FACTORS AFFECTING HEPATITIS C VIRUS SEROPOSITIVITY IN THE INNER CITY

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Background:
Analysis of data from NHANES suggests that the large majority of people with chronic Hepatitis C infection were born between 1946-1965, the so-called birth cohort. While NHANES is broadly representative of the healthy US population, it doesn't include subgroups of people with an increased risk of harboring HCV infection.

Methods:
We evaluated the relative effects of sex, race, age in relation to the birth cohort, an admission of any IV drug use, and possession of health insurance on HCV seropositivity in 2,762 inner city participants HCV testing in non-medical settings. Data were analyzed by logistic regression.

Results:
Overall, 9.2% of the participants were seropositive for HCV, including 4.8% of the women and 14.8% of the men. Of the 431 subjects (15.6%) admitting to IV drug use, 29.5% were seropositive for HCV. In contrast, of the 2,331 subjects without a history of IV drug use, only 6.0% were seropositive for HCV infection (p<0.001 vs subjects with a history of IV drug use). A history of IV drug use had the highest Odd's ratio for predicting HCV seropositivity at 5.11 (95% CI 3.77-6.93, p<0.001), while the effect of being male had an Odd's ratio of 2.54 (95% CI 1.85-3.49, p<0.001). In contrast, absolute age had an Odd's ratio of 1.012 (95% CI 1.002-1.023, p=0.024) and the effect of being African-American had an Odd's ratio of 0.68 (95% CI 0.51-0.92, p=0.012). Being a member of the birth cohort was not associated with HCV seropositivity, after accounting for a history of IV drug use (p=0.28), nor did being Caucasian, Hispanic or Asian.

Conclusion:
The clustering of HCV seropositivity in inner city participants in HCV testing in non-medical settings do not fit the birth cohort hypothesis due to the influence of current or former IV drug use.

Legends

Figure 1a: Age-specific HCV seroprevalence in people admitting to a history of IV drug use by decade, starting in 1926. The X axis refers to the decade of birth e.g. 46-55 = 1946 through 1955.

Figure 1b: Age-specific HCV seroprevalence in people denying a history of IV drug use
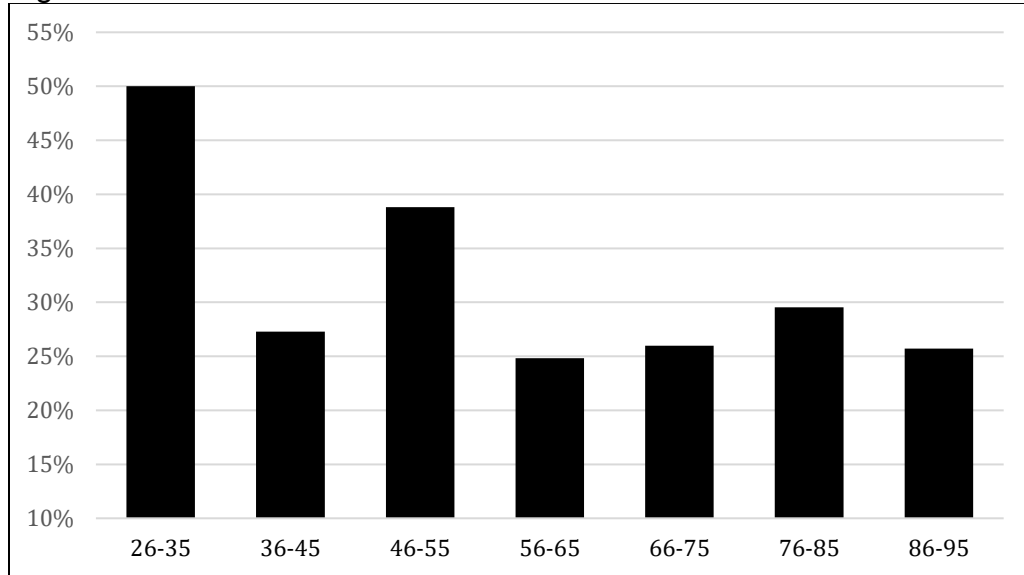
Figure 1a

Figure 1b