

HIV Diagnosis Following Discharge from Psychiatric Hospitalization: A Claims-Based, Real-World Study

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Background

- People living with mental illnesses (PLWMI) experience disproportionate HIV incidence¹
- HIV contributes to excess morbidity and early mortality among PLWMI, who experience up to 25 yr. shorter life expectancy²
- Daily antiretroviral medication as HIV pre-exposure prophylaxis (PrEP) up to 99% effective³
- Effective, biomedical HIV prevention options are effective and remain under-utilized for all patients in the U.S. (~36% of patients with PrEP indication were actually prescribed in 2022)⁴
- PrEP use among PLWMI is poorly understood, however limited work suggests < 1% of people with bipolar disorder and schizophrenia were prescribed PrEP between 2013-2018, despite well-documented HIV vulnerability⁵
- National policy agendas highlight the 'no wrong door' approach to integration of HIV prevention and mental health/substance use treatment⁶
- Minimal research has investigated opportunities for HIV prevention care or the unique needs of PLWMI for HIV prevention in the healthcare system

Methods

- Retrospective study using the MarketScan® commercial claims database of fully-adjudicated medical and pharmacy claims for privately insured Americans
- Data years 2004-2022, representing approximately 151 million unique enrollees; Cohort entry at any year
- Index date (inclusion in cohort): Day of discharge claim + 1
- Follow up period: 365 days after index date
- Inclusion criteria:
 - Hospital admission claim (inpatient) with a psychiatric diagnosis related group (DRG) or psychiatric diagnosis as primary diagnosis for admission
 - Age ≥ 14 years old
 - At least one year of continuous coverage prior to and after index date
- Exclusion criteria:
 - Any claims with HIV-related diagnosis code prior to hospitalization
 - 28-30 days of HIV treatment regimen; single 28/30-day prescription assumed post-exposure prophylaxis (PEP)
- **Primary Outcome:** New HIV diagnosis in follow-up period
 - Defined as: Date of second outpatient claim or first inpatient claim with HIV diagnosis code or ≥31 days of antiretrovirals for HIV treatment

Results

- 492,363 unique enrollees included in cohort
- Most common reason for hospitalization was depression (38.8%)
- Mean age: 33.3 (*SD* = 15.4) years
- Average length of hospitalization of 6.35 (*SD* = 7.36) days
- **277 new HIV diagnoses identified during follow-up period (after discharge)**
- New HIV diagnoses were more common among males (67.1%) and those who were not married (84.8%)
- Most new HIV were diagnoses in the Western U.S. (39.7%)

Reason for Admission	Sample		HIV Diagnosis	
	n	%	n	%
Alcohol Use Disorder	32,218	6.54%	33	11.9%
Bipolar Disorder	62,709	12.7%	32	11.6%
Depression	191,105	38.8%	108	39.0%
Psychotic Disorder ^a	26,228	5.33%	13	4.69%
Opioid Use Disorder	8,601	1.75%	5	1.81%
Stimulant Use Disorder	2,580	0.52%	8	2.89%
Other	168,645	34.3%	78	28.2%
Sex				
Male	228,809	46.5%	186	67.1%
Female	263,277	53.5%	91	32.9%
Married				
No	341,610	69.4%	235	84.8%
Yes	150,476	30.6%	42	15.2%
Region				
Northeast	76,154	15.5%	60	21.7%
N. Central	131,974	26.8%	54	19.5%
West	201,687	41.0%	110	39.7%
South	78,550	16.0%	52	18.8%
Unknown	3,721	0.76%	1	0.36%
M	SD	M	SD	
Age (years)	33.3	15.4	31.6	13.2
Length of Stay (days)	6.35	7.36	6.34	6.33

a. Psychotic disorders included schizophrenia, schizoaffective disorder(s), substance-induced psychosis, and unspecified psychosis.

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- Median time of 154 (IQR: 61-243) days (5.1 months) to new HIV diagnosis following discharge from psychiatric hospitalization
- Longest median time to HIV diagnosis was identified for people hospitalized for depression (170.5 days [IQR: 76.5-266])
- Shortest median time to HIV identified among people hospitalized primarily for stimulant use disorder (40 days [IQR:32-69.5])

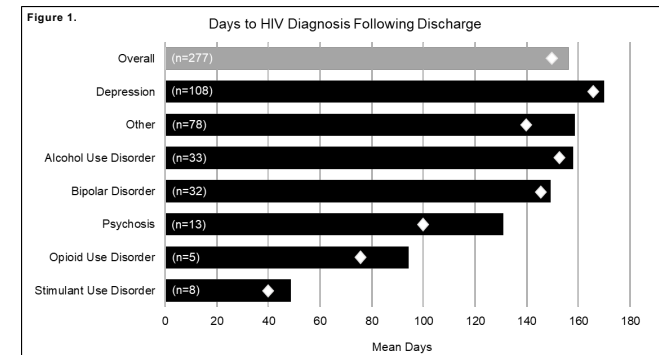


Figure 1. Mean number of days to new HIV diagnosis following discharge from psychiatric hospitalization, grouped by the primary diagnosis at the time of admission. Diamonds indicate median number of days to HIV diagnosis following discharge. Psychotic disorders included schizophrenia, schizoaffective disorder(s), substance-induced psychosis, and unspecified psychosis.

Conclusions & Future Directions

- Psychiatric illness and symptoms are broadly associated with increased incidence of HIV
- Psychiatric hospitals often function as a safety-net for PLWMI who are not well-engaged with the healthcare system or who are experiencing acute psychiatric care needs
- Using a conservative approach, we identified 277 new HIV diagnoses following psychiatric hospitalization, and median time to diagnosis for all was < 6 months after discharge
- Psychiatric hospitals may serve as an efficient point of integration for HIV screening, preventive counseling, and coordination of PrEP care
- Stimulant use disorder as a particularly important diagnosis to prioritize for intervention, previous work with similar data finding < 1% using PrEP⁷
- These data may serve as a foundation for larger studies to identify patients in psychiatric and substance use care who may benefit from PrEP and other HIV prevention interventions within psychiatric care
- Further research is needed to understand gaps in PrEP care for PLWMI including in a larger sample with all insurers