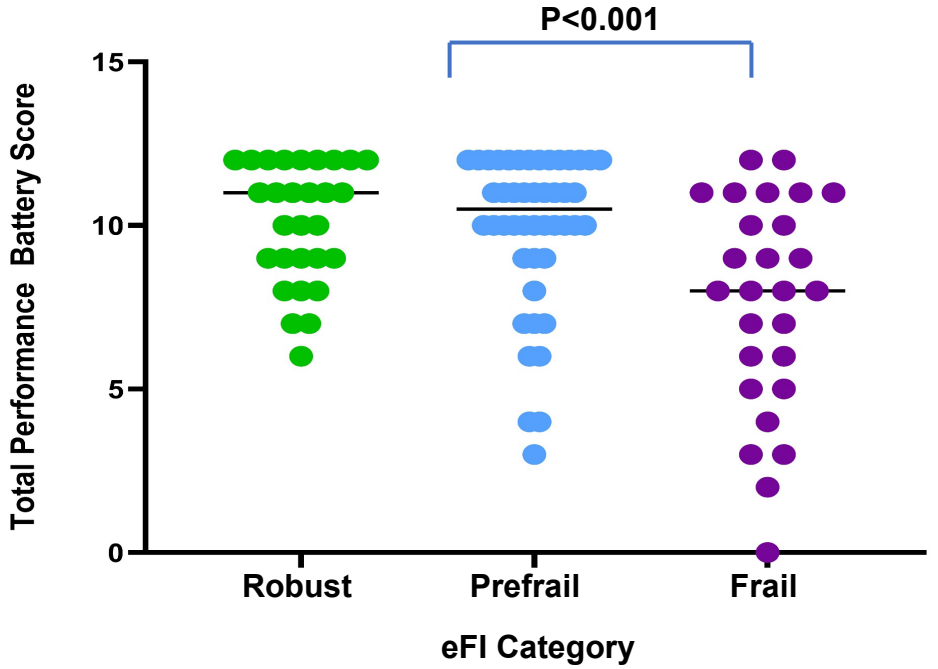
What have we learned with Wake Forest eFI? (1)

For people with HIV, 50 years and older (n=1,032) followed in our program,

- eFI identified frailty in 11% and pre-frailty in 44%
- eFI predicts ED visits, observation visits, and hospitalizations
- Highest eFI scores = highest risk
- eFI is a promising screen for frailty and risk of aging-related complication in people with HIV

What have we learned so far with Wake Forest eFI? (2)

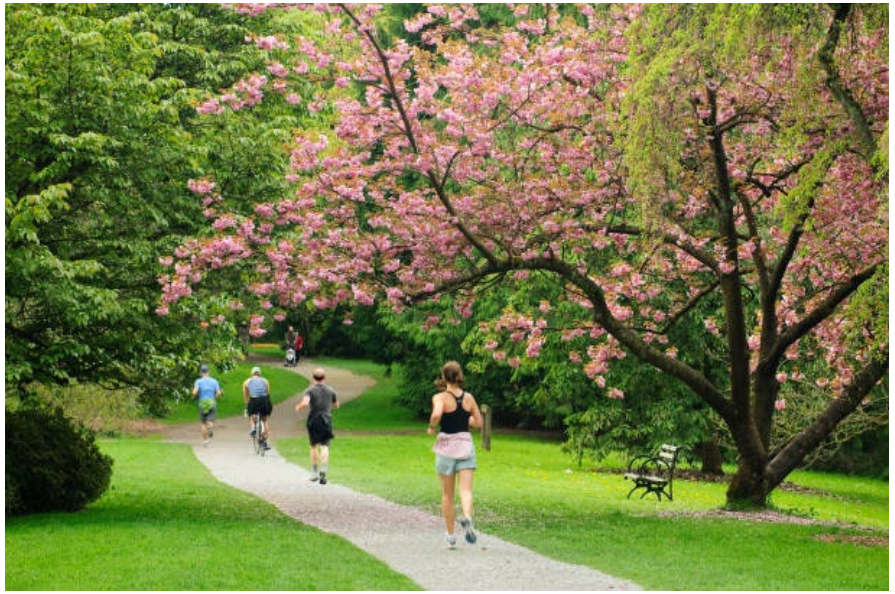
- 102 people with HIV completed screenings
- High rates of depression and anxiety (~30-40%)
- Physical performance testing strongly correlated with frailty
- Referrals for aging-related care increased



Physical activity: good for you!

Physical activity is good for everyone!

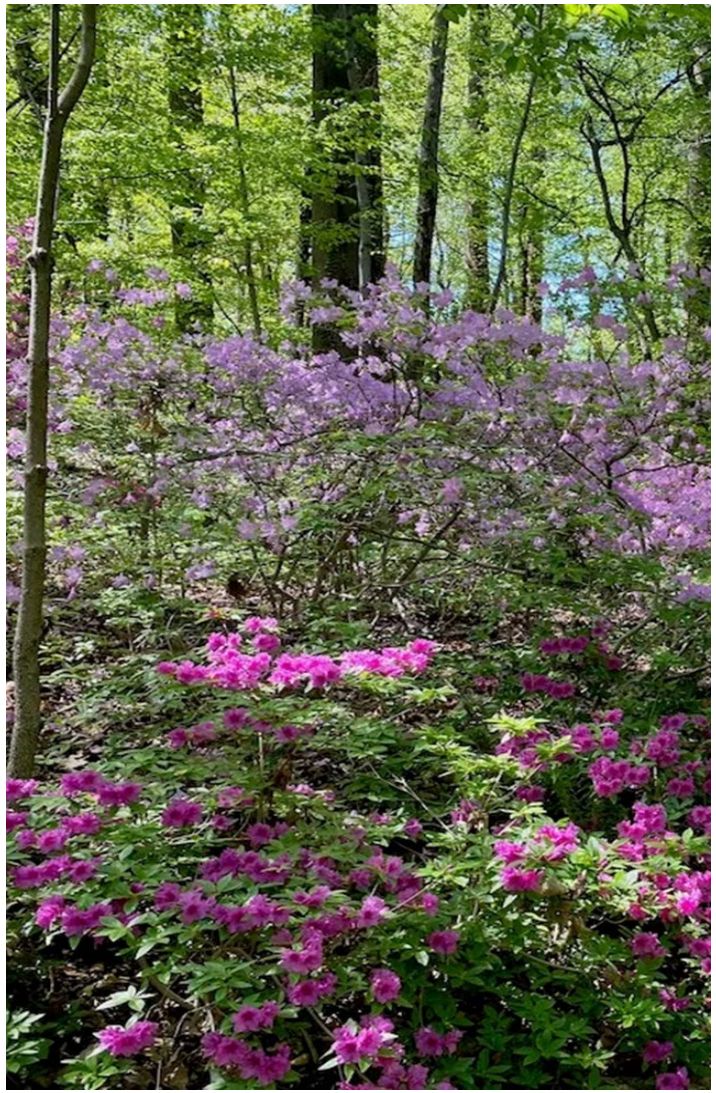
- Lowers risk of diabetes and multiple other chronic diseases
- Better physical function, sleep, and quality of life
- Improves cognition
- Reduces anxiety and depression



Adapted from Baker J 2023 Ryan White HIV/AIDS Clinical Conference, Portland, OR, Dec 2-5, 2023

Physical activity: good for you! (2)

- **Benefits confirmed in people with HIV (though studies aren't great)**
  - Strength/resistance training lowers inflammation[1]
  - Activity improves immune parameters[2]
  - Improves quality of life, mood, and fitness[3]
- **More than 50% people with HIV are active 150+ minutes/week[4]**



1 Zanetti et al. Eur J Sport Science 2016; 2 Bernal et al. OFID 2022; 3 Chetty et al. HIV AIDS 2021; 4 Vancampfort et al. Disab Rehab 2018

Personalized exercise goal setting to increase activity in people with HIV with frailty or pre-frailty

- **Physical therapy assessment (60+ min)**
  - Meet with physical therapy (PT) and Aging team at PT gym
  - Review options to increase activity, focusing on increasing mobility and integration of resistance training
  - Develop individualized exercise plan and establish goals
- **Optional equipment: exercise bands, pedometer or smart watch, exercise journal, and scale**
- **Check-ins by phone every 2 weeks and in-person at week 12 for repeat assessments**

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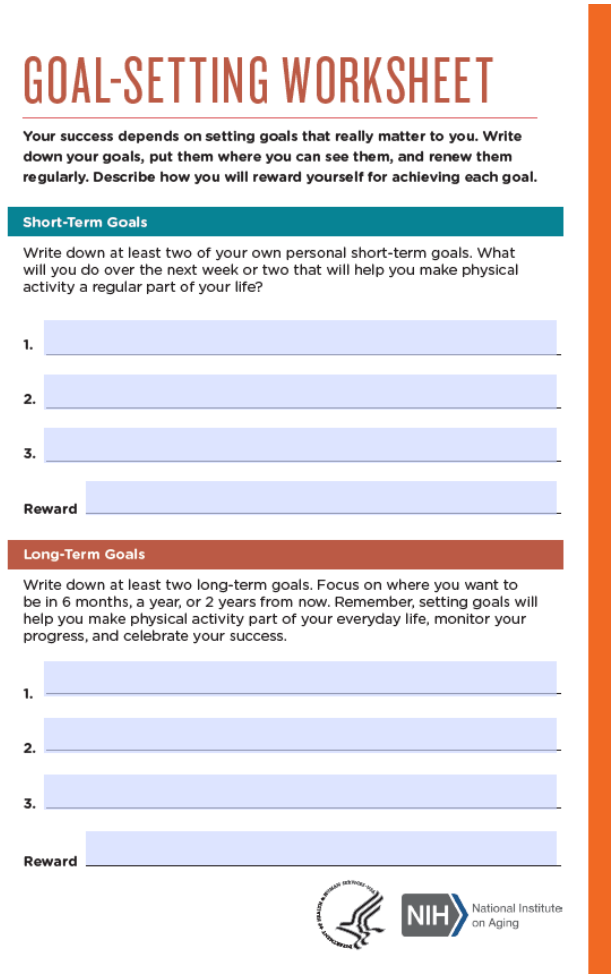
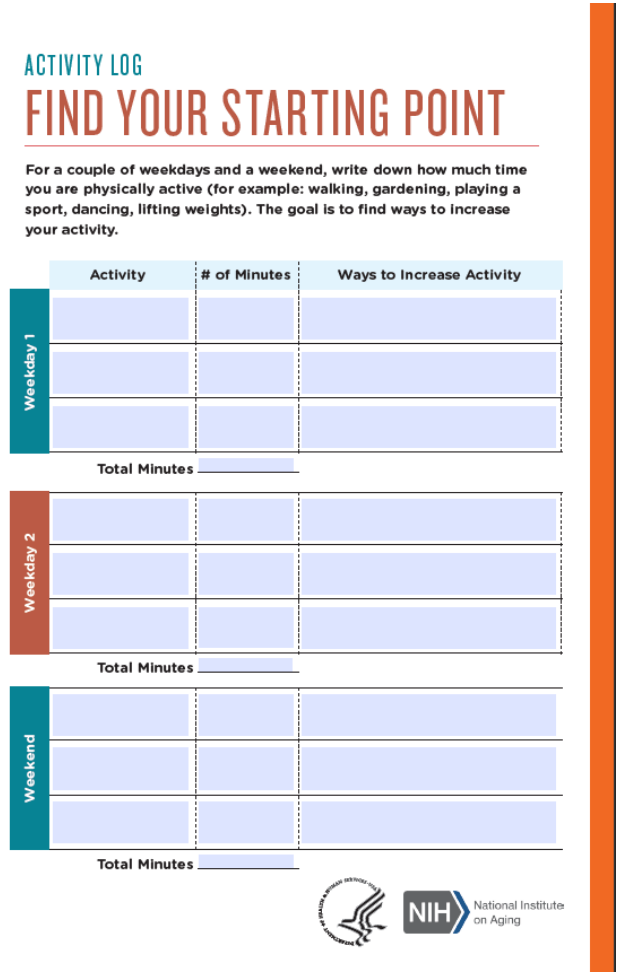
Leveraging free online resources (1)!





nia.nih.gov/sites/default/files

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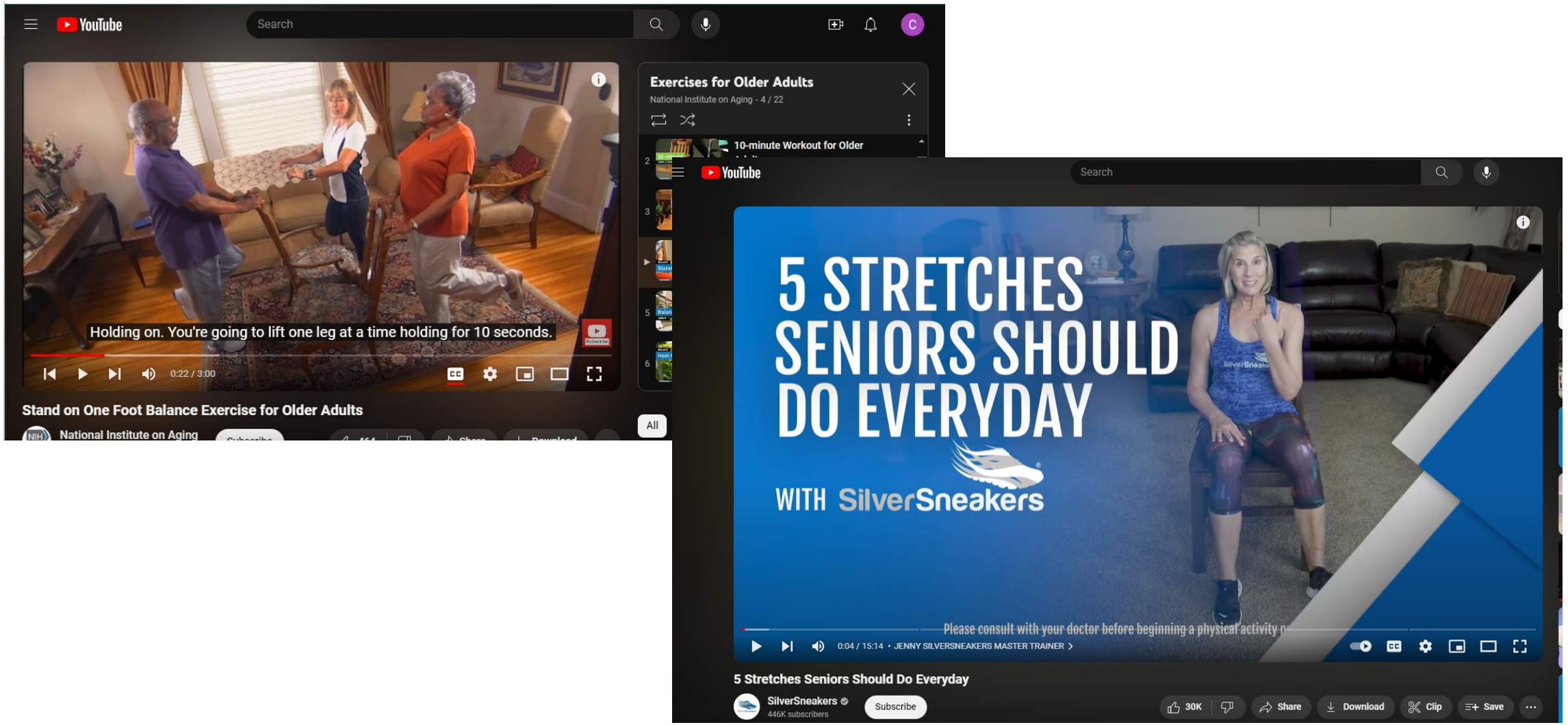
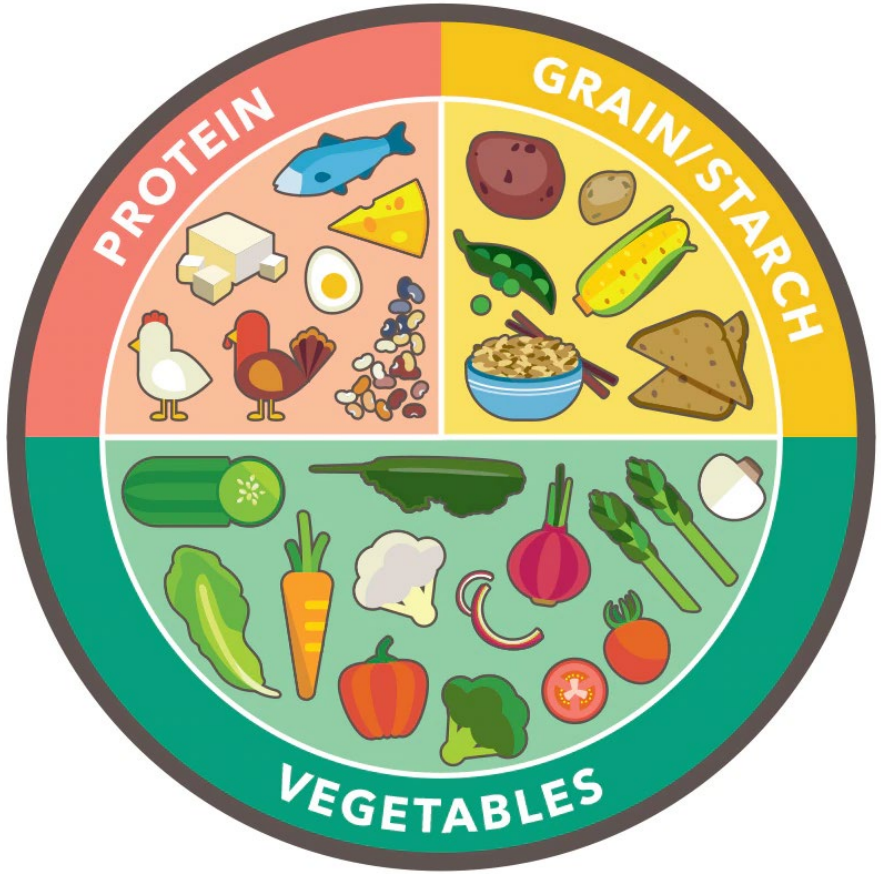
Leveraging free online resources (2)!



Nutrition Intervention

Standard of care nutritional assessment with individualized goal setting



Activity and Nutrition Intervention

Progress

36 enrolled to date

Lessons learned:

- High rates of missed follow-up phone calls, visit
- Early participants with high rate of non-participation in activity plan
- Similar reasons for each: interval health issues and competing demands

Current enrollment focused on persons excited and committed to moving more!

Thank you!

Promoting Wellness for Aging Adults with HIV: Behavioral Health, Exercise, Nutrition, and Beyond

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Miami, Florida
7/28/2025

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➢ Brief Description

- The **Empowering & Educating People with HIV (E&E)** intervention is an enhanced suite of services for older adults with HIV which includes behavioral health services, dental services, nutritional services, social support groups, and cognitive supports to improve physical health markers and overall health outcomes.

➢ Purpose

The goal of the E&E intervention is to improve health outcomes and quality of life for older adults with HIV by:

- Addressing co-morbidities including diabetes, hypertension, hypercholesterolemia, and obesity through **lifestyle and dietary changes.**
- Addressing psychosocial health, behavioral health, loneliness, and cognition through screening and the provision of **Social Support Groups** and individual **Behavioral Health Services.**
- Providing **Dental** and **Nutritional Services** based on the patient's baseline needs assessment.

➢ Rationale

- By 2060, the number of U.S. adults aged 65 years or older is expected to reach 98 million, representing 24% of the overall population.
- Of Miami Dade county's 2.3 million residents, approximately one-fifth or 22% are aged 60 years and over.
- Florida is second only to California in total amount of older residents.
- Nearly half of people with HIV in the U.S. are age 50 and older.
- Empower U has been serving people with HIV since 1999. In 2021, over 50% of our patients were 50 years or older. Additionally, half of them had at least one comorbidity such as diabetes, hypertension, or hyperlipidemia.

➢ E&E intervention client eligibility:

- New or Established client at Empower U Community Health Center
- Diagnosed with HIV
- 50 years of age or older
- At least 1 positive screen from the Comorbidity Assessment
- At least 1 positive screen from a Behavioral or Psychosocial Health Assessment

➢ Intervention outcomes

Short-term outcomes (1- 2 years)

- Received at least two nutritional counseling visits.
- Registered for the Social Support Group attend six sessions.

Long-term outcomes (end of initiative)

- Reduced weight (obesity)
- Reduced HbA1c below 5.5 (diabetes)
- Reduced Blood Pressure below 140/90 (hypertension)
- Reduced Levels of cholesterol, triglycerides, and LDLs (hyperlipidemia)

➢ Best Practices for Implementing Intervention

- The Data Manager generates the list of eligible clients from the EMR and sends the list to the Care Coordinator (CC).
- The CC assesses the client's nutritional needs by reviewing past and current laboratory testing results, vital signs, body mass index (BMI), and medication lists.
- Nutritionist completes comorbidities Assessment is a comprehensive evaluation to identify and analyze the presence of multiple co-occurring medical conditions of an individual that may affect their overall health status.
- Nutritionist uses validated nutrition screening (e.g., MNA-Mini Nutrition Assessment & Malnutrition Universal Screening Tool)
  Assess micronutrient deficiencies and food insecurity risks; Educate on managing side effects of antiretroviral therapy with diet.

➢ Patient Liaison

Patient liaison played an important role by:

- Building trust within the community
- Enhancing the program’s relevance
- Improving the client's adherence
- Act as a partner to encourage healthy eating habits
- Shared planning strategies and how to manage antiretroviral therapy side effects with diet

➢ Case Study I

Background

- A male client presented with unintentional weight loss of more than 10 lbs. over six months, muscle loss, and decreased appetite.

Interventions

- Initiated a high-protein diet with oral nutrition supplements.
- Recommended light resistance exercise to improve muscle mass.
- Collaborated with a mental health professional to address depression.

Outcome

- Client achieved weight gained of five lbs.
- Report enjoying meals and experienced fewer digestion issue.

➢ Case Study II

Background

- Female client reported skipping meals due to financial constraints and had uncontrolled hypertension.

Intervention

- Enrolled the client in a local food assistance program providing heart healthy meals.
- Offered Dietary Approaches to Stop Hypertension (DASH) diet education and weekly personal and group check-ins.

Outcome

- Client achieved blood pressure control (<130/80 mmHg) and improved nutritional intake.

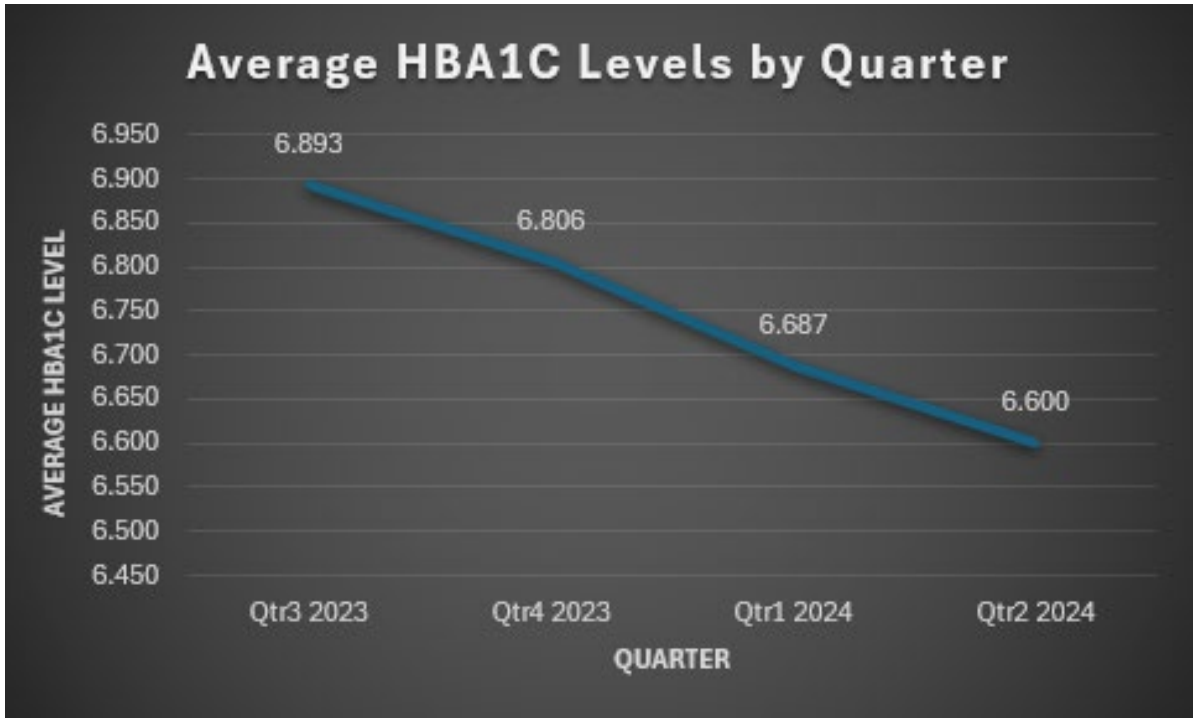
➢ Success Stories

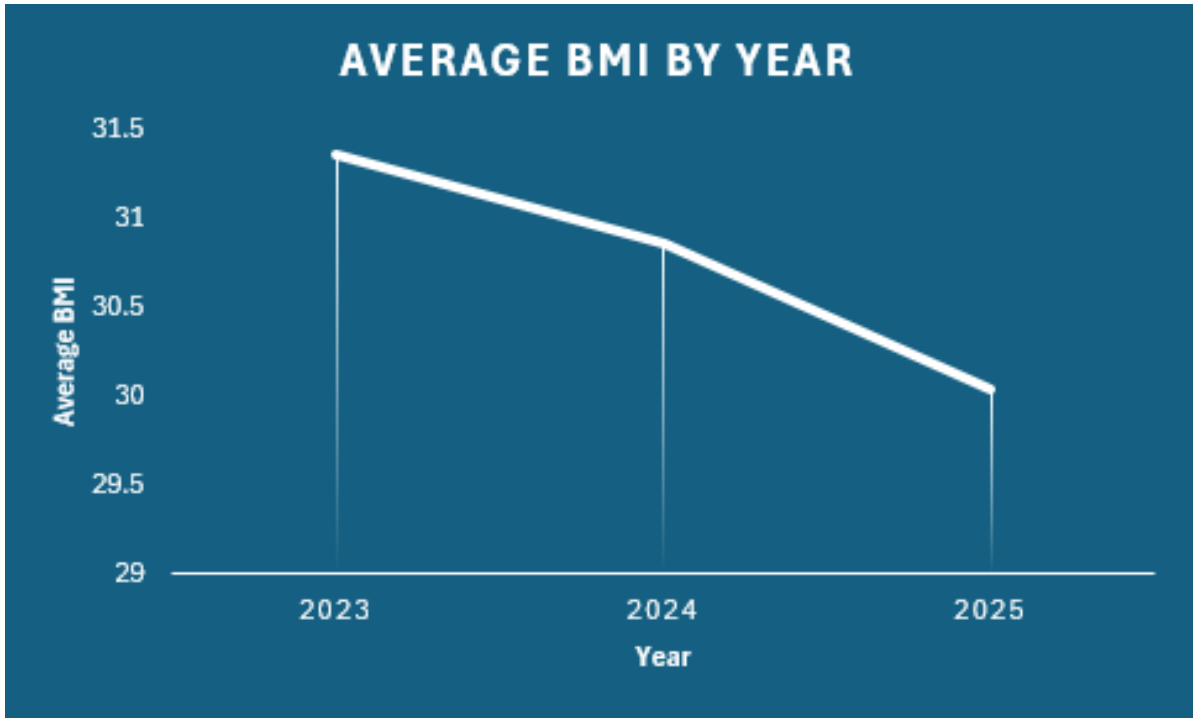
Group Nutrition Workshops

- Focused on cooking skills, budget friendly meal planning, and addressing stigma.
- Partnered with health care providers to coordinate nutrition care and mental health services.
- Developed specific meal plans and addressed medication-nutrient interactions.
- 50 individual counselling sessions provided to clients aged 50+ living with HIV (86% of total HIV and aging patients)
- 6 group sessions held for 2 hours as we discussed various topics
- Over 300 copies of tailored nutrition materials distributed
- 5-7 participants per weekly session

Outcome:

- Increased engagement in nutrition programs, with 75% of participants reporting improved dietary habits and improved quality of life.


Average HBA1C Levels by Quarter
AVERAGE HBA1C LEVEL
6.950
6.900
6.850
6.800
6.750
6.700
6.650
6.600
6.550
6.500
6.450
6.893
6.806
6.687
6.600
Qtr3 2023
Qtr4 2023
Qtr1 2024
Qtr2 2024
QUARTER


AVERAGE BMI BY YEAR
Average BMI
31.5
31
30.5
30
29.5
29
2023
2024
2025
Year

➢ Key Take-Aways

Nutritional Challenges in Aging with HIV

- Increased risk of comorbidities (diabetes, cardiovascular disease, osteoporosis) with age.
- Side effects of medication impacting appetite and nutrient absorption.
- Unintentional weight loss.

Successes of Current Interventions

- Implementation of individualized Medical Nutrition Therapy (MNT).
- Group nutrition education and follow ups.

➢ Lessons Learned

- Trust is essential.
- Ongoing evaluation of the program's effectiveness ensures that it remains relevant and impactful.
- Personalized Approaches - each client has unique nutritional needs influenced by their HIV status, age, and their coexisting conditions.
- Social Connection Enhances Participation - helps reduce isolation and improve retention and engagement.

➢ Lessons Learned Continued…

- Transportation and accessibility matter.
- Consistent follow-ups improve success.
- Regular check-ins help reduce dropout rate and ensure continued client's engagement.

➢ Plans for Future Development or Expansion

Create a "Healthy Aging with HIV" curriculum:

- *Ongoing* focus on managing polypharmacy, heart health, and bone health.

Incorporate community supported agriculture:

- Provide fresh, local produce to food insecure clients.
- Collaborate with local food banks and senior center to provide meal deliveries tailored for older adults with HIV.

➢ Steps To Replicate The Program

Conduct a needs assessment

- Tailored to the specific demographic and geographic population served.

How to implement it? Data collection

- Conduct surveys or focus groups to understand barriers that include food insecurity, medication adherence, and social isolation.

RWHAP service categories

- Medical case management
- Medical nutrition therapy
- Outpatient ambulatory health services

➢ Steps To Replicate The Program

Develop a Multidisciplinary Team

- That include case managers, HIV specialists, dietitians, and mental health counselors.

Stakeholder engagement

- Work with healthcare providers, community organizations, and patient advisory groups to identify key service gaps.
- Partner with local housing programs, meal services, and mental health providers to create a holistic care model.

➢Steps To Replicate The Program

Secure Funding and Partnerships

- Review funding opportunities.
- Use RWHAP Parts A-D and program income.
- Bill healthcare coverage (Medicare, Medicaid, and Private Insurance).
- Outline goals, outcomes, and sustainability plans in the proposal.
- Engage community health centers, local aging services, and HIV advisory groups to provide services.

Implement Core Interventions

- Conduct regular screenings for malnutrition, frailty, and morbid conditions.
- Incorporate the DASH diet and mediterranean diet.
- Provide customized meal plans that can help with polypharmacy interactions.

References

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Thank you

Q&A Session (20 minutes)

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Thank you!

Visit https://targetHIV.org/spns/aging for more information on the SPNS Aging with HIV Initiative.