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BACKGROUND

- Sociodemographic and comorbidities data among those hospitalized for mpox are limited.
- We compared demographic characteristics, highlighting socioeconomic disparities and clinical characteristics, including HIV infection, among persons with mpox who were and were not hospitalized in California.

METHODS

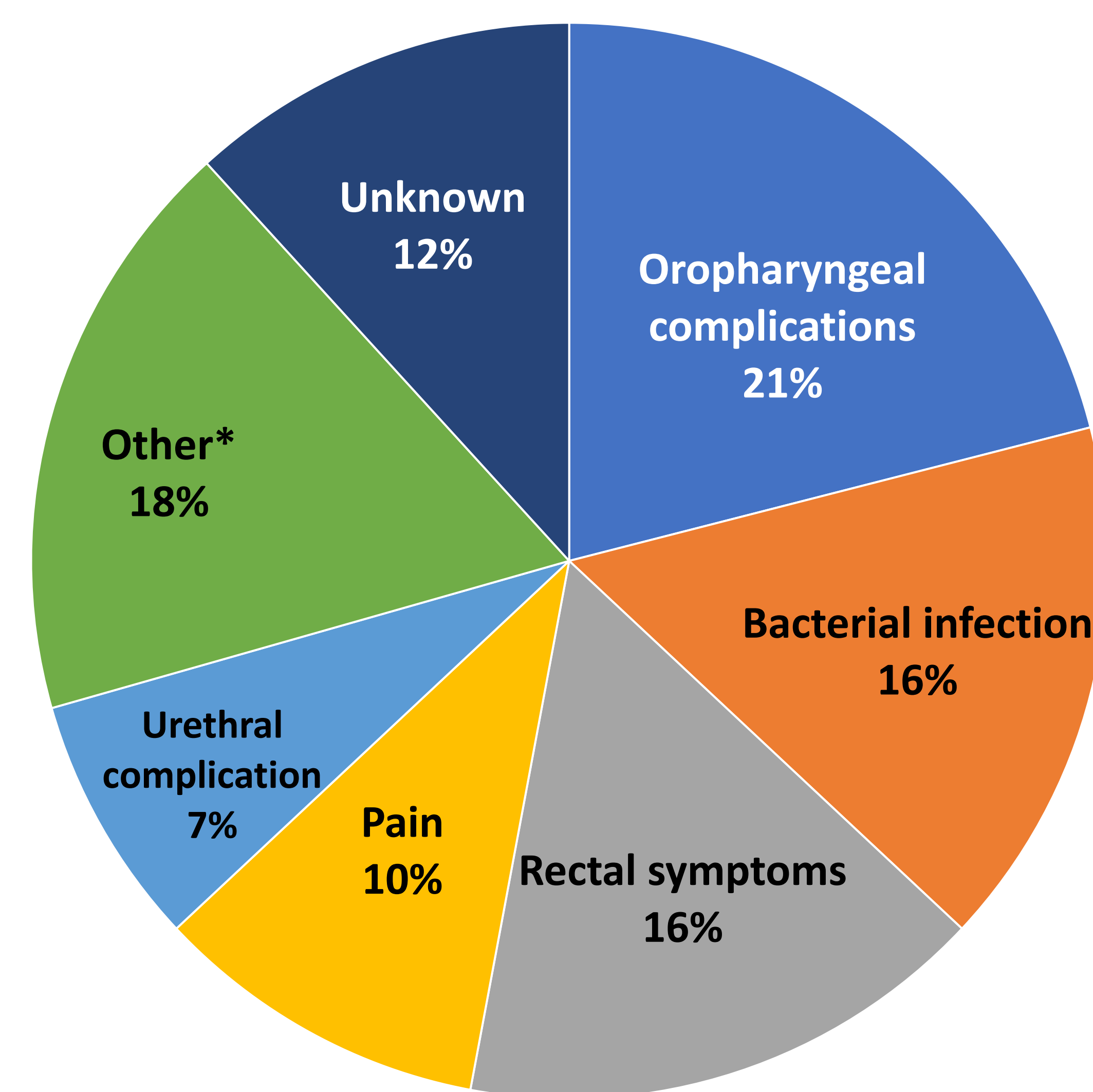
- Mpox cases reported in California's state reporting system from May 17 through September 8, 2022 were included.
- Census tracts of residence were matched to the California Healthy Places Index (HPI). HPI scores are divided into quartiles, with the lowest quartile representing communities with the fewest opportunities to lead healthy lives.
- Fisher's exact tests and Wilcoxon rank sum tests were used to compare groups.

RESULTS

- Of the 4304 mpox cases, 1063 (24.7%) were excluded due to missing hospitalization status. Of 3241 included mpox cases, 119(4%) were hospitalized.
- Among those with HIV (1317 [41%]), 68 (5%) were hospitalized; 51 (3%) without HIV were hospitalized ($p<0.001$).
- Hospitalization was commonly for oropharyngeal (25 [21%]) or rectal symptoms (19 [16%]), and bacterial infections (19 [16%]).
- Among those with HIV, more hospitalized compared to non-hospitalized persons:
 - Lived in the lowest HPI quartile (26 [42%] versus 279 [23%], $p=0.01$).
 - Had CD4 < 200 cells/uL (9 [14%] versus 46 [4%], $p=0.002$) or viral load ≥ 200 copies/mL (27 [42%] versus 121 [9%], $p<0.001$).
- For those hospitalized and living with HIV, 13 (36.1%) with non-suppressed viral loads and 4 (50%) with CD4<200 cells/uL lived in the lowest HPI quartile.

Hospitalization for mpox among people living with HIV was associated with living in communities with the fewest opportunities to lead healthy lives, an unsuppressed viral load, and a low CD4 cell count.

Figure 1: Reasons for hospitalization among persons hospitalized for mpox in California from May 17, 2022–September 8, 2022 (N=119)



*Other: Observation, pneumonia, myocarditis, transverse myelitis, lymphadenopathy, dehydration.

Figure 2: HPI Quartiles of hospitalized and non-hospitalized persons with HIV and mpox in California (N=1317)

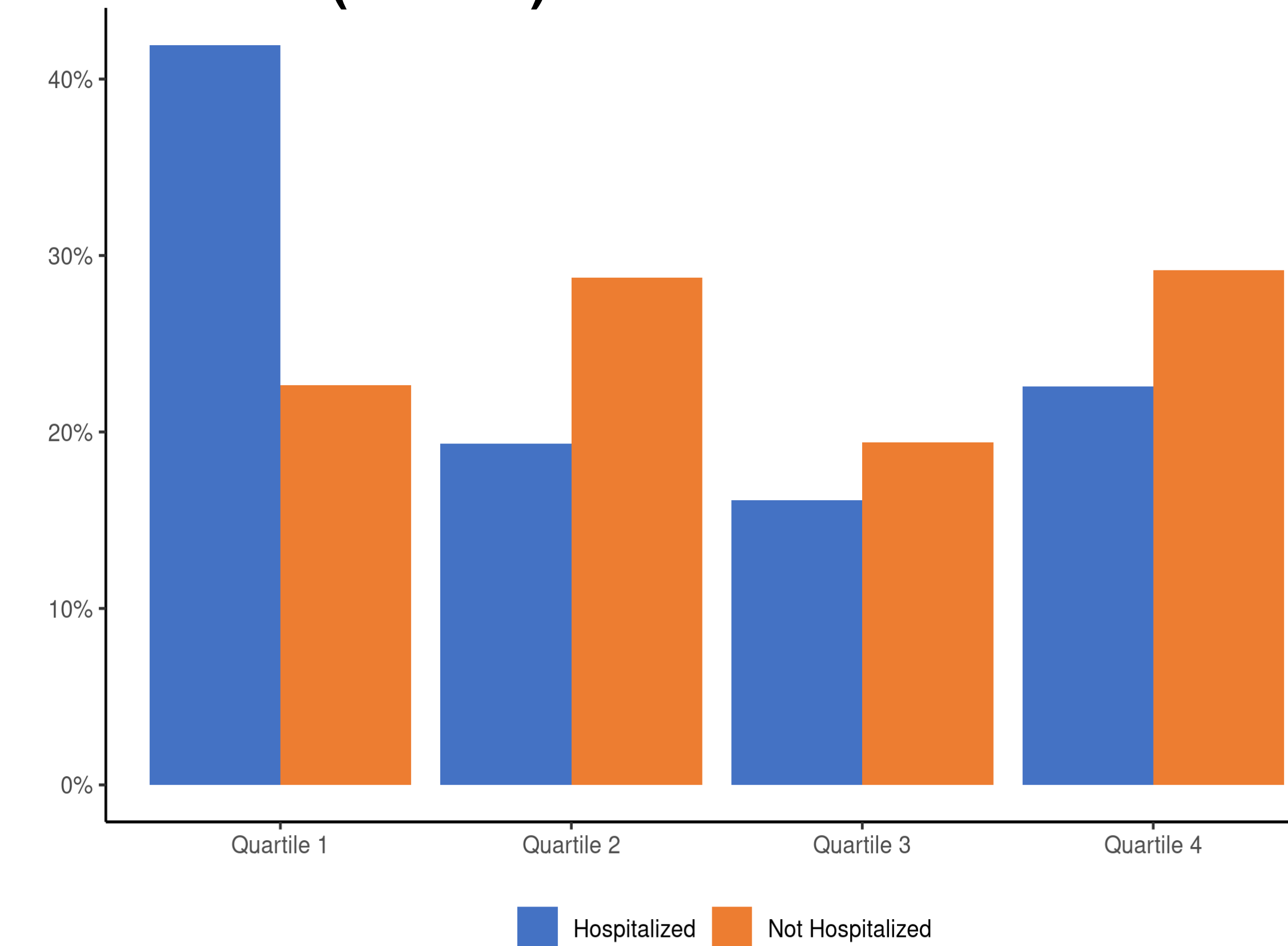
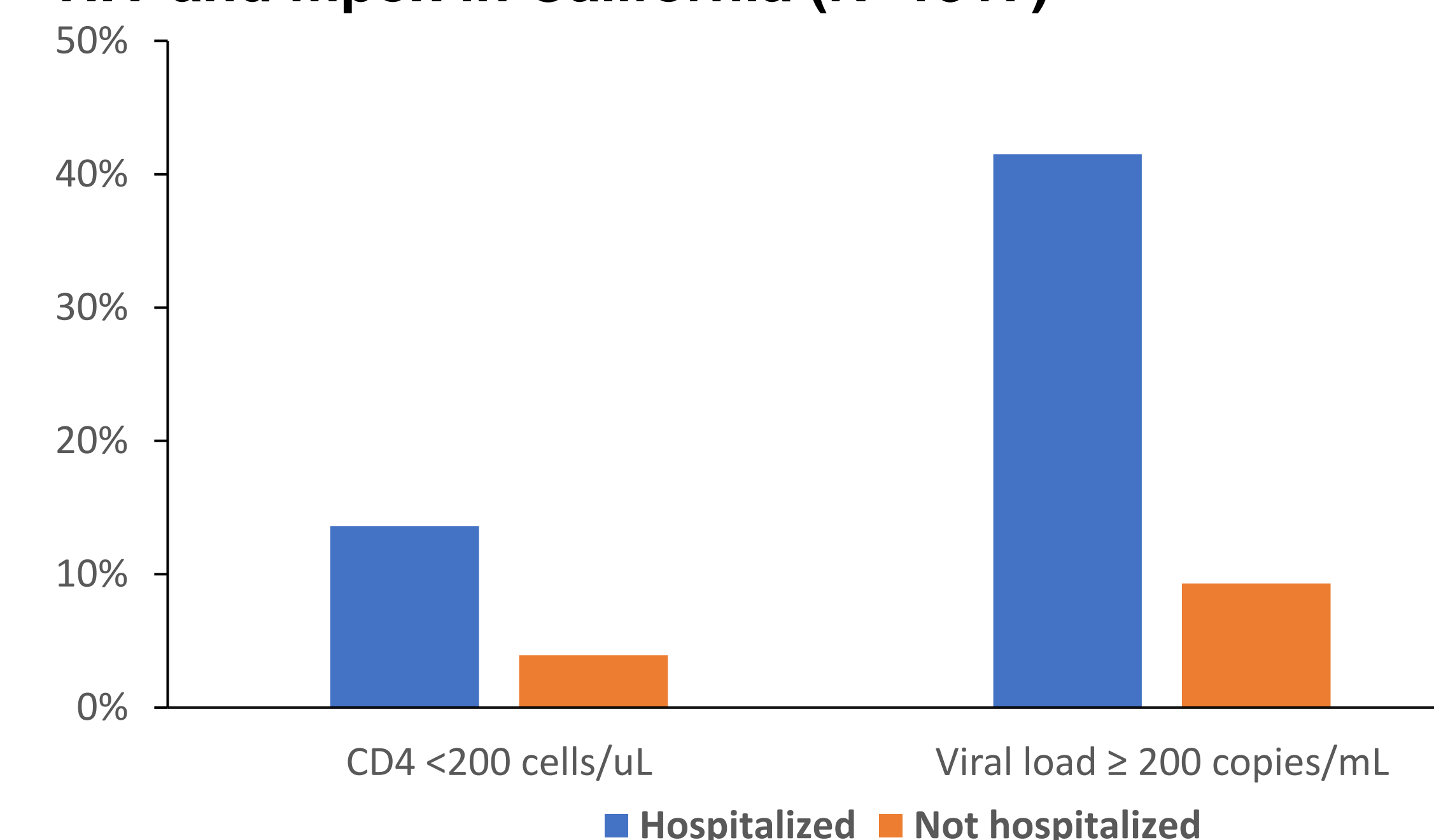


Figure 3: CD4 count and Viral load among hospitalized and non-hospitalized persons with HIV and mpox in California (N=1317)



- Among those without HIV, more hospitalized compared to non-hospitalized persons had diabetes (3 [6%] versus 31 [2%], $p<0.001$) or exfoliative skin conditions (5 [10%] versus 59 [3%], $p<0.001$).
- More hospitalized compared to non-hospitalized persons received tecovirimat ($p<0.001$). Hospitalized persons with HIV received tecovirimat a median of 9 days after symptom onset compared to 6 days among non-hospitalized persons ($p=0.20$).

Table 1: Characteristics of persons with mpox in California from May 17th 2022- September 8th 2022 (N=3241)

	With HIV			Without HIV		
	Hospitalized N(%)	Not Hospitalized N(%)	P	Hospitalized N(%)	Not Hospitalized N(%)	P
Total	68(5.2%)	1249(94.8%)		51(2.7%)	1873 (97.3%)	
Age (Median [IQR])	39(33-46)	38(32-46)	0.30	34(29-41)	34(29-41)	0.93
Diabetes	0	14(1.1%)	0.60	3(5.9%)	31(1.7%)	<0.001
Exfoliative skin condition	3(4.4%)	24(1.9%)	0.12	5(9.8%)	59(3.2%)	<0.001
Received Tpoxx	35(59.3%)	219(36.1%)	<0.001	22(51.2%)	257(25.4%)	<0.001
Missing	9(13.2%)	642(51.4%)		8(15.7%)	860(45.9%)	
Time from symptom onset to Tpoxx	9(6-9) days	6(4-10) days	0.20	7(4-10) days	7(5-10) days	0.67
Missing	20(29.4%)	23(1.8%)		9(17.6%)	33(1.8%)	
Jynneos receipt	4(5.9%)	115(9.2%)	0.51	5(9.8%)	184(9.8%)	1

CONCLUSIONS

- Hospitalization for mpox among people living with HIV was associated with uncontrolled HIV and living in communities with fewer opportunities to lead healthy lives.
- Hospitalization for mpox among persons without HIV was associated with diabetes or exfoliative skin disorders.
- Vaccination and rapid access to testing and treatment should be prioritized in these groups.

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