

CLINICAL OUTCOMES AMONG IN AND OUTPATIENTS WITH MPOX IN AN URBAN HEALTH SYSTEM

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Background

- During the 2022 mpox outbreak most patients were managed as outpatients however some required hospitalization
- We evaluated risk factors for hospitalization among an urban US population

Methods

- Study type:** Retrospective
- Study population:** Adult patients in the Johns Hopkins Health System (JHHS) with an mpox diagnosis from July 1 through December 15, 2022
- Collected data:** demographics, comorbidities, treatment, lab values and clinical outcomes
- Primary outcome:** Hospitalization
- Analysis:** Comparison using Wilcoxon Rank Sum and chi-square tests; logistic regression for factors associated with hospitalization stratified among PLWH to assess for impact of CD4 and HIV-1 RNA

Results

- There were no statistically significant differences between outpatients and inpatients in age, race, ethnicity, insurance status, HIV risk group, HIV status or obesity
- Among PLWH, CD4 <350 was associated with hospitalization

CD4 count < 350 was associated with increased odds of hospitalization with mpox

Table 1 Demographics	NOT ADMITTED (N=70)	ADMITTED (N=15)
Age (Median, Range)	35.2 (19.0-65.6)	38.8 (25.3-56.8)
Men, Women, Transgender	66 (94.3%), 2 (2.9%), 2 (2.9%)	13 (86.7%), 1 (6.7%), 1 (6.7%)
Black or African American	42 (60%)	10 (66.7%)
Hispanic/Latino	8 (11.4%)	1 (6.7%)
HIV Risk Factors		
MSM	59 (84.3%)	13 (86.7%)
Heterosexual	6 (8.6%)	2 (13.3%)
Missing	5 (7.1%)	0
IDU	1 (1.4%)	1 (6.7%)
Insurance Status		
Private insurance	37 (52.9%)	7 (46.7%)
Uninsured	4 (5.7%)	2 (13.3%)
Medicaid	23 (32.9%)	5 (33.3%)
Medicare	1 (1.4%)	1 (6.7%)
Unknown	5 (7.1%)	0
Comorbidities		
BMI >30	8 (11.4%)	4 (26.7%)
Persons Living With HIV (PLWH)	34 (48.6%)	10 (66.7%)
Mental illness	24 (34.3%)	4 (26.7%)
Smoking	6 (8.6%)	3 (20%)
Unknown	2 (2.9%)	0

Table 2: Persons Living With HIV	NOT ADMITTED (N=34)	ADMITTED (N=10)
Median CD4 count (cells/mm3)	587.5 (196-1417)	132 (4-881)
CD4 <50	0%	3 (33.3%)
CD4 50-200	1 (3.2%)	1 (11.1%)
CD4 201-350	1 (3.2%)	2 (22.2%)
CD4 >350	29 (93.5%)	3 (33.3%)
Missing CD4 count	3	1
On ART	33 (97.1%)	6 (60%)
HIV-1 RNA <200 copies/mL	30 (96.8%)	4 (44.4%)
Missing HIV-1 RNA	3	1

Table 3: Treatments for mpox	NOT ADMITTED (N=70)	ADMITTED (N=15)
Antibacterials	15 (21.4%)	12 (80%)
Mpox-specific therapy	14 (20%)	14 (93.3%)
Opiate pain control	2 (2.9%)	12 (80%)
None	43 (61.4%)	0%
Mpox specific therapy		
Tecovirimat (Oral)	14 (20%)	14 (93.3%)
Tecovirimat (IV)	0%	4 (26.7%)
Vaccinia Immune Globulin	0%	2 (13.3%)
Cidofovir	0%	2 (13.3%)
Trifluridine eye drops	0%	2 (13.3%)

Acknowledgements

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Table 4: Characteristics of hospitalizations	N=15
REASONS FOR ADMISSION	
Pain control	12 (80%)
Bacterial superinfection	4 (26.7%)
Urethritis	3 (20%)
Need for isolation	2 (13.3%)
Unable to swallow	2 (13.3%)
LENGTH OF STAY	
Median, days (range)	5 (1-48)
SURGICAL CONSULTATION	6 (40%)
TYPE OF SURGICAL SPECIALTY	
Ophthalmology	2 (13.3%)
Urology	2 (13.3%)
Gastroenterology	2 (13.3%)
Plastic surgery	2 (13.3%)
ICU admission	2 (13.3%)
Mean LOS for patients requiring ICU level care (days)	47
Died during hospitalization	2 (13.3%)

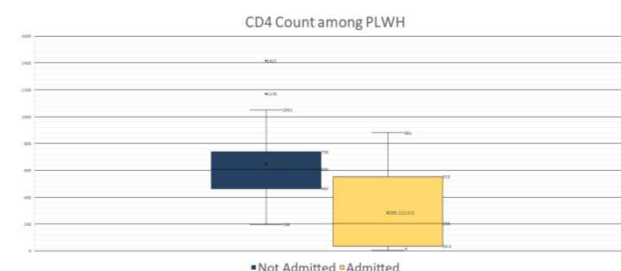


Table 5: Factors associated with hospitalization among PLWH	OR	aOR (95% CI)
MSM	0.87 (0.08-9.43)	0.45 (0.02, 9.86)
CD4 < 350	29 (3.95,212.89)	14.06 (1.09,180.62)
HIV-1 RNA >200	37.5 (3.45,408.06)	7.35 (0.39, 137.6)

Conclusions

- CD4 count < 350 was associated with higher odds of hospitalization
- Achieving viral suppression should be prioritized among those at risk
- Patients hospitalized with mpox often require surgical evaluation and have a high mortality rate