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Physician and Society Assignment
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Equitas Health is a nonprofit Community Health Center that provides healthcare and other supportive services to the LGBTQ+ and the HIV positive communities throughout Ohio. Equitas provides primary and specialized medical care, pharmacy, dentistry, mental health services, HIV and STI treatment and prevention, PrEP (pre-exposure prophylaxis for HIV) and PEP (post-exposure prophylaxis for HIV), and care navigation to patients in the community.[1] Through these services, Equitas addresses a number of social determinants of health. Most notably, Equitas provides health coverage and provider availability, social support, and health literacy.

The COVID-19 pandemic greatly affected patients seeking care with Equitas. Equitas has met many of the needs of the community during the COVID-19 pandemic by offering COVID-19 testing and vaccination, and has expanded pharmacy delivery of prescriptions. Support groups and the Name and Gender Change Legal Clinics offered by Equitas were conducted virtually using the Zoom meeting platform. Equitas also began offering Telehealth services during the COVID-19 pandemic. The Telehealth option opened access to many patients who may otherwise be unable to go to appointments in person. However, patients without access to wireless internet at home had difficulty receiving the Telehealth care that so many patients relied on during the pandemic, as using public free internet during appointments can lead to privacy issues. The COVID-19 pandemic has also negatively impacted the implementation of the Ending the HIV Epidemic Project, a national program of which Equitas is a part. There has been a decrease in easily accessible social support, access to PrEP and PEP, and access to HIV testing.[2] As students working on a service-learning project with Equitas during the COVID-19 pandemic, we have learned to adapt to communication barriers put in place by virtual meetings and schedule limitations of Equitas's busy staff. We have had the unique opportunity to speak directly with patients on their experience with isolation during the COVID-19 pandemic as well, and from that experience we better understand the importance of provider availability and social support in the wellbeing of our future patients.

The Hamilton County Public Health Division of Epidemiology and Assessment publishes quarterly reports describing trends in HIV diagnoses throughout Southwest Ohio. To be included as a confirmed case, symptomatic and asymptomatic patients were tested by a disease investigation specialist. However, some HIV cases were unable to be located for follow-up with partner services, which may have impacted the total number of cases. Several social factors likely affected case detection, such as transportation availability, insurance status, homelessness, unemployment, and the stigma surrounding a potential HIV exposure and/or diagnosis. The restrictions imposed by the COVID-19 pandemic lockdowns certainly influenced case identification and thus reporting. This may be reflected in the stark decrease in new cases within populations of IV drug users. Specifically, there were 53 confirmed new cases in 2019 versus 16 confirmed cases in 2020. During the height of the pandemic in 2020, those already

facing barriers to care likely were met with additional difficulty accessing services where a positive HIV diagnosis could be made.

In the year prior to the pandemic (2019), the monthly incidence of HIV infections in Hamilton County was 14.6 cases, compared to 11 cases/month in 2020 ($p<0.03$), and 10.6 cases/month in 2021 ($p\leq0.02$). Therefore, when comparing new HIV cases, Hamilton County experienced a statistically significant decrease in HIV cases from 2019 to 2020 and 2019 to 2021. However, the number of cases did not markedly differ during the peak of the pandemic ($p=0.75$), such as between years 2020 and 2021. This means the swing in HIV cases occurred most dramatically during the transition into the pandemic. The most likely explanation for this trend is that HIV testing services and facilities were less available to at-risk populations due to temporary closures, restricted operating hours, and limited personnel.

Table 3. Hamilton County New HIV Infections		
Month	**New Cases of HIV 2019**	**New Cases of HIV 2020**
January	11	13
February	13	12
March	19	9
April	22	8
May	8	7
June	11	13
July	21	11
August	15	13
September	10	16
October	17	11
November	13	7
December	15	12
Total	**175**	**132**

Table 3. Hamilton County New HIV Infections		
Month	**New Cases of HIV 2020**	**New Cases of HIV 2021**
January	13	7
February	12	18
March	9	10
April	8	12
May	7	9
June	13	12
July	11	5
August	13	10
September	16	15
October	11	11
November	7	10
December	12	8
Total	**132**	**127**

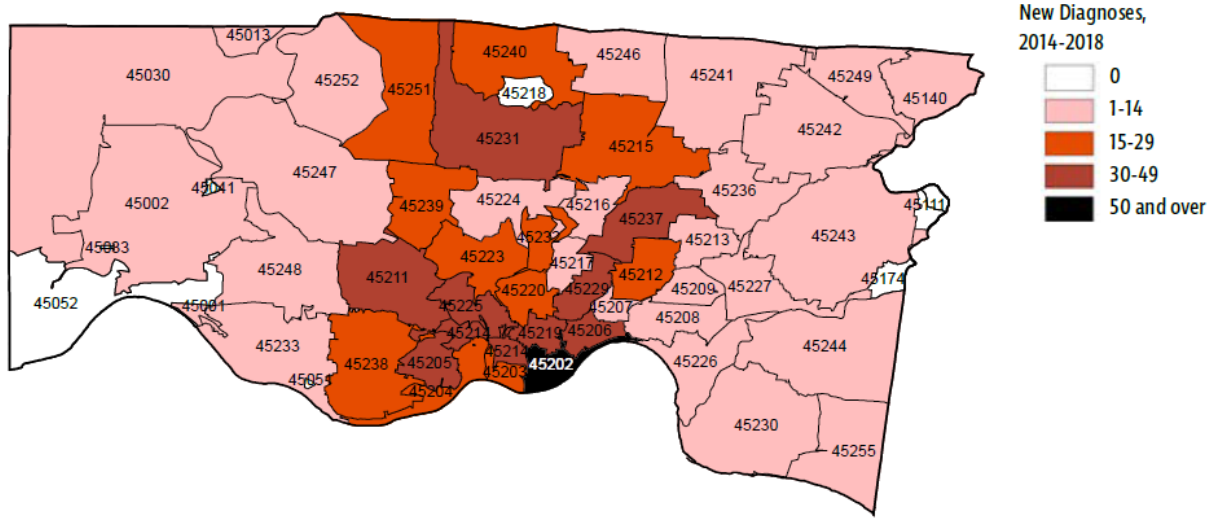
Table 4. Hamilton County HIV Demographics				
	Jan - Dec 2019		Jan - Jun 2020	
	#	%	#	%
Race				
Black	86	49.1%	73	55.3%
White	78	44.6%	44	33.3%
Other	11	6.3%	15	11.4%
Sex				
Male	119	68.0%	101	76.5%
Female	56	32.0%	31	23.5%
Risk Groups				
MSM	55	31.4%	50	37.9%
HRH	81	46.3%	38	28.8%
IDU	53	30.3%	16	12.1%

Table 4. Hamilton County HIV Demographics				
	Jan - Dec 2020		Jan - Dec 2021	
	#	%	#	%
Race				
Black	73	55.3%	75	59.1%
White	44	33.3%	33	26.0%
Other	15	11.4%	19	15.0%
Sex				
Male	101	76.5%	95	74.8%
Female	31	23.5%	32	25.2%
Risk Groups				
MSM	50	37.9%	48	37.8%
HRH	38	28.8%	29	22.8%
IDU	16	12.1%	10	7.9%

The number of confirmed HIV cases in Black and Other racial groups has seen a consistent increase from 2019 to 2021.

Hamilton County was one of three Ohio counties identified by the Center for Disease Control and Prevention (CDC) to receive funding to implement the End the HIV Epidemic (EHE) pillars of Diagnose, Treat, Prevent, and Respond with the goal of reducing new HIV infections by 90% in the next 10 years. Under this public health goal, we would like to highlight two issues: HIV criminalization and improving both HIV prevention/care and discharge to community HIV care for the prison population.

Reported new diagnoses of HIV infection by ZIP code, Hamilton County, 2014-2018



Recent statistics show that in the United States 664 per 100,000 citizens are incarcerated which totals close to 2 million people.[6] Ohio displays a similar incarceration rate of 659 per 100,000 citizens totalling 78,000. These numbers are staggering when compared to similarly developed nations such as the United Kingdom (129 per 100,000), Portugal (111 per

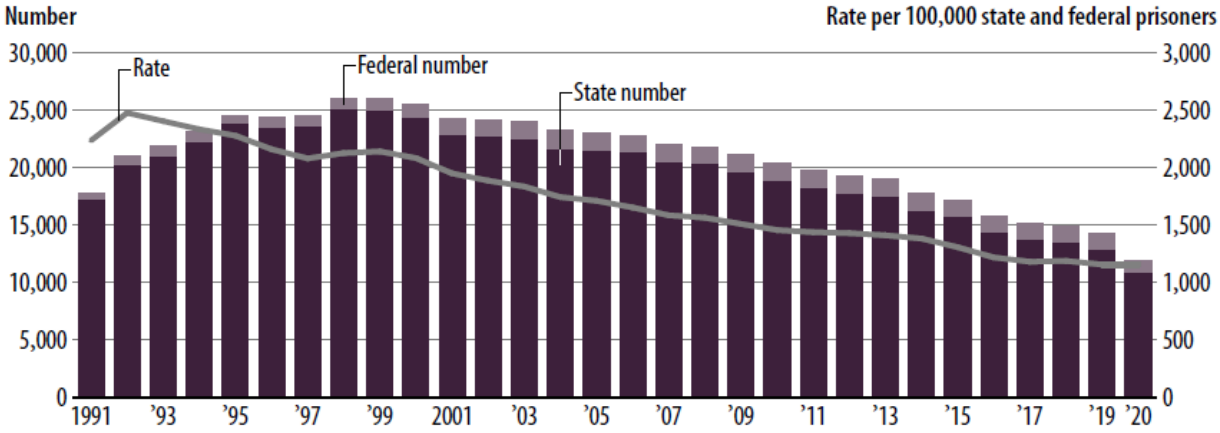
100,000), and Canada (104 per 100,000).[7] Furthermore, it is estimated that a total of 100,000 inmates are being held in solitary confinement on any given day in the United States, a greater number than the number prisoners in the UK in total.[7] While these rates and comparisons are highly concerning, they do not address the enormous churn of people into and out of jails. Over 10 million people in the United States, and 150,000 in Ohio, are detained in jails every year prior to being processed through the criminal justice system. Many of these individuals have the means to make bail, but this still leaves a large number of disadvantaged people locked up while they await their trial. These numbers paint a story showing the mass incarceration of our populace, a topic important to discuss not only from a civil rights perspective, but a public health one as well.

In the landmark 1976 case, Estelle vs. Gamble, the Supreme Court deemed that lack of access to healthcare in the prison system unconstitutional by the Eighth Amendment's prohibition of cruel and unusual punishment. Thus, the prison population is uniquely defined by law as the only population with a constitutional right to healthcare.

From 2019-2020 data, the national rate of people living with HIV in state and federal prisons is approximately 1.15%[4], which is mirrored in Ohio. However, this is likely an underestimation, as people living with HIV or who were exposed to HIV while incarcerated fear seeking testing due to the consequences of stigma, potential segregation/quarantine, denial of visiting privileges, and denial of work assignments, which can impact work-release opportunities. Furthermore, the prison population may not have had the appropriate counseling to understand their risk of transmission and the lack of symptoms during the initial latent HIV infection phase. From 2016 data, Ohio has mandatory HIV testing for state and federal prisoners during the intake process, but this is not paired with consent practices. The following practices can be implemented to assist in the appropriate counseling for HIV testing both at entry and during incarceration:

1) Medical consent practices, which help build patient-healthcare provider trust and should be facilitated in privacy with the goal of maintaining medical confidentiality
2) Routine offering of evidence-based medications that can both prevent HIV transmission before and after exposure (Pre-exposure Prophylaxis or PrEP and Post-exposure Prophylaxis or PEP)
3) HIV education that meets people at their literacy level, explaining the modes of HIV infection, high risk and risk reducing practices, the phases of HIV infection, and HIV treatment, including the ability to live a healthy life with medication adherence and viral suppression

Persons living with HIV and rate of HIV per 100,000 persons in the custody of state and federal correctional authorities, yearend 1991–2020



Note: Between one and four jurisdictions did not report the number of persons living with HIV in each year of the 30-year period from 1991 to 2020. Data were imputed for those jurisdictions not reporting data using various methods; therefore, numbers presented are estimates. See *Methodology*. See appendix table 1 for estimates.

Source: Bureau of Justice Statistics, National Prisoner Statistics, 1991–2020.

Additionally, decreases in the number of people living with HIV in prison have been attributed to declines in the overall prison population. Therefore, it is critical to ensure appropriate linkage to community HIV care and a continuum of care following release. In Hamilton County, the Community Linkage Coordination program (CLC) referred 62 people living with HIV to a Ryan White Part B-funded agency in the community prior to their release in 2018. Caracole, a Ryan-White funded agency, is the main provider of HIV case management services in Hamilton County. From 2016 data, Ohio offers HIV testing during release planning only by prisoner request.[5] The following practices can be implemented to assist in the linkage and continuum of HIV care following release:

1) Routine offering of HIV testing and counseling to all during release planning
2) Increasing funding for and the capacity of HIV community linkage coordination programs

Beyond the need for appropriate screening measures during the prison intake process and connecting patients to care upon release, it is equally critical that individuals receive adequate care while incarcerated. Inconsistent and missed doses of many HIV medications can lead to drug resistance[8], reducing the quality of life of patients and making further treatment more difficult even upon release. Providing consistent care and pharmaceuticals within the prison system will both improve patient outcomes and reduce the overall community burden, thus reducing costs in the long term. To this end, the following actions should be considered in improving HIV care for incarcerated individuals:

1) Expanding the scope of on-site pharmacies so that critical medications can be delivered efficiently and ongoing prescriptions can be maintained.
2) Adopting electronic ordering systems in place of paper record keeping do reduce loss of or delays in fulfilling prescription orders.

3) Expand access to licensed medical professionals on-site so that the obligation to meet the community standard of care is upheld.

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