



NYC DOHMH  
BUREAU OF EPIDEMIOLOGY SERVICES

Sarah E. Dumas, DVM, PhD



## HEALTHY NYC:

### The Design and Implementation of a Probability-based Survey Panel by a Local Health Department

Current Innovations in Probability-based Household  
Internet Panel Research Conference

March 4 – 5, 2021

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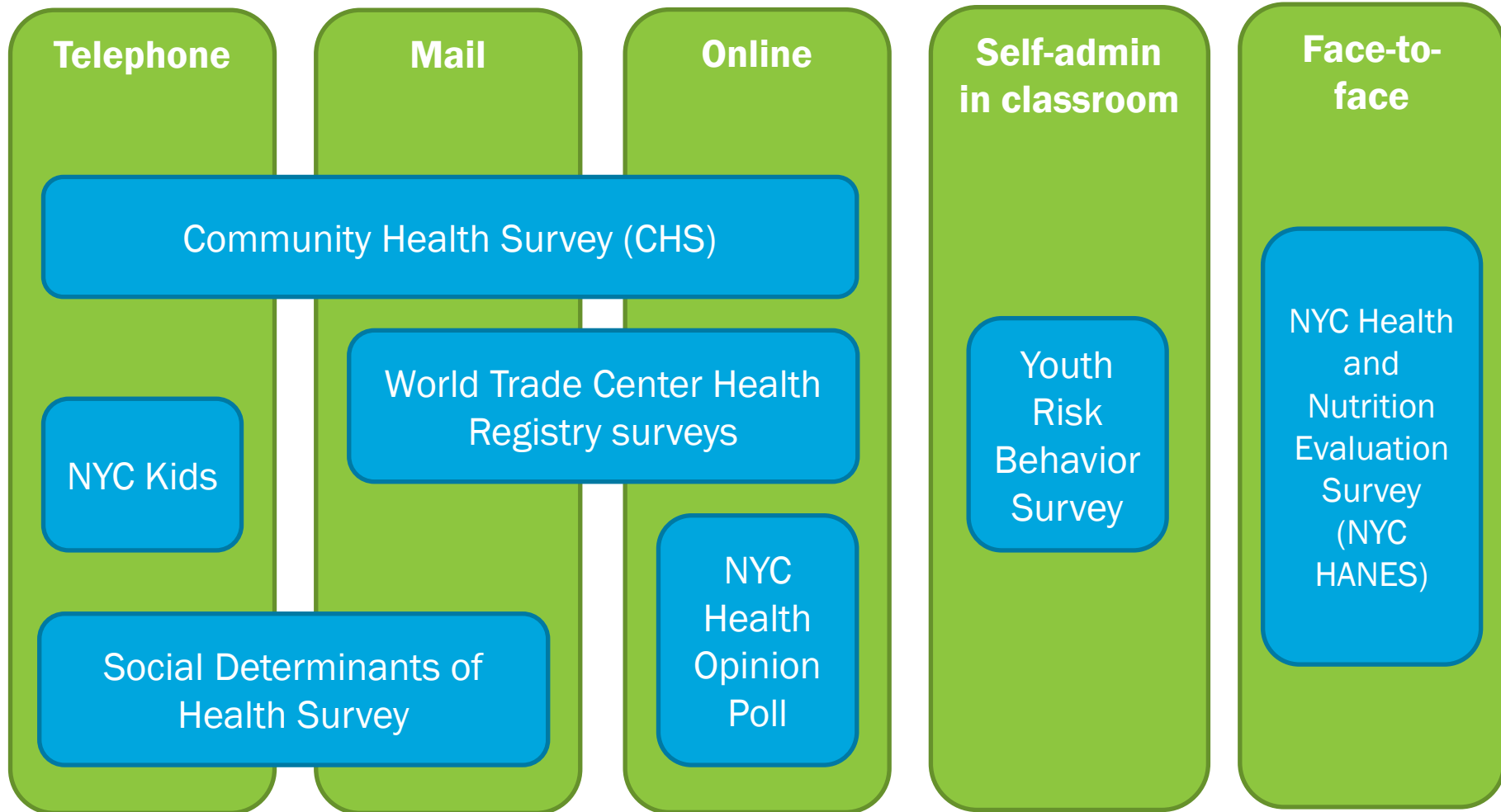


**BACKGROUND**

## **Division of Epidemiology Mission**

To improve the health of all New Yorkers through population health surveillance and research, public health workforce development, and vital records services.

# Division of Epidemiology Surveys

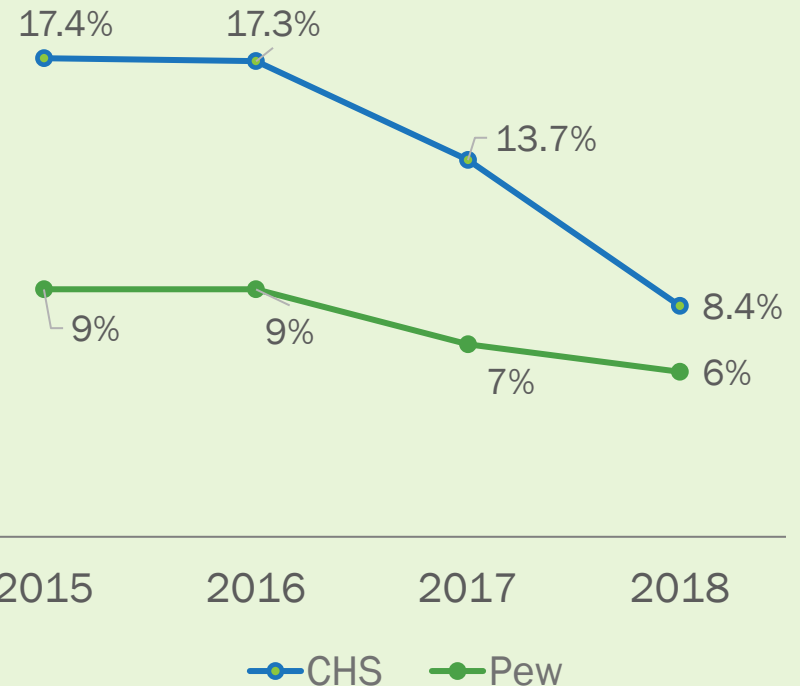


# Why a panel?

- Increased cost of telephone surveys
- Existing online sampling options are limited for our purposes

Custom, in-house, probability-based panel offers a methodological alternative to conduct web-first surveys

## Decreasing response rates for telephone surveys

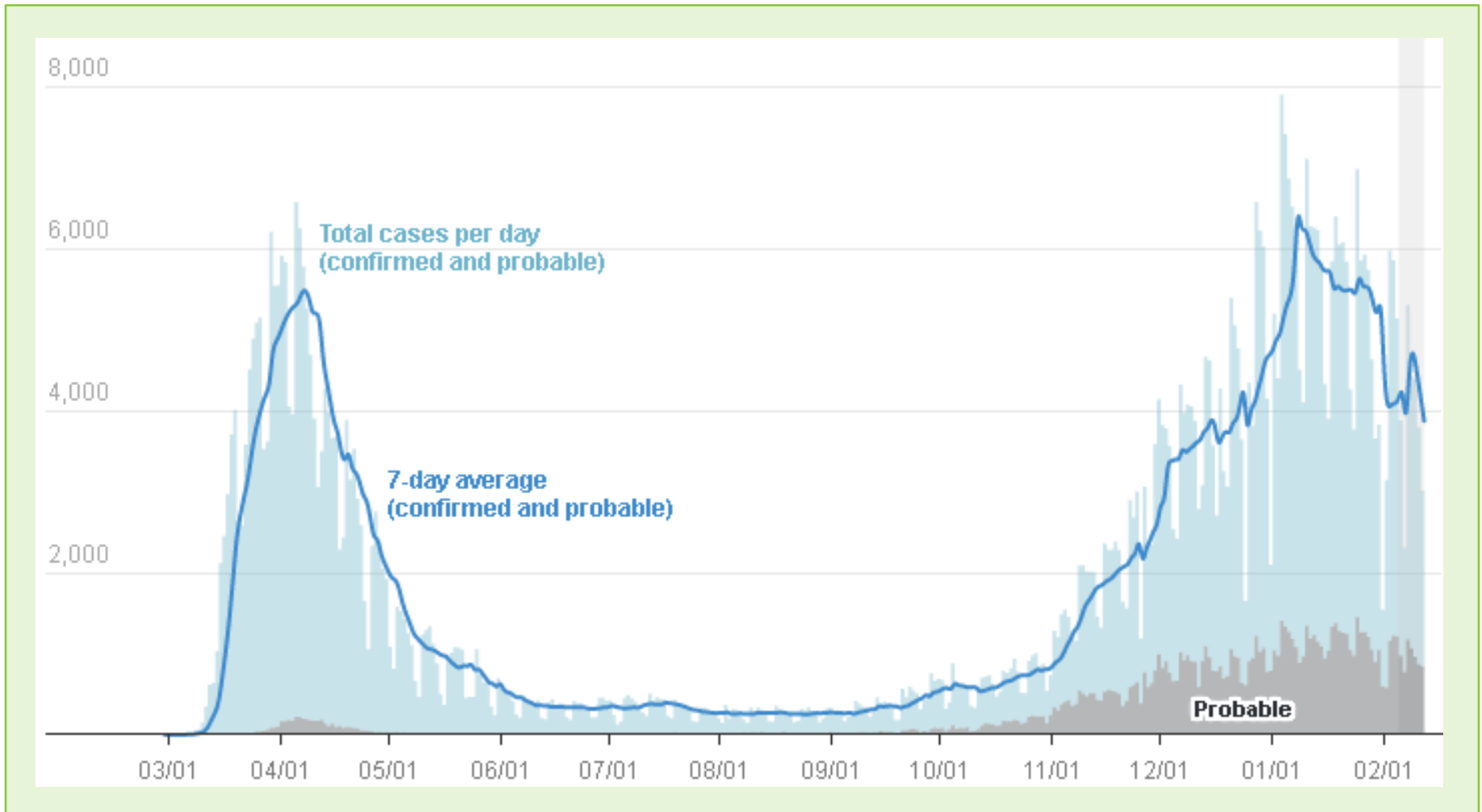


Note: Response rate is AAPOR RR3

Source: NYC DOHMH Community Health Survey telephone surveys, 2015-2018



# Unexpected urgency: the emergence of COVID-19



Source: "COVID-19: Data." *COVID-19: Data, Long-Term Trends*, NYC Department of Health and Mental Hygiene, 2021, [www1.nyc.gov/site/doh/covid/covid-19-data-trends.page](http://www1.nyc.gov/site/doh/covid/covid-19-data-trends.page).



# Unexpected urgency: the emergence of COVID-19

New data needs surrounding New Yorkers’:

- Knowledge, opinions, and experiences of COVID-19
- Social distancing and behavior change
- Incidences of COVID-19-like-illness and seropositivity
- Exposure and risk factors
- Health care seeking
- Vaccine intentions and hesitancy
- Health disparities
- Experiences of racism
- Mental health and economic impacts





# Aim

To describe the process of designing and implementing Healthy NYC, an innovative, probability-based panel of adult New Yorkers, and compare panelists to the NYC adult population across key demographic characteristics.

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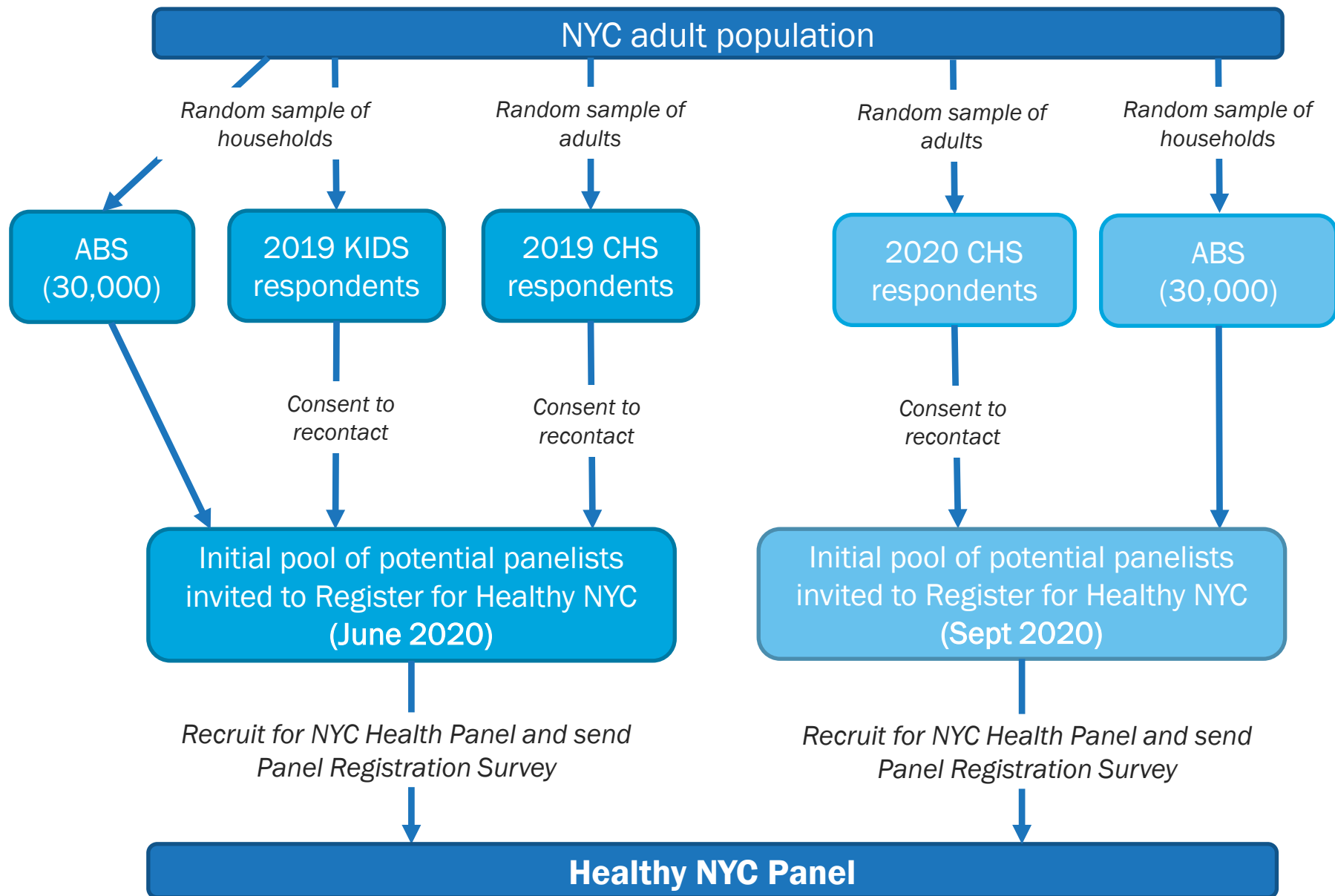
# METHODS

# Healthy NYC recruitment

- Two recruitments were conducted: June 2020 and September 2020
- Sample sources:
  - Existing probability-based surveys conducted in the Bureau of Epidemiology Services
    - 2019 Community Health Survey (CHS 2019)
    - 2019 Kids Survey
    - 2020 Community Health Survey (CHS 2020)
  - Two Address Based Samples of 30,000 records each



# Healthy NYC recruitment



# Healthy NYC recruitment

- Invitations were sent by email, text message, and mail
- Intra-household randomization using the next birthday method
- Up to five contacts each
- Information available in English, Spanish, Simplified and Traditional Chinese, and Russian
- Web-first survey, with alternative provided in final contact for non-responders
- \$20 post-completion incentive
- All materials and protocols received approval from the NYC Health Department IRB



# Text message and email invitations

Join Healthy NYC to improve the health of New Yorkers > Inbox x

Healthy NYC <invite@decipherinc.com> [Unsubscribe](#)  
to me ▾

4:34 PM (1 minute ago)



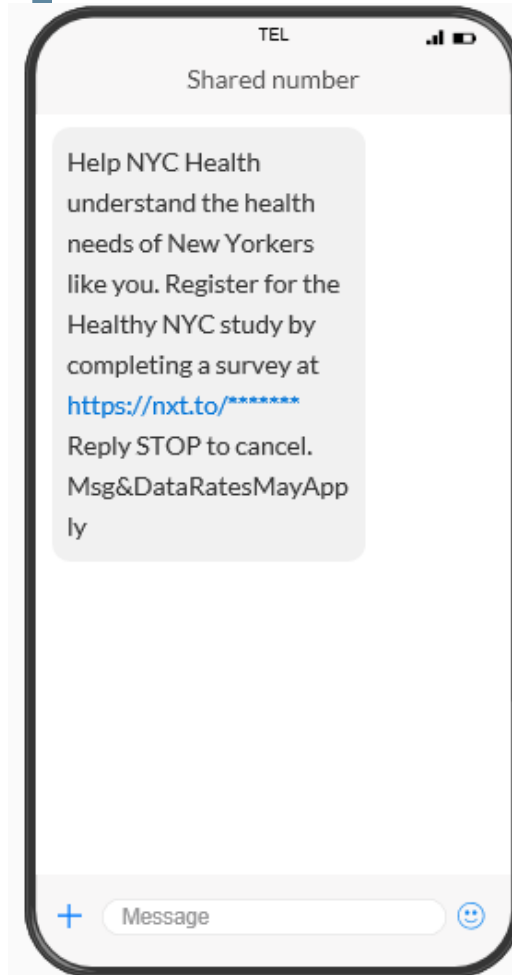
Dear Fellow New Yorker,

We would like to invite you to join Healthy NYC, a health study by the New York City Health Department. By completing up to 10 health surveys per year, you can help us identify health issues, develop needed programs and increase access to health care. We want to hear your voice!

[Please register for the study now](#), or copy and paste this link into your browser:  
<https://selfserve.decipherinc.com/survey/selfserve/1316/200500?list=1&ePID=P2UU5yyyy1&source=59TJDYMYUo>

Registration for Healthy NYC takes just 10 minutes to complete. As a thank you for your time, you will receive a **\$20 electronic gift card**.

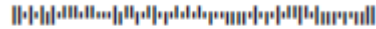
As part of Healthy NYC, you may soon be invited to take **surveys about the coronavirus outbreak** in





**NEW YORK CITY DEPARTMENT OF  
HEALTH AND MENTAL HYGIENE**  
Oxiris Barbot, MD  
Commissioner

1 3 \*\*\*\*\*AUTO\*\*MIXED AADC 07099  
New York City Resident



June 8, 2020

Dear Fellow New Yorker,

We would like to invite you to join Healthy NYC, a health study by the New York City Health Department. By completing up to 10 health surveys per year, you can help us identify health issues, develop needed programs and increase access to health care. We want to hear your voice!

Registration for Healthy NYC takes just 10 minutes to complete by following these two easy steps:

- 1) **Identify the adult who should complete the survey:** Choose the adult (age 18 or older) in your household who will have the next birthday. If you are not the selected adult, please share this letter with them and have them go to Step 2.
- 2) **Choose one of these ways to register:**
  - a. Go to [tinyurl.com/HealthyNYCSurvey](https://tinyurl.com/HealthyNYCSurvey), or
  - b. Scan the QR code below with a smartphone camera or a QR code scanning app.

To access the survey, enter this unique participant ID: P2UU-322

As a thank you, participants will receive a \$20 electronic gift card for registering. As part of Healthy NYC, participants may soon be invited to take surveys about the coronavirus outbreak in New York City to help with the response.

For more information, please see the included information sheet, or visit [nyc.gov/health/nycsurveys](https://nyc.gov/health/nycsurveys). Participation in Healthy NYC is greatly appreciated and will help make New York City healthier.

Sincerely,

Oxiris Barbot, MD  
Commissioner  
New York City Department of Health and Mental Hygiene



Estimado neoyorquino:

Queremos invitarlo a unirse a Healthy NYC, un estudio de salud del Departamento de Salud de la Ciudad de Nueva York. Al completar hasta 10 encuestas de salud por año, puede ayudarnos a identificar problemas de salud, desarrollar los programas necesarios y mejorar el acceso a la atención de salud. ¡Queremos saber su opinión!

Completar la inscripción para Healthy NYC solo le tomará 10 minutos si sigue estos dos simples pasos:

- 1) **Identifique al adulto que deberá completar la encuesta:** Elija al adulto (mayor de 18 años) de su hogar que será el próximo en cumplir años. Si usted no es el adulto seleccionado, comparta esta carta con esa persona e indique que se dirija al paso 2.
- 2) **Elija una de estas maneras para registrarse:**
  - a. Visite [tinyurl.com/HealthyNYCSurvey](https://tinyurl.com/HealthyNYCSurvey), o
  - b. Escanee el código QR de abajo con la cámara de un teléfono inteligente (celular) o con una aplicación para escanear códigos QR.

Para acceder a la encuesta, escriba esta identificación única del participante: P2UU-322

Como agradecimiento, recibirá una **tarjeta electrónica de regalo de \$20** por su inscripción. Como parte de Healthy NYC, es posible que los participantes reciban pronto invitaciones para completar encuestas sobre el brote del coronavirus en la ciudad de Nueva York que ayuden con la respuesta.

Para obtener más información, consulte la hoja informativa que se incluye o visite [nyc.gov/health/nycsurveys](https://nyc.gov/health/nycsurveys). Agradecemos mucho su participación en Healthy NYC, que ayudará a que la ciudad de Nueva York sea más saludable.

Atentamente,

Oxiris Barbot, MD  
Comisionada  
Departamento de Salud y Salud Mental de la Ciudad de Nueva York



尊敬的紐約市民：

我們誠邀您參與由紐約市衛生局開展的 Healthy NYC 健康研究。您會應邀填寫最多每年 10 份健康調查問卷，藉此可以協助我們識別健康問題、開發所需的健康保障項目，以及改善健康照護的提供情況。我們渴望聆聽您的心聲！

只需採取下列兩個簡單步驟，就能在 10 分鐘內完成 Healthy NYC 登記：

- 1) **確定填寫調查問卷的成年人：**選擇家中最近將過生日的成人（年滿或超過 18 歲）。如果您不是被選定的成年人，請將本函交給應邀參與調查者，以便其執行第 2 步。
- 2) **選擇下列方式之一登記加入：**
  - a. 前往 [tinyurl.com/HealthyNYCSurvey](https://tinyurl.com/HealthyNYCSurvey)，或
  - b. 使用智慧型手機或 QR 碼掃描應用程式掃描下方的 QR 碼

若要填寫問卷調查，請輸入這一參與者唯一專屬 ID：P2UU-322

為感謝您的參與，您在登記加入後，將收到一張價值 20 美元的電子禮品卡。加入 Healthy NYC 後，參與者可能很快會受邀參與關於紐約市新型冠狀病毒疫情的問卷調查，以為我們的疫情應對工作提供幫助。

如需詳細資訊，請參閱隨附的資訊表或造訪 [nyc.gov/health/nycsurveys](https://nyc.gov/health/nycsurveys)。衷心感謝您參與 Healthy NYC，感謝您幫助我們共同改善紐約市民健康的善舉。

敬祝安康！

Oxiris Barbot, MD  
局長  
紐約市健康與心理衛生局



紐約市衛生局誠邀您參與一項重要的健康研究。如需了解关于研究参与方式的更多信息，请访问 [nyc.gov/health/healthnycsurveys](https://nyc.gov/health/healthnycsurveys)。

Департамент здравоохранения г. Нью-Йорка приглашает Вас принять участие в важном исследовании. Чтобы узнать больше об участии, посетите веб-страницу [nyc.gov/health/healthnycsurveys](https://nyc.gov/health/healthnycsurveys).

## Statistical methods

One proportion z-tests comparing the raw (unweighted) Healthy NYC data to the NYC adult population per the 2014-2018 5-year American Community Survey (ACS)

- $H_0: \mu = \mu_0$
- Significance level at  $p < 0.05$

Variables assessed:

- Age group (4 levels)
- Sex at birth (2 levels)
- Race/ethnicity (5 levels)
- Educational attainment (4 levels)
- Nativity (2 levels)
- Language spoken at home (2 levels)
- Borough (5 levels)





# RESULTS

# Respondents

June 2020

**36,848 invited**

**4002 web  
respondents  
(89%)**

**472 phone  
respondents  
(11%)**

September 2020

**33,142 invited**

**3551 web  
respondents  
(73%)**

**1290 paper  
respondents  
(27%)**

**9315 Healthy NYC panelists**



# Respondents

**9315 Healthy NYC panelists**

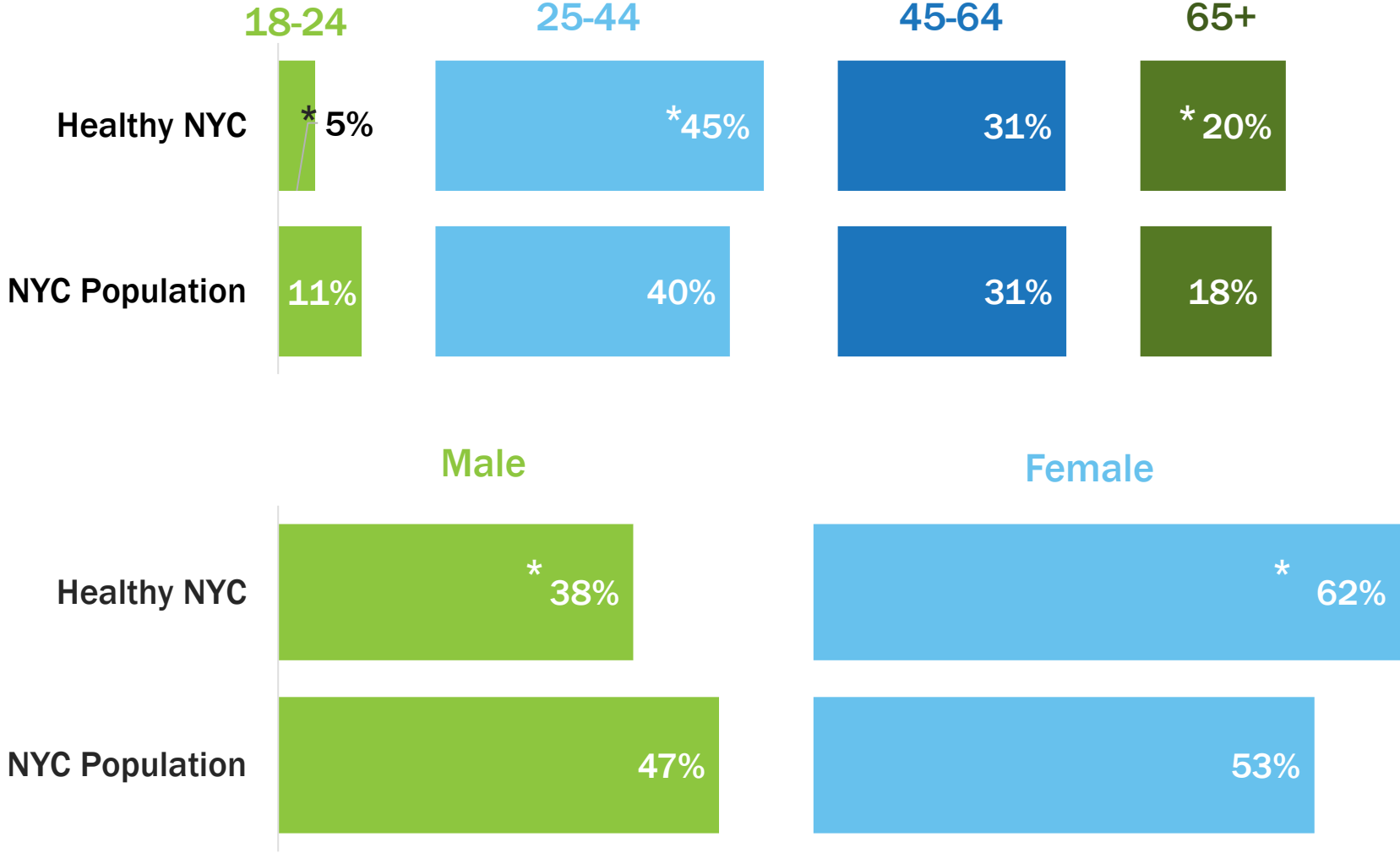
Responses were in:

- 8804 English
- 306 Spanish
- 122 Simplified Chinese
- 28 Traditional Chinese
- 19 Russian

- 8882 provided a valid **mailing** address
- 8508 provided an **email** address
- 5439 provided **text messaging** consent



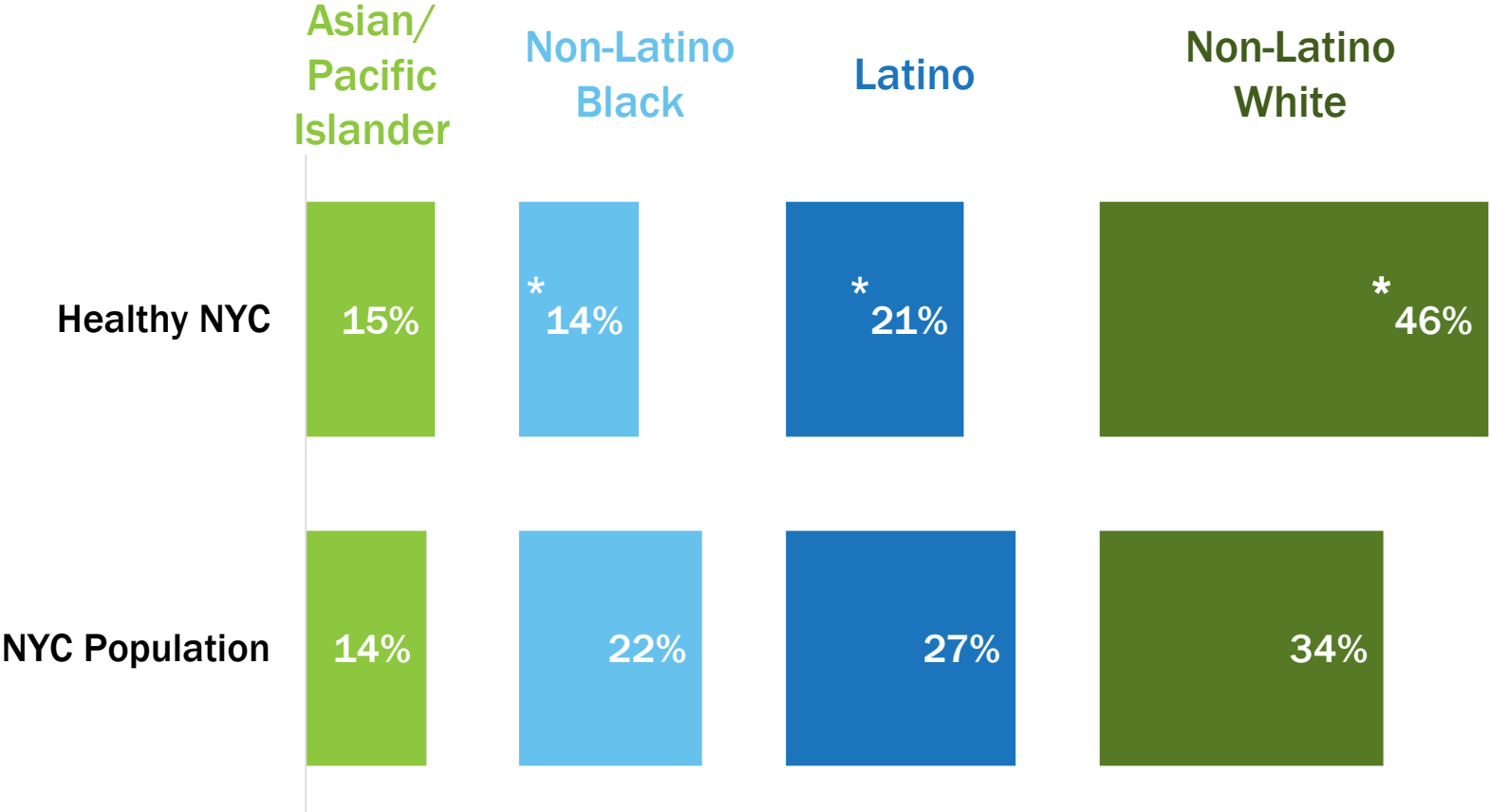
# Young adults and males are underrepresented in Healthy NYC compared to the NYC population



\*significantly different from NYC population

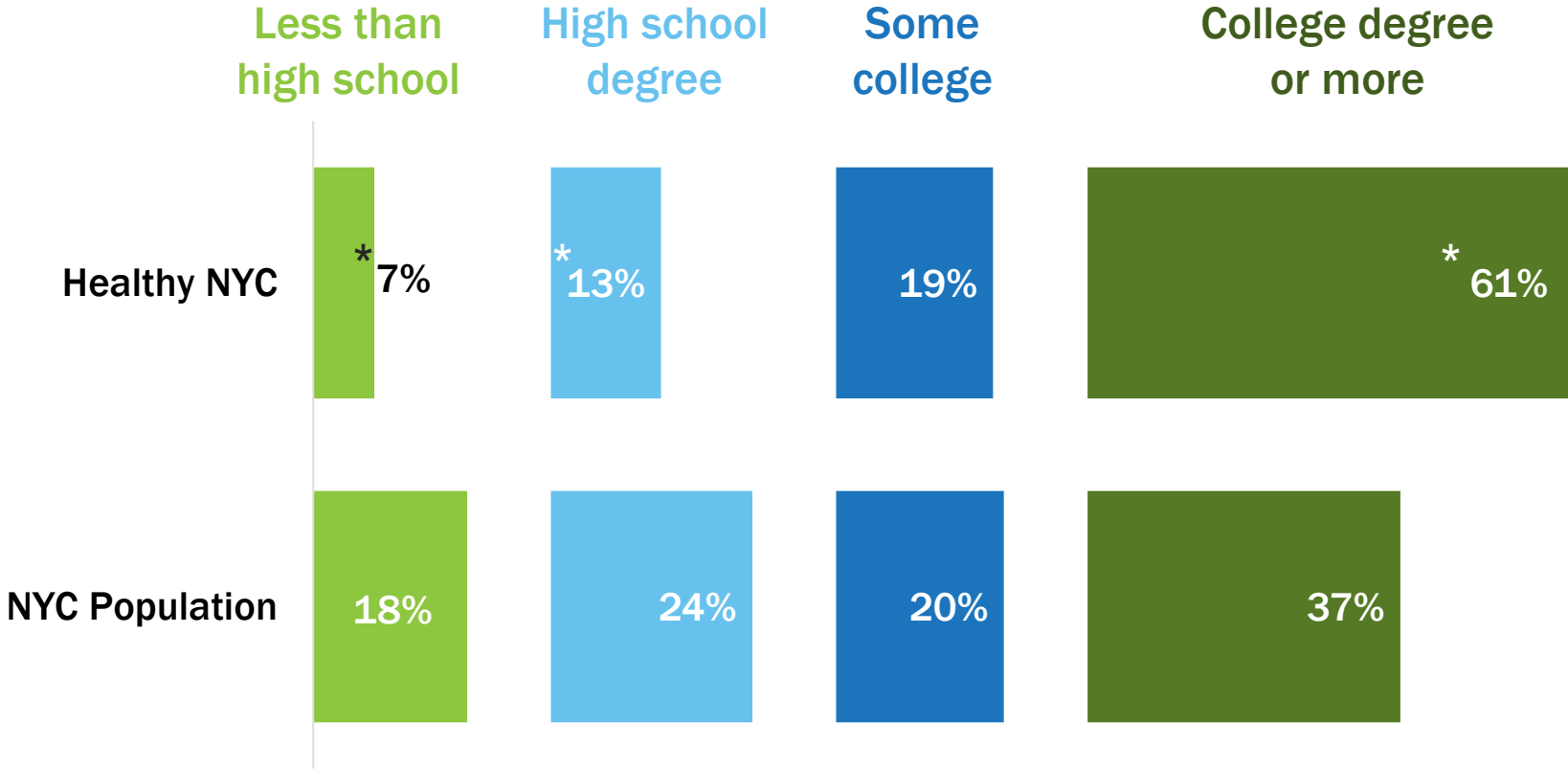


# Non-Latino White adults are overrepresented in Healthy NYC, while Latino/a and non-Latino/a Black adults were underrepresented



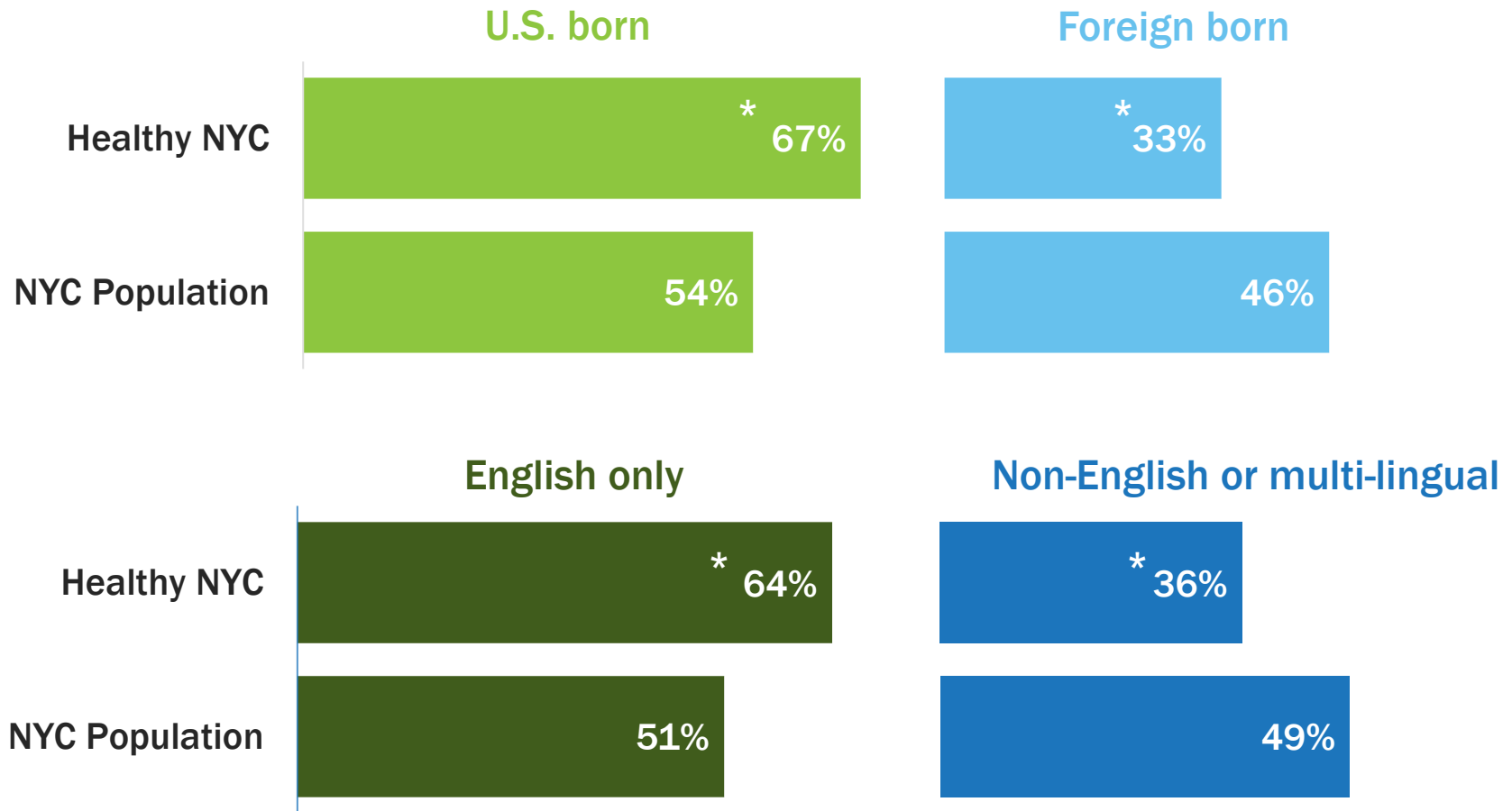
\*significantly different from NYC population

# Healthy NYC panelists are much more likely to have a college degree or higher compared to the adult NYC population

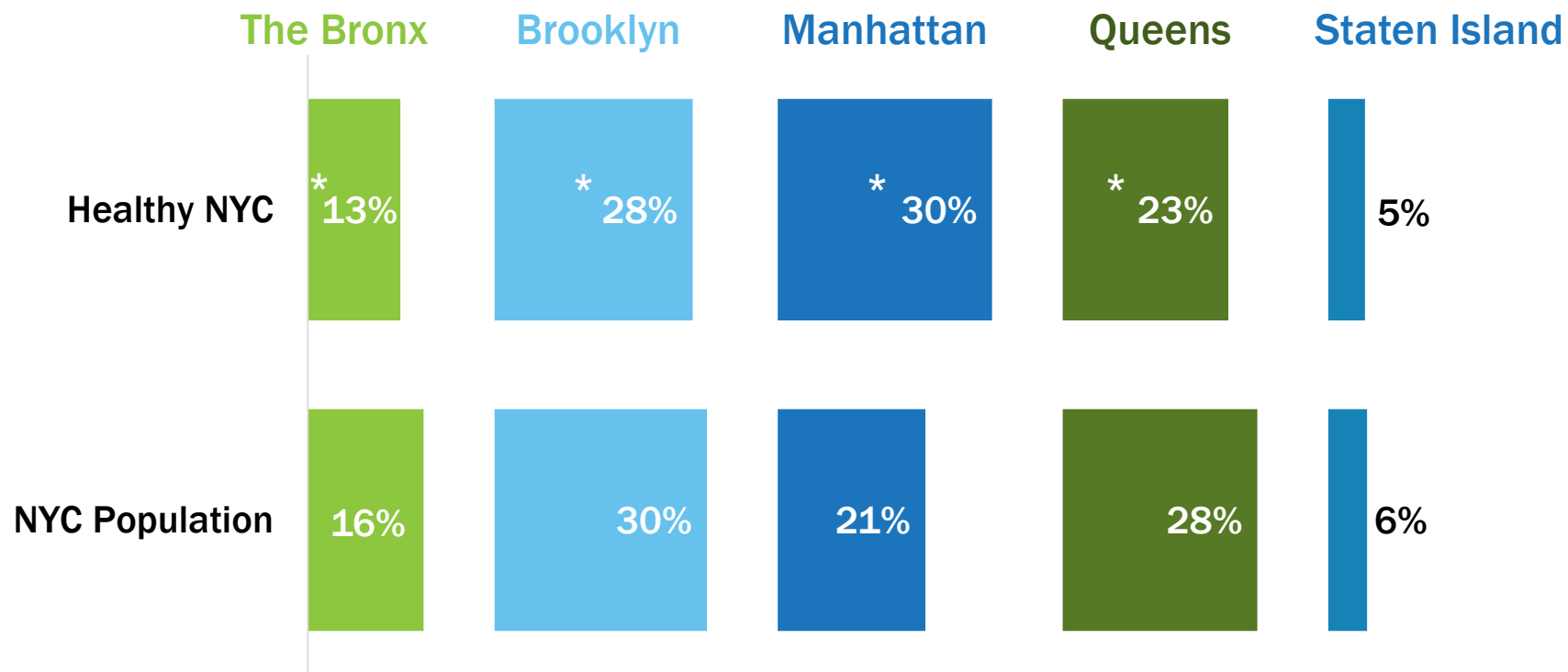


\*significantly different from NYC population

# Healthy NYC panelists are more likely to be U.S.-born and speak only English at home than adults in the NYC population



# Residents of Manhattan are overrepresented in Healthy NYC, while residents of Queens and the Bronx are underrepresented





# CONCLUSION

## Key takeaways

- We effectively recruited 9315 NYC adults to participate in Healthy NYC
- Differential response to the registration survey resulted in demographic differences between the panel and the NYC population
- Healthy NYC is being used to administer monthly surveys to:
  - Estimate COVID-19-like illness
  - Mental health effects of the pandemic
  - Social determinants of health
  - Recruit for a serosurvey and focus groups
  - Assess vaccine intentions and hesitancy



# Questions?

**Email Sarah Dumas:**  
**[sdumas1@health.nyc.gov](mailto:sdumas1@health.nyc.gov)**



For more information, contact NYC DOHMH  
Bureau of Epidemiology Services  
Dial 311 or visit [nyc.gov/health](http://nyc.gov/health)

