TRENDS IN SUICIDE-RELATED EMERGENCY DEPARTMENT VISITS AMONG PEOPLE WITH AND WITHOUT HIV IN BRONX, NY

1051

Chloe Roske[1,2], **Caitlin Hills[1]**, Yingchen Xu[1], Wenzhu B. Mowrey[1], Aaron S. Breslow[1], Atul Bhattiprolu[1], Ava Erulker[1], Grishma Patel[1], Joan W. Berman[1], Anjali Sharma[1], Vilma Gabbay[1,2], David B. Hanna[1]
[1]Albert Einstein College of Medicine, Bronx, NY, US, [2]University of Miami Miller School of Medicine, Miami, FL, US

BACKGROUND

- People with HIV (PWH) are at elevated risk for suicidality (i.e., suicidal ideation, plans, attempts), though little is known about population-specific factors driving potential disparities in Emergency Department (ED) visits in the context of suicide.

METHODS

- Using the **Einstein-Rockefeller-CUNY CFAR's Clinical Cohort Database**, we identified all **ED visits** among patients age 17+ years at 4 EDs in the Montefiore Health System between 2016 and 2022.
- **Suicide-related visits** were determined using ICD-10-CM diagnosis codes for suicidal ideation/behavior.
- We measured **rates of suicide-related ED visits** by HIV serostatus. Rates were annualized per 1000 ED visits and age-standardized to the 2000 US standard population.

CONCLUSIONS

- Suicide-related visits were nearly 3-fold higher among PWH compared with people without HIV (PWoH).
- Suicide-related visits increased differentially over time, even after accounting for temporal changes associated with the COVID-19 pandemic.
- **Younger PWH and non-cisgender individuals may be at particular risk for suicidality.**
- More research into associated factors is needed to help inform suicide-preventive approaches in PWH.

LIMITATIONS and NEXT STEPS

- ED visits in our sample may underrepresent the full scope of suicidality in PWH in the Bronx.
- ED work-ups may not be comprehensive, leading to missing data in patient history.
- Limited data about social determinants of health.
- **Multivariable analyses will further characterize the factors most strongly associated with suicide ideation/behavior in this population.**

Suicide-related ED visits were nearly ***3-fold higher among PWH*** compared with those without HIV.

Among PWH, the ***highest rates of suicide-related ED visits*** were observed among non-cisgendered individuals, those aged 17-39, and those with unsuppressed viral loads.

RESULTS

Table 1: Number and rate of suicide-related ED visits, by demographic characteristics

	PERSONS WITH HIV (N=7932)					PERSONS WITHOUT HIV (N=560,974)				
	Suicide-related diagnosis (N=246)		No suicide-related diagnosis (N=7686)		Rate of suicide-related ED visits	Suicide-related diagnosis (N=5733)		No suicide-related diagnosis (N=555,241)		Rate of suicide-related ED visits
	N	%	N	%	Rate (95% CI)	N	%	N	%	Rate (95% CI)
Overall rate of suicide-related diagnoses, 2016-2022	-	-	-	-	14.8 (13.3-16.3)	-	-	-	-	5.2 (5.1-5.3)
Age, years (median, IQR)	44 (33, 53)	-	52 (39, 59)	-	-	33 (23, 50)	-	43 (28, 60)	-	-
17-39	101	41	1923	25	25.6 (22.3-28.9)	3453	60	250,302	45	6.7 (6.5-6.9)
40-49	54	22	1378	18	12.8 (10.1-15.6)	812	14	78,863	14	6.1 (5.7-6.4)
50-59	72	29	2556	33	10.4 (8.8-12.1)	851	15	85,310	15	5.3 (5.0-5.6)
60+	19	8	1829	24	3.5 (2.4-4.7)	617	11	140,766	25	1.7 (1.6-1.8)
Race/ethnicity										
Black (non-Hispanic)	119	48	3636	47	15.5 (13.3-17.6)	1853	32	175,194	32	5.2 (5.0-5.4)
Hispanic (any race)	96	39	3106	40	13.4 (11.0-15.8)	2641	46	242,486	44	5.0 (4.8-5.2)
White (non-Hispanic)	10	4	314	4	17.3 (10.5-24.1)	569	10	48,313	9	9.6 (8.9-10.2)
Other/Unknown	21	9	630	8	14.4 (8.6-20.1)	670	12	89,248	16	4.0 (3.7-4.2)
Gender										
Cisgender men	168	68	4412	57	18.4 (16.2-20.5)	2734	48	236,811	43	7.5 (7.3-7.7)
Cisgender women	59	24	3122	41	6.6 (5.0-8.2)	2978	52	318,155	57	3.8 (3.6-3.9)
Non-cisgender	15	8	152	2	31.6 (17.5-45.6)	21	0.4	257	0.05	13.7 (8.3-19.1)

TABLE 2: Number and rate of suicide-related ED visits among PWH, by HIV-related characteristics

	Suicide-related diagnosis (N=246)		No suicide-related diagnosis (N=7686)		Rate of suicide-related ED visits
	N	%	N	%	Rate (95% CI)
HIV transmission risk factor					
Men who have sex with men	60	24	1305	17	14.4 (11.6-17.1)
Injection drug use history	31	13	916	12	22.1 (8.1-36.0)
Heterosexual/other transmission	155	63	5465	71	14.6 (12.5-16.7)
CD4 T-cell count (median, IQR)	407 (191, 709)	-	440 (218, 699)	-	-
500+ cells/uL	60	42	1771	43	13.7 (10.8-16.5)
200-499 cell/uL	47	33	1402	34	17.2 (13.4-20.9)
<200 cells/uL	36	25	940	23	12.2 (9.5-15.0)
Missing	103	-	3573	-	15.4 (12.7-18.0)
HIV viral load (RNA copies/mL)					
Undetectable (<40)	81	51	3255	69	9.2 (7.0-11.3)
Suppressed but detectable (40 - 199)	15	9	384	8	11.4 (5.3-17.6)
Unsuppressed (200+)	64	40	1095	23	23.0 (19.3-26.6)
Missing	86	-	2952	-	17.1 (14.3-19.9)
Length of HIV diagnosis					
<1 year	58	24	1810	24	16.9 (12.8-20.9)
1-2 years	15	6	412	5	21.7 (16.5-26.9)
3-5 years	25	10	643	8	20.9 (16.1-25.6)
6-10 years	39	16	1035	14	8.5 (5.8-11.1)
Over 10 years	109	44	3786	49	12.1 (9.7-14.4)

Tables 1 and 2:

- **Suicide-related ED visits** were nearly **3-fold higher among PWH** compared with PWoH.
- **Highest rates of suicide-related ED visits among PWH:**
  - Aged 17-39
  - Cisgender men
  - Non-cisgender individuals
  - With a history of injection drug use
  - With unsuppressed viral loads
- PWH with **undetectable viral loads** had a **lower rate** of suicide-related ED visits.

RESULTS

Number of suicide-related ED visits

- **PWH**: 40,578 total ED visits; 506 **(1.2%)** suicide-related visits
- **PWoH**: 1,710,558 total ED visits; 8488 **(0.4%)** suicide-related visits

Repeat suicide-related visits

- PWH with a suicide-related diagnosis had **more repeat visits for suicidality** compared with PWoH.
  - **PWH**: 2.06 suicide-related visits per person
  - **PWoH:** 1.48 suicide-related visits per person

Figure 1: Annualized rates of suicide-related ED visits by HIV serostatus and gender, 2016-2022

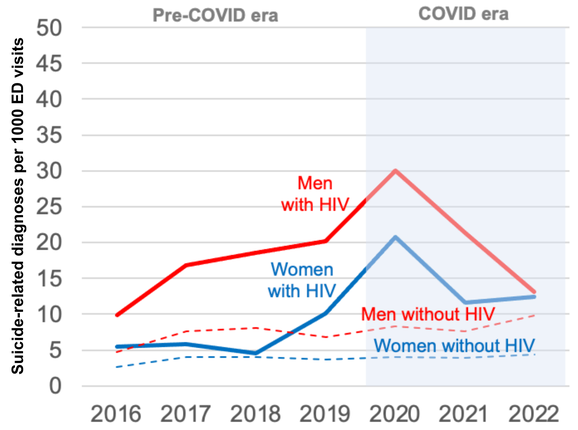
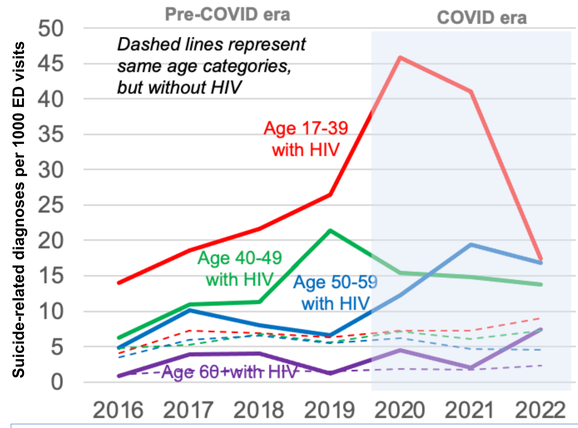


Figure 2: Annualized rates of suicide-related ED visits by HIV serostatus and age, 2016-2022



Figures 1 and 2: Before 2021, the rate of suicide-related ED visits increased steadily over time among PWH. Temporal increases in suicidality ideation were less pronounced among people without HIV.