# Clinical and Sociodemographic Characteristics Associated With Poor Self-rated Health Across Multiple Domains Among Older North American Adults Living With HIV

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## Key Takeaways

- **Among older adults (aged ≥50 years) living with HIV (OALHIV) in North America, approximately three-quarters reported suboptimal health on at least one domain**
- **Mental health disorders, anemia, bone disease, insomnia, and substance abuse were the greatest indicators of OALHIV reporting suboptimal health on all domains compared with those reporting optimal health**

## Introduction

- The UNAIDS 95-95-95 strategy to help end the HIV epidemic includes the following targets[1]:
  - Diagnosis: 95% of those with HIV will know their status
  - Treatment: 95% of those diagnosed will be on antiretroviral therapy (ART)
  - Viral suppression: 95% of those on ART will be virologically suppressed
- In addition to the UNAIDS targets, a fourth target focusing on quality of life has been proposed: 90% of virologically suppressed people living with HIV (PLHIV) will have good health-related quality of life[2]
- The World Health Organization definition of health is aligned with the idea that treating PLHIV goes beyond virologic suppression[3]

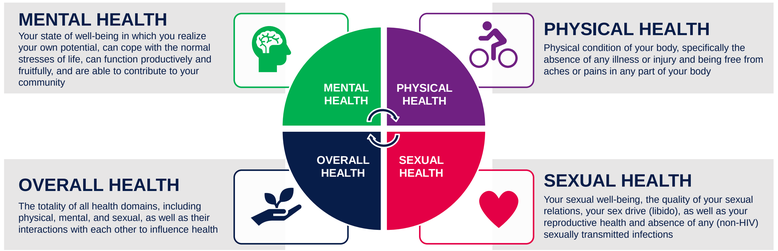
***"Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity."*** – World Health Organization

- This is particularly important in older adults as comorbidities and polypharmacy increase with age[4,5]; furthermore, OALHIV represent a growing demographic in North America[6,7]
- In this study, we used a large patient survey to summarize baseline characteristics and associated self-reported suboptimal health in North American OALHIV

## Methods

- Positive Perspectives was a comprehensive survey conducted from April to August 2019 in 25 countries to assess the lifestyles and challenges of PLHIV, including self-reported health and comorbidities[8]
- OALHIV aged ≥50 years (born in or before 1969) from the United States, Canada, and Mexico were included in this analysis (N=161)
- Self-reported health was assessed across 4 domains (physical, mental, sexual, and overall; Figure 1) and each was dichotomized as optimal (Good/Very good) or suboptimal (Neither good nor poor/Poor/Very poor)

### Figure 1. Health Domains Evaluated




- Multinomial logistic regression was measured for associations between domains and relevant sociodemographic and clinical characteristics
- Comorbidities and polypharmacy were self-reported by participants based on the following questions:
  - "Please select which medical conditions below you have ever been diagnosed with by a doctor or other healthcare professional"
  - "Please select the medical conditions below for which you are currently taking a medicine. This can be a prescription or non-prescription medicine, and can be for treating the condition itself or a symptom of that condition"

## Results

### Participants

- Of 583 participants from North America, 161 were aged ≥50 years and included in this analysis (Table 1)

### Table 1. Baseline Demographics by Country and Overall

| Parameter | Canada (N=24) | Mexico (N=15) | United States (N=122) | Total (N=161) |
|---|---|---|---|---|
| Sex, male, n (%) | 21 (88) | 12 (80) | 85 (70) | 118 (73) |
| Aged ≥65 y, n (%) | 6 (25) | 1 (7) | 16 (13) | 23 (14) |
| HIV diagnosis ≥10 y before survey, n (%)[a] | 20 (83) | 11 (73) | 89 (73) | 120 (75) |
| Time since diagnosis, median (range), y | 21 (4-39) | 14 (1-25) | 20 (0-37) | 20 (0-39) |
| Number of daily non-HIV medicines, n (%)[b] | | | | |
| ≥1 | 18 (75) | 9 (60) | 91 (75) | 118 (73) |
| ≥3 | 10 (42) | 2 (13) | 41 (34) | 53 (33) |
| ≥5 | 3 (13) | 1 (7) | 13 (11) | 17 (11) |
| Number of ART switches, n (%) | | | | |
| ≥1 | 22 (92) | 11 (73) | 95 (78) | 128 (80) |
| ≥4[c] | 9 (38) | 4 (27) | 60 (49) | 73 (45) |
| Reason for switching, n (%)[d] | | | | |
| Reduce severity or frequency of side effects | 11 (46) | 5 (33) | 39 (32) | 55 (34) |
| Reduce number of pills | 7 (29) | 4 (27) | 34 (28) | 45 (28) |
| Resistance/No longer effective | 3 (13) | 2 (13) | 23 (19) | 28 (17) |
| Reduce number of medicines | 6 (25) | 1 (7) | 18 (15) | 25 (16) |
| Potential drug-drug interactions | 4 (17) | 0 | 14 (11) | 18 (11) |

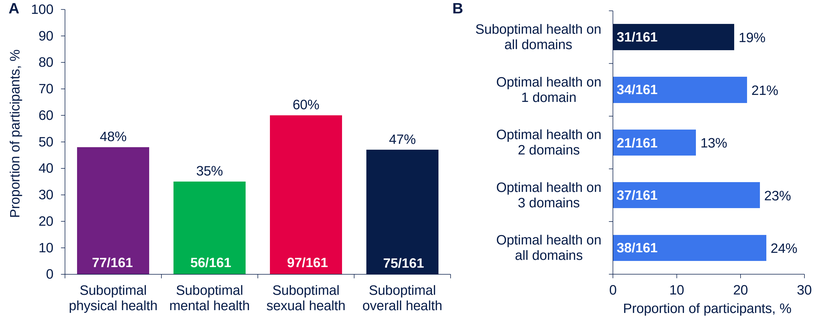
[a]Survey was conducted in 2019. [b]Included prescription and non-prescription medicines that could be used to treat a condition or a symptom of a condition. [c]With ≥1 switch in the past year for resistance or poor tolerability. [d]Reported by ≥15% of survey respondents.

- All participants were currently taking ART
- 100% of participants aged ≥50 years reported ≥1 comorbidity; the most common were hypertension (42%), hypercholesterolemia (39%), mental health disorders (32%; including anxiety, depression, bipolar disorder, and schizophrenia), insomnia (29%), arthritis (27%), and gastrointestinal disease (23%)
  - 86% and 66% of participants had ≥2 and ≥3 comorbidities, respectively

### Suboptimal Health

- Overall, 76% of OALHIV reported experiencing suboptimal health on ≥1 domain (Figure 2)

### Figure 2. Reports of Suboptimal Health by (A) Domain and (B) Number of Domains




### Suboptimal Health and Comorbidities

- 90% of participants reporting suboptimal health on all domains had ≥2 comorbidities, with mental health disorders (48%), hypercholesterolemia (48%), and hypertension (48%) being the most prevalent
- Some comorbidities, including mental health disorders, bone disease, and insomnia, had a >10% difference in prevalence between OALHIV reporting suboptimal and optimal health (Table 2)

### Table 2. Comorbidities With a >10% Difference Between OALHIV Reporting Suboptimal and Optimal Health

| Comorbidity, n (%) | Suboptimal health on all domains (N=31) | Optimal health on all domains (N=38) | Optimal health on ≥1 domain (N=130) |
|---|---|---|---|
| Mental health disorder | 15 (48) | 8 (21) | 36 (28) |
| Anemia | 6 (19) | 0 | 10 (8) |
| Bone disease | 8 (26) | 1 (3) | 11 (8) |
| Gastrointestinal disease | 10 (32) | 4 (11) | 27 (21) |
| Hypercholesterolemia | 15 (48) | 7 (18) | 47 (36) |
| Insomnia | 13 (42) | 5 (13) | 33 (25) |
| Substance abuse[a] | 8 (26) | 2 (5) | 7 (5) |

[a]As self-reported in the survey; included alcohol and drugs.

- Certain comorbidities were more likely to lead to suboptimal health on specific domains (Table 3)
  - 95% and 89% of OALHIV with bone disease had suboptimal sexual health and suboptimal overall health, respectively
  - 61% and 65% of OALHIV with mental health disorders had suboptimal physical health and suboptimal sexual health, respectively

### Table 3. Suboptimal Health Across Domains in OALHIV by Comorbidity

| Health status, n (%) | Mental health disorder (N=51) | Anemia (N=16) | Bone disease (N=19) | Gastrointestinal disease (N=37) | Hyper-cholesterolemia (N=62) | Insomnia (N=46) | Substance abuse (N=15)[a] |
|---|---|---|---|---|---|---|---|
| Suboptimal physical health (n=77) | 31 (61) | 10 (63) | 13 (68) | 23 (62) | 34 (55) | 24 (52) | 12 (80) |
| Suboptimal mental health (n=56) | 11 (22) | 8 (50) | 5 (26) | 6 (16) | 8 (13) | 11 (24) | 6 (40) |
| Suboptimal sexual health (n=97) | 33 (65) | 11 (69) | 18 (95) | 25 (68) | 39 (63) | 31 (67) | 11 (73) |
| Suboptimal overall health (n=75) | 29 (57) | 9 (56) | 17 (89) | 23 (62) | 33 (53) | 30 (65) | 11 (73) |

[a]As self-reported in the survey; included alcohol and drugs.

## Conclusions

- All OALHIV in North America reported comorbidities and most reported polypharmacy, with approximately one-fifth reporting suboptimal health on all domains and three-quarters reporting suboptimal health on at least one domain
- Care for OALHIV requires improved models that ensure the broader impacts of HIV are better managed
- Quality communication is needed to identify poor mental health to enable more effective management of mental health disorders, which may impact QoL

**References: 1.** UNAIDS. https://www.unaids.org/sites/default/files/media_asset/201506_JC2743_Understanding_FastTrack_en.pdf. Accessed September 28, 2022. **2.** Lazarus et al. *BMC Med*. 2016;14:94. **3.** World Health Organization. https://www.who.int/about/governance/constitution. Accessed September 1, 2022. **4.** Althoff et al. *Curr Open HIV Res*. 2016;11:527-536. **5.** Roomaney et al. *Int J Environ Res Public Health*. 2022;19:2359. **6.** Wing. *Trans Am Clin Climatol Assoc*. 2017;128:131-144. **7.** NIH. https://www.nia.nih.gov/health/hiv-aids-and-older-adults. Accessed September 7, 2022. **8.** Okoli et al. *Prev Chronic Dis*. 2020;17:E22.

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