Comorbidities and Symptoms Associated with Falls from 2020-2021

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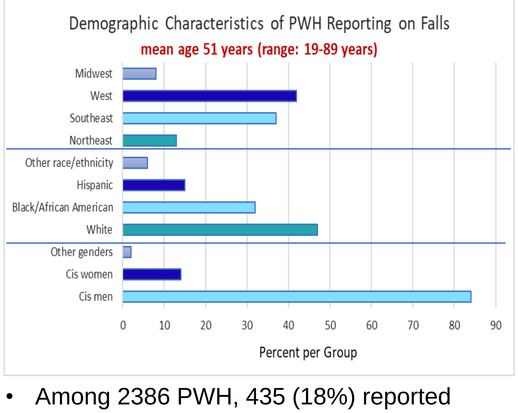
BACKGROUND

- Falls are associated with aging-related decline in health among people ≥ 65 years.
- People with HIV (PWH) experience aging-related complications earlier than the general population.
- While falls have previously been associated with aging-related complications among PWH, this work is limited by small sample sizes, focused on only healthcare-reported falls, and often includes falls prior to the current antiretroviral treatment (ART) era.

METHODS

- We examined falls reported within the previous 12 months between 2020-2021 among PWH in the Center for AIDS Research Network of Integrated Clinical Systems (CNICS) cohort at 7 US sites.
- Data were collected via patient reported and clinical measures.
- Associations of clinical, demographic and behavioral factors with any falls and number of falls were examined using relative risk regression models.

RESULTS



- Among 2386 PWH, 435 (18%) reported falling at least once in the past 12 months.
- 50% fell once, 28% twice, 22% ≥ 3 times.

20% of PWH in routine clinical care experienced a fall in the last year, which were associated with:

*** Neurological & mental health symptoms * Emergency visits**
*** Frailty *Diabetes * Quality of Life**

and falls occurred in all age groups

Table: Factors associated with any falls and number of falls in the past 12 months adjusted for age, race/ethnicity (white vs all others), geographic location (west vs all others), and birth sex (N=2386)

		Any Falls (N=435)	1 vs 0 Falls (N=218)	2 vs 0 Falls (N=120)	3 vs 0 Falls (N=97)
		RR (95% CI)	RR (95% CI)	RR (95% CI)	RR (95% CI)
Neuropathy symptoms: (None = REF)	Not/ a little bothersome	1.74 (1.41, 2.15)	1.50 (1.12, 2.01)	1.69 (1.06, 2.69)	2.35 (1.47, 3.77)
	Bothersome/ highly bothersome	2.85 (2.34, 3.46)	1.76 (1.30, 2.40)	2.41 (1.62, 3.59)	6.77 (4.39, 10.4)
Difficulty remembering: (None = REF)	Not/ a little bothersome	2.18 (1.79, 2.65)	1.62 (1.24, 2.13)	3.35 (2.29, 4.90)	1.65 (1.06, 2.60)
	Bothersome/ highly bothersome	3.18 (2.67, 3.95)	1.71 (1.21, 2.42)	3.98 (2.63, 6.01)	4.37 (2.81, 6.80)
Fatigue or Loss of Energy: (None = REF)	Not/ a little bothersome	2.39 (1.89, 3.02)	1.59 (1.18, 2.15)	3.24 (2.08, 5.03)	2.09 (1.25, 3.51)
	Bothersome/ highly bothersome	3.57 (2.83, 4.51)	2.04 (1.49, 2.79)	4.09 (2.62, 6.40)	4.81 (2.93,7.92)
Feeling dizzy: (None = REF)	Not/ a little bothersome	2.49 (2.07, 3.00)	1.70 (1.28, 2.24)	2.78 (1.93, 3.99)	3.29 (2.22, 4.89)
	Bothersome/ highly bothersome	3.91 (3.20, 4.77)	1.49 (0.98, 2.30)	4.95 (3.34, 7.34)	6.90 (4.60, 10.3)
Frailty Phenotype: (None = REF)	Prefrail	2.42 (1.94, 3.01)	1.71 (1.30, 2.25)	1.64 (1.10, 2.44)	4.45 (2.82, 7.02)
	Frail	4.67 (3.69, 5.92)	1.69 (1.14, 2.52)	4.22 (2.70, 6.60)	10.13 (6.42, 16.0)
Depression Symptoms: (None = REF)	Mild/ moderate	2.33 (1.95, 2.78)	1.97 (1.52, 2.56)	2.15 (1.50, 3.08)	3.07 (2.06, 4.59)
	Moderately severe/ Severe	3.50 (2.72, 4.50)	1.72 (1.08, 2.75)	2.61 (1.49, 4.56)	6.39 (4.07, 10.04)
Diabetes		1.43 (1.20, 1.72)	1.44 (1.09, 1.90)	1.34 (0.91, 1.97)	1.58 (1.04, 2.42)
Quality of Life index	per 1 standard deviation	0.41 (0.35, 0.47)	0.54 (0.46, 0.62)	0.45 (0.38, 0.53)	0.30 (0.25, 0.36)
# Emergency visits (in the past 2 years)	per visit	1.07 (1.05, 1.09)	1.09 (1.03, 1.15)	1.10 (1.03, 1.17)	1.18 (1.12, 1.25)

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RESULTS

- 118 (27% of those who fell) sought medical care for the fall.
- Falls were reported significantly more among PWH ≥ 50 years-old; although 9% of those < 40 years reported falling.
- Falls were also more likely to be reported by PWH who were white and lived near the West coast of the US.
- After adjustment, falls were associated with reporting symptoms of neuropathy, forgetfulness, fatigue, feeling dizzy, and depression (Table).
- A prefrail or frail phenotype, diabetes, lower quality of life (QoL) scores and more emergency visits were also associated with falls.
- Magnitude of observed associations increased with greater number of falls.
- HIV viral load and current and nadir CD4 count were not consistently associated with falls.

CONCLUSIONS

- Our findings suggest that a high proportion of PWH, even younger people, experience falls, which may be indicative of aging-related issues.
- Falls were associated with neurological and mental health symptoms, frailty, diabetes, and lower quality of life scores.
- Monitoring of neurological, cognitive, and mental health symptoms across the age spectrum in routine clinic visits may be important among PWH to minimize complications with early onset aging.

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