Outcomes in 960 individuals with triple infection with HIV, chronic hepatitis B, and chronic hepatitis C

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OPERA® The Longitudinal Cohort

Background

- There are shared risk factors among HIV, hepatitis B (HBV), and hepatitis C (HCV) infections
- Co-infection with these pathogens heightens risk of progression and presents challenges for care and management of all three diseases

OBJECTIVES

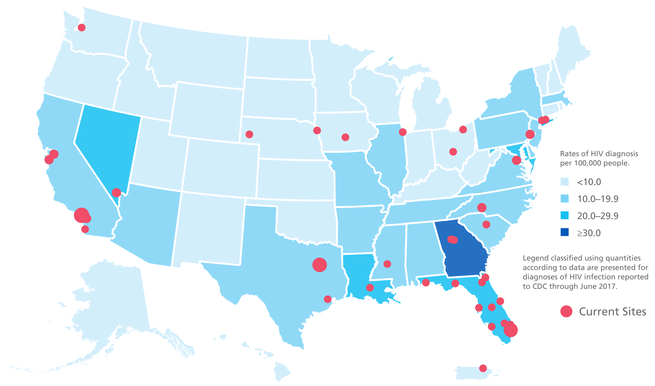
To identify and describe individuals with triple infection of HIV, chronic hepatitis B, and chronic hepatitis C

Methods

Study population

- People living with HIV (PLWH) were identified using the OPERA® cohort (84 clinics in 18 U.S. states/territories) [Figure 1]
- PLWH with a diagnosis of chronic HBV or lab evidence and a diagnosis of chronic HCV or lab evidence were identified as triple infection (HIV/HBV/HCV)
- All PLWH and those with triple infection were followed through their electronic medical records throughout their routine care with an OPERA provider
- Demographic and clinical characteristics were described at last follow up

Figure 1: PLWH at OPERA locations in the United States overlaying CDC HIV incidence estimates



Results

Figure 2. People living with HIV, HBV, or HCV in OPERA as of 10 April 2019

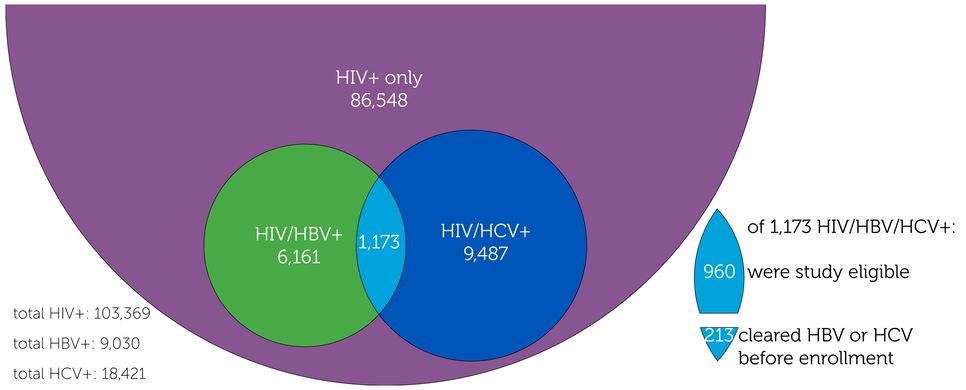


Figure 3. Demographic characteristics of people living with HIV or HIV/HBV/HCV

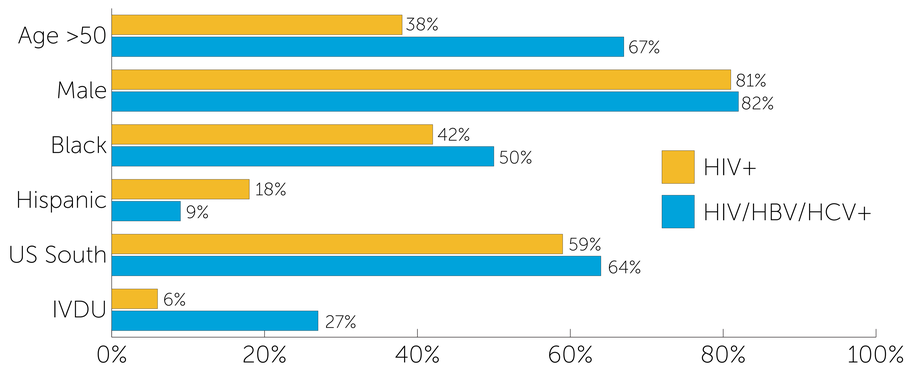


Figure 4. Duration (median [IQR]) in years since last testing among people living with HIV or HIV/HBV/HCV

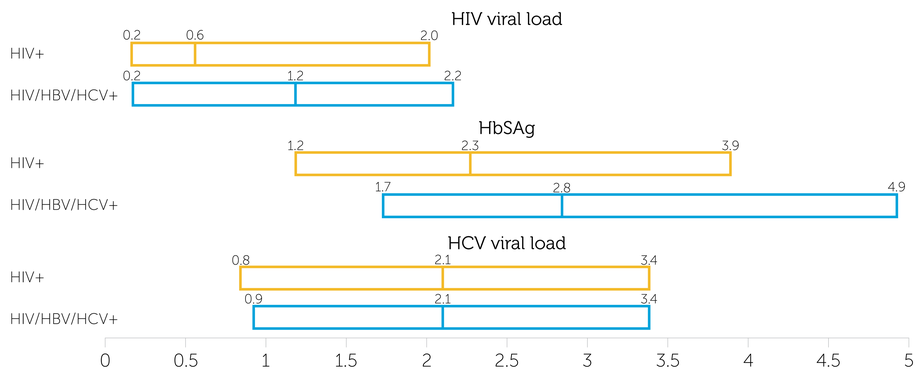


Table 1. Clinical characteristics of people living with HIV or HIV/HBV/HCV at last follow up

Characteristic median (IQR) or %	Total HIV (N=103,369)	HIV/HBV/HCV (N=960)
Duration of HIV Infection (years)	8.1 (3.4, 15.9)	16.8 (9.2, 22.8)
Duration in OPERA care (years)	3.7 (2.1, 7.1)	6.6 (3.6, 12.0)
HIV viral load <50 copies/mL	65.5%	55.1%
HBV viral load <10 IU/mL*	70.5%	55.7%
HCV viral load <615 IU/mL*	69.0%	48.7%
Treated with antiretrovirals	86.7%	88.5%
Visit in the past 24 months	65.3%	57.3%

*among those who were tested

Table 2. Status of people living with HIV or HIV/HBV/HCV as of 10 Apr 2019

Status	Total HIV (N=103,369)	HIV/HBV/HCV (N=960)
In care	62.8%	51.1%
Lost to follow-up	34.7%	42.8%
Dead	2.5%	6.0%

Discussion

- Of 103,369 PLWH followed in OPERA, 5,181 (5.0%) have been diagnosed with chronic HBV, 10,660 (10.3%) have been diagnosed with chronic HCV and 960 (0.9%) have been diagnosed with all three infections after first visit [Figure 2]
- The triple infected tended to be older (median: 54 years of age; interquartile range [IQR]: 47, 60) than all PLWH (median: 45; IQR: 34, 54)
- Demographics differed between the triple-infected (50.0% African American, 8.8% Hispanic, 27.1% self-reported IVDU) and all PLWH (42.2% African American, 18.0% Hispanic, 6.3% self-reported IVDU)
- Both groups were predominantly male; (triple-infected: 82.3%; all PLWH: 81.4%)
- Among those tested for HBV viral load, the triple-infected were much less likely to be undetectable (<10 IU/mL) at last test (55.7%) than all PLWH (70.5%)
- Similarly, among those tested for HCV viral load, the triple-infected were less likely to be undetectable (<615 IU/mL) at last test (48.7%) than all PLWH (69.0%)

KEY FINDINGS

- HIV/HBV/HCV-coinfected individuals were observed to experience increased mortality
- Triple-infected individuals were less likely to achieve or maintain HIV viral suppression at last follow up

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