Conclusion. Based on our results, differences in SDOH, including economic stability, neighborhood and built environment, social and community context, as well as healthcare access and quality, have observable effects on COVID-19 patient LOS in the hospital.

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464. Structural Vulnerability among Patients with HIV and SARS-CoV-2 Coinfection: Descriptive Case Series from the U.S. Midwest

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Session: P-22. COVID-19 Social Determinants of Health

Background. It is well known that the HIV epidemic and COVID-19 pandemic have both disproportionately harmed marginalized minority and immigrant communities in the United States. The risk factors associated with disease incidence and outcomes reaffirm that *structural vulnerabilities*—sociopolitically imposed risk factors like discrimination, legal status, poverty, and beyond which impact a patient's opportunity to achieve optimal health—play a key role in facilitating the inequitable harms of COVID-19 and HIV alike. This study explores the role of structural forces in increasing the risk of SARS-CoV-2 coinfection among people with HIV (PWH).

Methods. We performed a retrospective chart review of PWH receiving care at the University of Nebraska Medical Center HIV clinic in Omaha, Nebraska, to collect patient demographics, comorbidities, HIV outcomes, and COVID-19 outcomes for 37 patients with HIV and SARS-CoV-2 coinfection as of August 27, 2020. As a comparison group, we obtained demographic data from a registry of all patients seen at the HIV clinic. We used R Statistical Software to perform descriptive statistical analysis.

Results. Relative to our overall HIV clinic population, over twice as many Hispanic patients (35.1% vs. 16.0%), three times as many undocumented patients (13.5% vs. 4.2%), and four times as many refugee patients (16.2% vs. 4.0%) had COVID-19. The majority (67.6%) of coinfected patients reported working in "essential" jobs during the pandemic. Thirty-four of the 37 people with HIV and COVID-19 (PWHC) had at least one comorbidity, including increased BMI (83.7%), hypertension (64.9%), or hyperlipidemia (48.6%). All 37 PWHC remained alive as of October 4, 2020.

Table 1. Demographics and HIV Disease Progression of People with HIV and SARS-CoV-2 Coinfection vs. Overall HIV Clinic Registry

	Patients with HIV/SARS-CoV-2 Coinfection (N=37)	HIV Registry (N=1128)
Age (years)		
Mean (SD)	46.3 (12.3)	46.7 (12.6)
Median [Min, Q1, Q3, Max]	47 [23, 40, 56, 73]	48 [3, 37, 56, 85]
Gender	n (%)	n (%)
Cisgender male	28 (75.7)	849 (75.3)
Cisgender female	9 (24.3)	260 (23.0)
Transgender[a]	0 (0)	19 (1.7)
Race		
White	24 (64.9)	696 (61.7)
Black	12 (32.4)	344 (30.5)
Asian	1 (2.7)	29 (2.6)
Other[b]	0 (0)	56 (5.0)
Missing	0 (0)	3 (0.3)
Ethnicity		
Not Hispanic or Latinx	24 (64.9)	946 (83.9)
Hispanic or Latinx	13 (35.1)	180 (16.0)
Missing	0 (0)	2 (0.2)
Legal status		
Refugee	6 (16.2)	45 (4.0)
Undocumented	5 (13.5)	47 (4.2)
Asylee	0 (0)	6 (0.5)
Other	4 (10.8)	42 (3.7)
U.S. Citizen or Permanent Resident	22 (59.5)	936 (83.9)
Missing	0 (0)	54 (4.8)

Demographics and HIV Disease Progression of People with HIV and SARS-CoV-2 Coinfection vs. Overall HIV Clinic Registry

Income (percent of federal poverty level)		
<100%	8 (21.6)	372 (33.0)
100-200%	13 (35.1)	267 (23.7)
201-300%	9 (24.3)	201 (17.8)
301-400%	6 (16.2)	93 (8.2)
>400%	1 (2.7)	34 (3.0)
Missing	0 (0)	161 (14.3)
Housing status		
Stable/permanent	37 (100)	1043 (92.5)
Non-permanent housing	0 (0)	76 (6.7)
Incarcerated	0 (0)	4 (0.4)
Missing	0 (0)	5 (0.4)
Primary insurance		
Private	24 (64.9)	646 (57.3)
Medicare	7 (18.9)	202 (17.9)
Medicaid	3 (8.1)	122 (10.8)
Uninsured	3 (8.1)	152 (13.5)
Other plan, not listed	0 (0)	2 (0.2)
Missing	0 (0)	4 (0.4)
Viral suppression (<50 copies/mL) at most recent HIV clinic visit		
Yes	36 (97.3)	849 (75.3)
No	1 (2.7)	166 (14.7)
Missing	0 (0)	113 (10.0)
History of AIDS		
Yes	16 (43.2)	393 (34.8)
No	21 (56.8)	735 (65.2)

[a]Gender identities within the transgender spectrum were combined to maintain patient anonymity.
[b]Includes American Indian and Alaska Native, Native Hawaiian or Other Pacific Islander.
Abbreviations: AIDS, acquired immunodeficiency syndrome; HIV, human immunodeficiency virus; SARS-CoV-2, severe acute respiratory syndrome coronavirus 2.

Demographics and HIV Disease Progression of People with HIV and SARS-CoV-2 Coinfection vs. Overall HIV Clinic Registry (continued)

Table 2. Comorbidities and Outcomes of Patients with HIV and SARS-CoV-2 Coinfection

	Patients with HIV/SARS-CoV-2 Coinfection (N=37)
BMI category (kg/m²)	n (%)
Normal BMI (18.5-24.9)	5 (13.5)
Overweight BMI (25.0-29.9)	17 (45.9)
Obese BMI (30.0-39.9)	13 (35.1)
Severely obese BMI (>40)	1 (2.7)
Missing	1 (2.7)
Diabetes mellitus	
None	22 (59.5)
Prediabetes	9 (24.3)
Type 2 diabetes mellitus	6 (16.2)
Hypertension	
Yes	24 (64.9)
No	13 (35.1)
Hyperlipidemia	
Yes	18 (48.6)
No	19 (51.4)
Maximum level of COVID-19 care required	
Outpatient	34 (91.9)
Inpatient[a]	2 (5.4)
Intensive care	0 (0.0)
Not on file	1 (2.7)

Footnotes:
[a]One inpatient admission was for chest pain rule-out, and the other was for seizures. Both patients were tested routinely for SARS-CoV-2 upon admission and resulted SARS-CoV-2-positive.
Abbreviations: AIDS, acquired immunodeficiency syndrome; HIV, human immunodeficiency virus; SARS-CoV-2, severe acute respiratory syndrome coronavirus 2; BMI, body mass index; COVID-19, coronavirus disease 2019.

Conclusion. The disproportionate burden of SARS-CoV-2 coinfection on Hispanic, undocumented, and refugee PWH may be a product of structural vulnerabilities contributing to greater risk of exposure. Although all 37 PWHC had

well-controlled HIV and relatively mild COVID-19 courses, the broader theme of disproportionate COVID-19 incidence among vulnerable sub-populations of people with HIV reaffirms the importance of structural interventions to mitigate current and downstream harms.

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465. Mental Health Treatment Disparities During the COVID-19 Pandemic
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Session: P-22. COVID-19 Social Determinants of Health

Background. The COVID-19 pandemic has been associated with a decline in mental health status in the US, as well as reduced ability to seek mental health treatment. This study analyzed undertreatment of mental health during the pandemic to identify possible disparities and assess the need for interventions.

Methods. Data were collected from Wave 3 (January 6-February 15, 2021) of the US Census COVID-19 Household Pulse online survey, designed to measure the ongoing impact of the pandemic. Microdata files were downloaded from the Census website and included N=185,201 respondents. Data was collected in both English and Spanish and consisted of a representative sample of US residents. Data were analyzed using χ^2 tests, with z-tests for more granular between-group comparisons.

Results. When asked if they needed and received therapy due to mental health concerns, 81% of respondents did not need therapy and did not receive it. Some (2%) reported receiving therapy but needing more. However, 9% reported needing therapy but not receiving it. A similar proportion, 9%, reported having received adequate therapy from a mental health professional. Those who needed therapy but did not receive it were more likely than adequately treated respondents to express debilitating worry, anxiety, depression, and lack of interest/pleasure in doing things (all p< .05). These respondents were also more likely (vs. adequately treated respondents) to be younger, lower-income, racial/ethnic minorities, without health insurance, and food-insecure (all p< .05).

Conclusion. Inadequate mental health treatment is a critical challenge, especially in the wake of COVID-19; Just as many respondents reported adequate mental health treatment as did needing additional mental health treatment. Respondents reporting undertreated mental health issues in this study were more likely to be vulnerable populations, many of whom have already been disproportionately impacted by the pandemic. Methods to expand accessible counseling capacity in economically feasible ways to limit these disparities should be further explored.

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466. Symptom Profile of Hospitalized, Adult Patients with COVID-19 – Findings From COVID-Net Database
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Session: P-23. COVID-19 Special populations (e.g. pregnant women, children, immunocompromised, etc)

Background. According to the Center for Disease Control and Prevention (CDC), there is a disproportional number of COVID-19 deaths in hospitalized patients that increases based on age. Among COVID-19 related deaths in hospitalized patients, 8 of 10 patients are age 65 years and older. By looking at the latest data, the objective of this retrospective analysis is to evaluate the symptom profile in patients hospitalized with COVID-19 and determine if certain symptoms are seen more in older patients.

Methods. We performed a retrospective analysis using the COVID-Net database. This database contains information involving COVID-19 laboratory-confirmed hospitalization across 14 states. Medical history, signs, and symptoms at admission were collected by COVID-NET surveillance officers and reported during the period of March 1st to May 31st. For our analysis, we only included adults patients age 18 and above. Further descriptive statistics were stratified by age into two groups: age 18-64, and age ≥ 65.

Results. We identified 60,363 patients age 18 and above with COVID-19 confirmed hospitalizations. Cough, shortness of breath, and fevers/chills were the most common symptoms at respectively 67%, 66%, and 65%. Patients age ≥ 65, when compared to patients age 18-64, were less likely to have cough (56.7% vs 73.8%), shortness of breath (58.1% vs 72.1%), fever/chills (54.7% vs 71.%), dysgeusia (2.3% vs 7%), and anosmia (1.2% vs 6%). The only presentation that was more common in patients age 65+, than in patients 18-64, was altered mental status (26.9% vs 5.2%). Overall inpatient mortality was higher in the age ≥ 65 group (8.9% vs 2%). Among the 2,922 COVID-19 decedents, 75.3% were age ≥65.

Conclusion. Published in April 2020, preliminary data from COVID-Net on approximately 180 patient reported that only 8.2% of patients age ≥ 65 had altered mental status[2]. Since then, our analysis noted that altered mental status is more commonly seen in the age group ≥ 65 than previously reported. The percentage of decedents age ≥ 65 in this analysis is similar to the 74.8% (N= 10,647) reported in a large study that focused specifically on COVID-19-related deaths[3]. Our analysis highlights that altered mental status is a common neurologic manifestation in elderly patients hospitalized with COVID-19.

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467. COVID-19 Infection in Persons Living with HIV in a Network of Community Health Centers in New York

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Session: P-23. COVID-19 Special populations (e.g. pregnant women, children, immunocompromised, etc)

Background. COVID-19 infection amongst persons living with HIV (PLWH) at Federally Qualified Healthcare Centers (FQHC) is not yet well understood. FQHC patients are frequently impoverished and marginalized due to socioeconomic instability and structural inequities. The virus has a wide-ranging clinical presentation, and little is known about how it affects specific populations such as PLWH and whether specific patterns of immunocompromise confer increased risk. Patients in community health centers and those living with HIV are often underrepresented from clinical trials. Patients seen at FQHC's are more likely to be uninsured or living in poverty, or of Black or Latinx racial and ethnic backgrounds. Sun River Health is a not-for-profit, New York State licensed Article 28 Diagnostic & Treatment Center and FQHC. Sun River Health provides HIV primary care and supportive services caring for more than 2,500 PLWH primarily concentrated in 16 sites throughout the region. This study is a retrospective analysis of a vulnerable community at the heart of this pandemic.

Table 1: Demographics of Patients

Characteristic	Total Number of Patients (%)
Total number of Patients	N =122
Age	
Age Range	22 to 86 years
Mean	50 years
Age Distribution by Decades	
20 - 29 years	11 (9.0%)
30 - 39 years	16 (13.1%)
40 - 49 years	31 (25.4%)
50 - 59 years	29 (23.8%)
60 - 69 years	27 (22.1%)
70 - 79 years	7 (5.7%)
80 - 89 years	1 (0.8%)
Gender	
Male	85 (69.7%)
Female	37 (30.3%)
Race	
Black/African American	54 (44.3%)
White	46 (37.7%)
Declined to Specify	18 (14.8%)
Asian	1 (0.8%)
More than one Race	3 (2.5%)
Ethnicity	
Latino/Hispanic	48 (39.3%)
Non-Hispanic	68 (55.7%)
Declined to Specify	6 (4.9%)