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IMPACT OF MPOX OUTBREAK ON HIV TESTING IN A LARGE INTEGRATED HEALTHCARE SYSTEM

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Background

- Over 70,000 infected with Mpox during global outbreak with US peak July- August 2022[1,2]
- 40- 60% of Mpox cases occurred in People Living with HIV (PLwH)[3].
- Due to high rates of coinfections described in the literature, our healthcare system implemented an Mpox testing protocol with syndemic testing for HIV and other STIs.
- Testing focused at Emergency Departments (EDs) and urgent cares (UCs) as the highest volume STI testing centers at baseline, overlaid on existing ED HIV testing program.
- Occurred at Atrium Health which has 17 EDs and 44 urgent cares across the Charlotte region, and with 3800 PLwH under care.
- Our healthcare system observed high rates of co-infection in those diagnosed with Mpox.
  - 58% had known HIV
  - 24% diagnosed with new syphilis infection

Objectives

- Compare rates of HIV testing and diagnosis before and during the 2022 Mpox outbreak in a large, integrated healthcare system

Methods

Design and Patient Selection

- IRB-approved, quasi-experimental cohort study of all patients tested for HIV between July 1, 2021 and October 31, 2022 in a large integrated healthcare system
- EMR query of all patients undergoing HIV testing and chart review patients newly diagnosed

Inclusion Criteria

- Laboratory test (4th generation assay) for HIV

Exclusion Criteria

- Prior known diagnosis of HIV

Outcomes

- Rates of HIV testing per 1000 patient encounters by month
- Number of new HIV diagnosis by month

Statistical Analysis

- Nominal variables: Chi-square test

Interventions

- During Mpox outbreak EMR protocol built to encourage HIV testing

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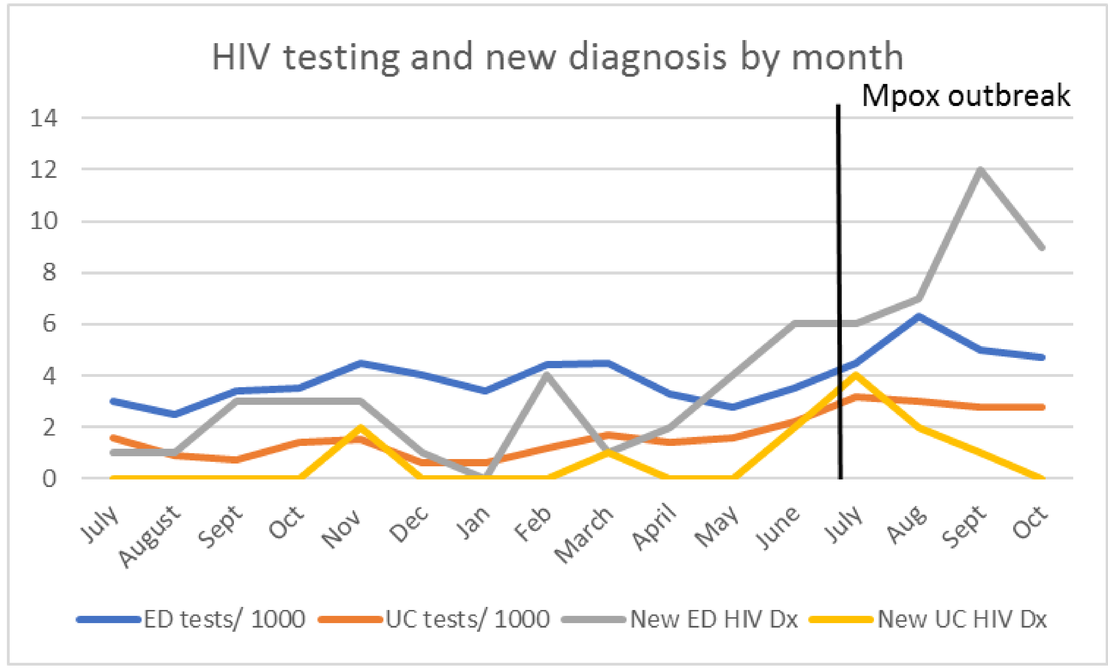
Results



Analysis of Mpox Epidemic Impact on HIV Testing Rates and HIV Diagnosis by Testing Location

	Pre-Mpox (July 2021 – June 2022)	Mpox Outbreak (July 2022 - Oct 2022)
ED HIV tests / 1000 encounters per month	3.6	4.8
ED new HIV diagnosis per month	2	8
Urgent care HIV tests/ 1000 encounters per month	1.3	2.9
Urgent care new HIV diagnosis per month	<1	2
Total HIV tests / 1000 encounters per month	2.3	3.8*
Total new HIV diagnosis	1.4	3.9*

*p<.05

Characteristics of newly diagnosed PLwH during Mpox outbreak (July 1 – Oct 31, 2022) whether tested for not tested for Mpox

	Mpox Tested (n=27)	Not Tested (n=14)	Total (n=41)
Age (mean years [range])	32 [23 – 49]	38 [20 – 70]	34 [20 – 70]
Race/ Ethnicity			
African American	24 (89%)	11 (79%)	35 (85%)
White	2 (7%)	2 (14%)	4 (10%)
Native American	1 (4%)	1 (7%)	2 (5%)
Hispanic	1 (4%)	0	1 (2%)
Gender			
Male	26 (96%)	10 (71%)	36 (88%)
Transgender female	1 (4%)	0	1 (2%)
Female	0	4 (29%)	4 (10%)
Symptoms at testing			
Fever	17 (63%)	2 (14%)	17 (41%)
Rash	11 (41%)	0	13 (32%)
STI related	26 (92%)	7 (50%)	22 (80%)
Mpox infection	17 (63%)	0	17 (41%)
Syphilis coinfection (if tested)	19 (70%)	1 (7%)	26 (63%)
HIV parameters at diagnosis			
CD4 count (mean mm3 [range])	540 [11 – 1148]	365 [157-718]	484 [11-1148]
CD4 count <200 mm3	2 of 15 (13%)	3 of 7 (43%)	5 of 22 (23%)
HIV viral load >100,000 copies/ mL	5 of 23 (22%)	3 of 10 (30%)	8 of 33 (24%)

Discussion

- We saw a statistically significant increase in HIV testing and new diagnosis of HIV during Mpox outbreak
- 27 of 41 newly diagnosed PLwH had testing sent concomitant with Mpox testing
- High rates of fever, rash, and syphilis were seen in those with a new diagnosis of HIV who were tested for Mpox.
- Mpox outbreak raised awareness for HIV testing.
- Future plans:
  - Continue to educate ED and urgent providers on the need and opportunities for HIV testing.
  - Encourage syndemic testing for all STIs.

References

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Disclosures

No authors have no relevant affiliations or financial involvement with any organization or entity with a financial interest in or financial conflict with the subject matter or this presentation