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Decrease in HIV Testing in a Large, Representative, Population-Based Sample during COVID-19, New York City (NYC)

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Background

- Barriers to HIV testing due to the COVID-19 pandemic and the response to it have been a concern. Testing is usually the first step in accessing HIV prevention and care services, which are essential to end the HIV epidemic in NYC. *We compared HIV testing rates in a population-based, urban sample from 2019 to 2020 to explore the potential impact.*
- We used data from the **New York City Community Health Survey (CHS).** This survey provides data on the health of New Yorkers- neighborhood, borough, and citywide estimates on a broad range of chronic diseases and behavioral risk factors
- Cross-sectional telephone survey conducted annually
  - yearly sample of approximately 10,000 randomly selected adults aged 18 and older
  - conducted in all five boroughs of New York City
  - a computer-assisted telephone interviewing (CATI) system is used to collect survey data from selected respondents
  - all data collected are self-reported
  - data weighted by several demographic variables including neighborhood, age, gender, race, number of adults and children per household, marital status, and education levels
- Survey results disseminated in order to track the health of New Yorkers to:
  - understand relationship between health behavior and health status
  - influence health program decisions

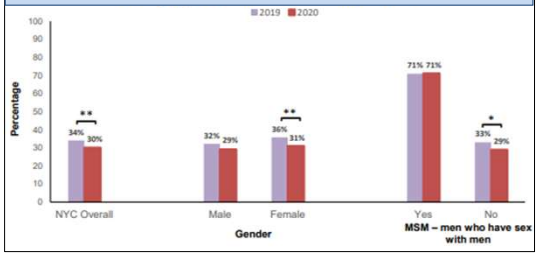
Methods

- HIV testing in the past 12 months was measured among all participants with the survey question, "Have you had an HIV test in the last 12 months?". Responses of "Don't know" or "Prefer not answer", and missing values were not included in the denominator.
- We compared rates from 2019 to 2020, overall and within the following stratifications:
  - sex (male, female)
  - race/ethnicity (White, Black, Hispanic/Latino, Asian/Pacific Islander, Other)
  - age (18-24, 25-29, 30-44, 45-64, 65-74),
  - MSM (men who have sex with men) behavior in the past year
  - borough of residence (Brooklyn, Bronx, Queens, Manhattan, Staten Island)
- T-tests were used to determine statistical significance (p<0.05).

Results

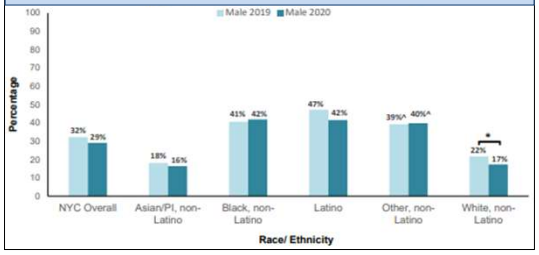
- In the NYC population overall, there was a significant decrease in HIV testing in the past 12 months from 34% in 2019 to 30% in 2020 (*p=0.0003*). A significant decrease from 2019 to 2020 was also present in the female population (36% to 31%; *p=0.0015*)(Figure 1).

Fig 1: Prevalence of a HIV test in past 12 months among NYC adults 18 years and older, by gender and sexual behavior, 2019 and 2020



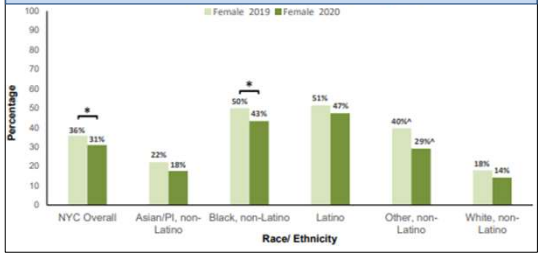
- Within the male population there was a significant decrease among white, non-Latino males (22% to 17%; *p*=0.0500)(Figure 2).

Fig 2: Prevalence of a HIV test in past 12 months among NYC adults 18 years and older, males by race/ethnicity, 2019 and 2020



- Within the female population, there was a significant decrease among Black, non-Latina females (50% to 43%; *p*=0.0432)(Figure 3).

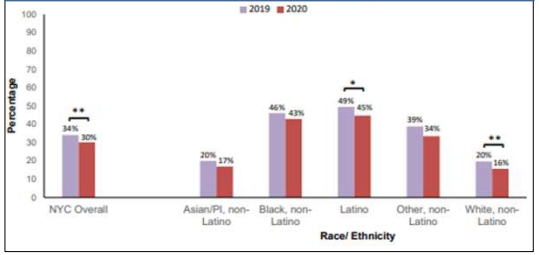
Fig 3: Prevalence of a HIV test in past 12 months among NYC adults 18 years and older, females by race/ethnicity, 2019 and 2020



Significant decreases from 2019 to 2020 were also present in the following groups:

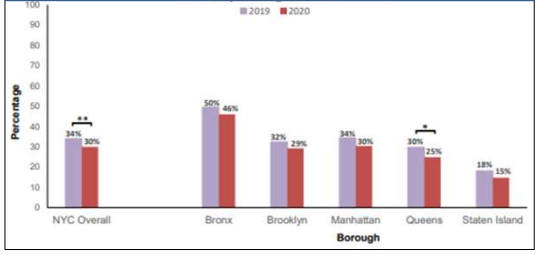
- Latinos/as (49% to 45%; *p*=0.0301), and White, non-Latinos/as (20% to 16%; *p*=0.0094), and those aged 25 to 44 years (46% to 39%; *p*=0.0005)(Figure 4).

Fig 4: Prevalence of a HIV test in past 12 months among NYC adults 18 years and older, by race/ethnicity, 2019 and 2020



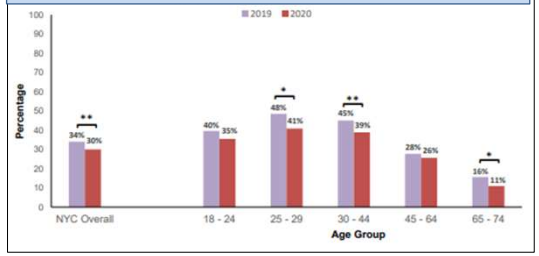
- Residents of Queens (*30% to 25%; p*=0.0244)(Figure 5).

Fig 5: Prevalence of a HIV test in past 12 months among NYC adults 18 years and older, by borough, 2019 and 2020



- Those aged 25 to 29 years (46% to 39%; *p*=0.0417), 30 to 44 years (45% to 39%; *p=0.0046*), and 65 to 74 years *(16% to 11%; p=0.0453)*(Figure 6).

Fig 6: Prevalence of a HIV test in past 12 months among NYC adults 18 years and older, by age group, 2019 and 2020



"*" indicates a significant (p<0.05), and "**" indicates a significant (p<0.01) difference when comparing crude estimates of the number of people tested between 2019 and 2020 (paired t-test). *Estimate should be interpreted with caution. Data source and data are not age adjusted.

Limitations

- Self reported data
- Interviews limited to English, Spanish, Russian, Chinese, Bengali, and Haitian Creole
- The survey sampling does not capture:
  - adults in households without any telephone service (either landline or cellphone)
  - adults living in group setting such as college dormitories and nursing facilities

Discussion

- The rate of HIV testing decreased from 2019 to 2020 for New Yorkers **overall**, (p<.01). There was a statistically significant decrease within the following subgroups; rates in all other groups decreased non-significantly:
  - *Gender*
    - ➢ non-MSM participants, (p<.05)
    - ➢ all female participants, (p<.01)
    - ➢ White, non-Latino males, (p <.01)
    - ➢ Black, non-Latina females, (p<.05)
  - *Borough*
    - ➢ participants living in Queens, (p<.05)
  - *Ethnicity*
    - ➢ all Latino/a participants, (p<.05)
    - ➢ all White, non-Latino participants, (p<.05)
  - *Age Groups*
    - ➢ 25 to 29, (p<.05)
    - ➢ 30 to 44, (p<.01)
    - ➢ 65 to 74, (p<.05)
- This negative impact on HIV testing may be in part a result of availability and accessibility of services during the COVID pandemic. Specifically, interruption/ closure of HIV prevention services and CBO's (community based organizations) available to NYC'ers, fear of visiting healthcare centers, and a reduction in sexual partners/ interactions due to social distancing.
- Interestingly, MSM testing remained stable (71% to 71%). Possible reasons include prior knowledge of and practice of HIV testing , use of PrEP requiring HIV testing, access to home testing such as the Home Test Giveaway, and resources within their communities

Acknowledgements

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