

Leveraging Data to Identify Key Populations with Health Disparities Related to Persistent Viremia

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Organizational Background

- ▶ The Institute for Advanced Medicine (IAM) is comprised of five HIV practices across Manhattan:
 - Morningside Clinic at Mount Sinai St. Luke's Hospital in West Harlem
 - Samuels Clinic at Mount Sinai West Hospital in Columbus Circle
 - Jack Martin Clinic at Mount Sinai Hospital in East Harlem
 - Comprehensive Health Clinic in Chelsea
 - Peter Krueger Clinic at Mount Sinai Beth Israel in Union Square

- ▶ Represents the largest HIV primary care practice in New York and provides HIV primary care to over 10,000 people with HIV (PWH)

- ▶ The IAM's Quality Management (QM) Program establishes annual goals and uniform measures in order to standardize QI initiatives

Project Background

- ▣ While the IAM's overall viral load suppression rate is consistently high (currently 88% as of November 2018), a significant number of patients are unsuppressed due to the high volume at our clinics
- ▣ A number of studies have shown that disparities exist between populations of PWH with respect to viral load suppression
- ▣ In 2017, a retrospective health disparities analysis was conducted to identify subpopulations of PWH at the IAM who had consistently worse outcomes
 - Chronic viremia (VL \geq 200 copies/mL at two most recent viral loads) was chosen as the variable of interest in order to exclude patients with “blips” in their lab values

Project Objectives

Aim

- Identify populations with significant health disparities in chronic viremia

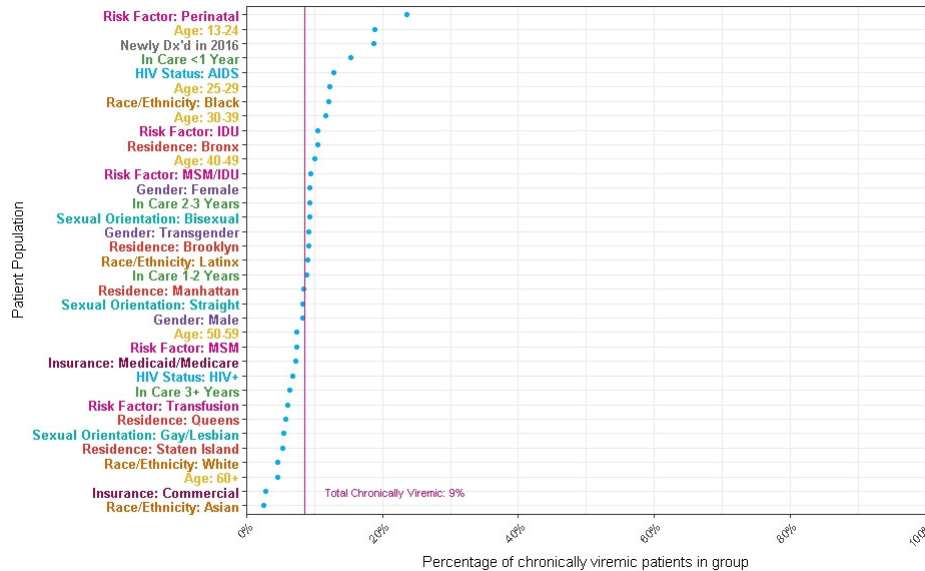
Goal

- Outline a framework for health disparities analysis at the organizational level
- Utilize data to inform targeted, population-specific QI projects and improve viral load suppression rates at the IAM

Methods

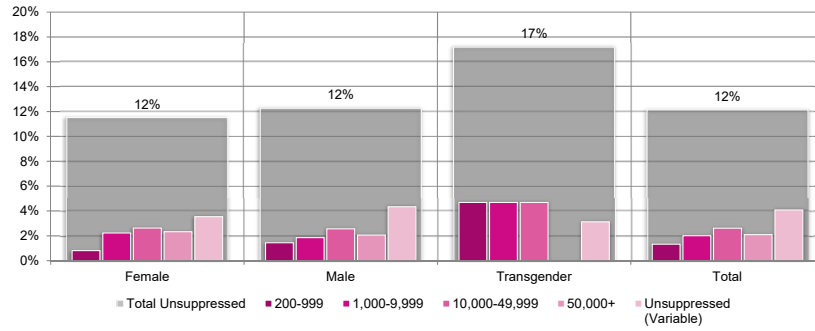
- ▶ **Data Collection:** Data were extracted from Epic, the EMR in use at all IAM clinics
- ▶ **Cohort:** HIV+ patients active in primary care between 1/1/16 and 12/31/16 were selected for analysis
- ▶ **Outcome Variables:** viral load values for the period 1/1/16 through 6/30/17 were included in order to account for the time to suppression for patients new to care at the end of 2016
- ▶ **Demographic Variables:** race, ethnicity, gender, sexual orientation, age, zip code, HIV risk factor, HIV/AIDS status, time in care, enrollment in support services, retention in care indicators, clinical indicators, and comorbidities
- ▶ **Analysis Techniques:** Excel and R were used to compile, analyze, and visualize data using primarily logistic regression

Results Overview – Chronic Viremia Rate by Population



Results: Subpopulations of Black/African American Patients

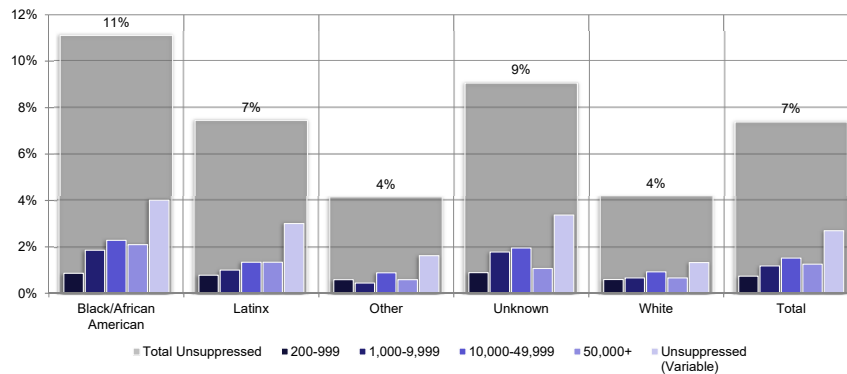
Black/African American Patients with Chronic Viremia (2016 Data)



- ▶ 49% of patients with chronic viremia were Black/African American, while only 34% of IAM patients overall were Black/African American

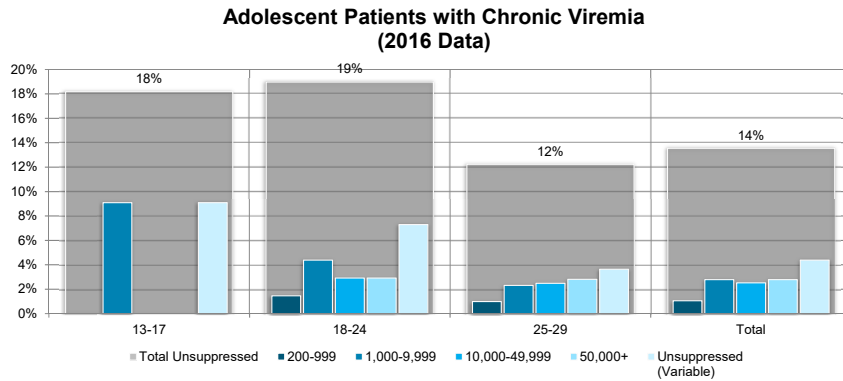
Results: Subpopulations of MSM Patients

MSM Patients with Chronic Viremia (2016 Data)



- ▶ 44% of patients with chronic viremia were known MSM, comparable to the 51% of IAM patients were identified as MSM
- ▶ While the average chronic viremia rate was lower than the IAM average for all MSM, it was higher for Black/African American MSM

Results: Subpopulations of Adolescent Patients



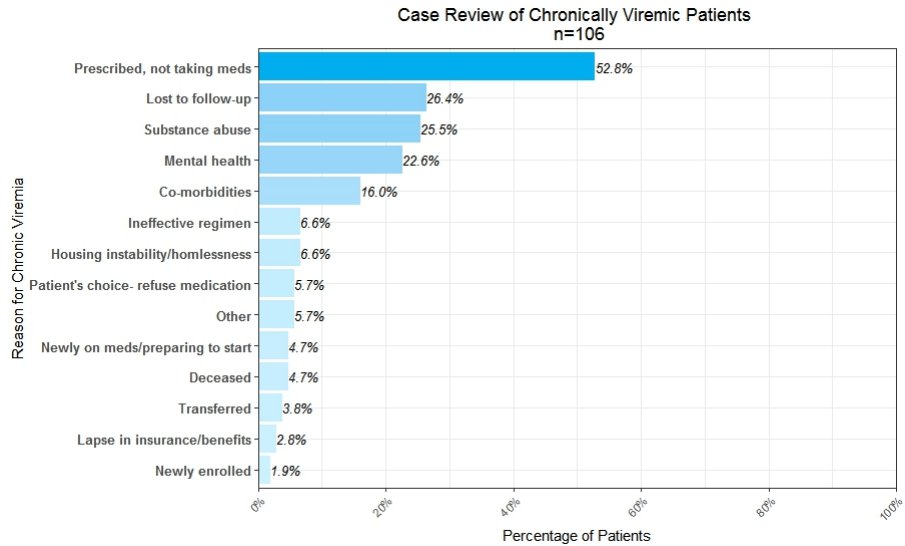
- ▶ 11% of patients with chronic viremia were adolescents, while only 7% of IAM patients overall fell into this age group

Case Study

	Total Patients Seen in 2016	Total Patients Unsuppressed at Any Time 1/1/16-7/1/17		Total Patients Unsuppressed at Most Recent Viral Load 1/1/16-7/1/17		Total Patients Unsuppressed in Both of Two Most Recent Viral Loads 1/1/16-7/1/17	
		#	%	#	%	#	%
Peter Krueger	1,135	336	30%	146	13%	106	9%
IAM	10,202	2583	25%	1255	12%	869	9%

- ▶ The Peter Krueger Clinic (PKC) utilized this data to assess the characteristics of patients with chronic viremia and develop a patient profile beyond the demographics extractable from Epic
- ▶ A detailed case review was performed for the 106 patients found to be chronically viremic in this analysis

Case Study: Findings at PKC



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Case Study: Results at PKC

Viral Suppression Results as of June 2018 for 2016 Cohort of Case Review Patients with Chronic Viremia		
	# of Patients	% of Total
Patients Becoming Virally Suppressed (< 200)	24	23%
<i>Patients with Undetectable Viral Load < 20</i>	15	63%
Patients Not Achieving Suppression (≥ 200)	50	47%
<i>Patients With Viral Load < 2000</i>	6	12%
<i>Patients With Viral Load ≥ 2000</i>	44	88%
Patients Permanently Out of Care (Deceased, Transferred, Lost to Follow Up)	32	30%
Total	106	

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Conclusion

- ▶ This project demonstrates the power of leveraging data to identify key populations in need of specific interventions
- ▶ Consistently worse HIV outcomes disproportionately affect young people and people of color at the IAM
- ▶ The IAM has been using this to tailor QI projects to improve viral load suppression for those most in need of care, and expanding upon the available data using targeted chart review
 - In one clinic, 23% of chronically viremic patients achieved viral load suppression by June of 2018 after identifying and overcoming barriers to treatment success

Acknowledgements

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- ▶ QI Leadership Teams across IAM clinics