

**COVID-19  
HEALTHCARE  
PROVIDER  
UPDATE**

**Demetre Daskalakis, MD, MPH**

Deputy Commissioner, Disease Control  
NYC Department of Health and Mental Hygiene

**Sarah Braunstein, PhD, MPH**

Co-lead  
NYC Health Department Contact Tracing Task Force

**May 1, 2020**

## DISCLAIMER

- Our understanding of COVID-19 is evolving rapidly
- This presentation is based on our knowledge as of May 1, 2020, 12 PM

# Outline



CURRENT STATUS OF OUTBREAK



EPIDEMIOLOGY OF COVID-19 IN NYC  
RECENT SCIENTIFIC AND CLINICAL FINDINGS



NYC HEALTH DEPARTMENT CONTACT  
TRACING TASK FORCE



QUESTIONS AND DISCUSSION

## WHERE WE ARE

- Nearly two months have passed since the confirmed arrival of COVID-19 in NYC
- Our community, health care, and public health systems have since been tested in unprecedented ways
- Over 17,000 people have died due to confirmed or probable COVID-19 in NYC
- The census remains high at many NYC hospitals
- However, there are signs that mitigation measures, including social distancing, are making a difference
- These measures must be maintained until we can safely transition to containment and suppression measures

# CUMULATIVE CASES AND DEATHS, WORLDWIDE

5/1/20

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>3,270,000 cases

>233,000 deaths



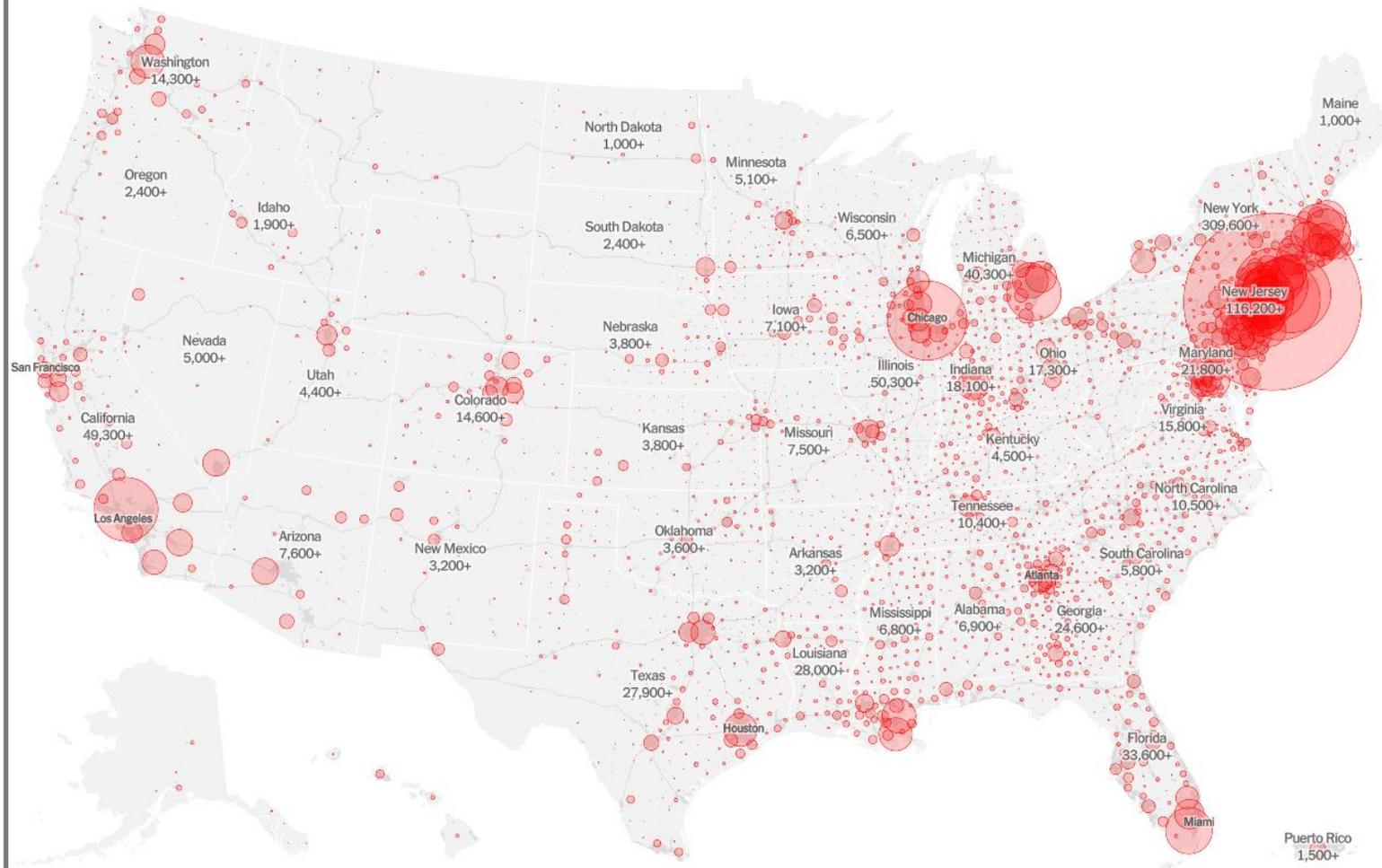
Cumulative confirmed cases, Johns Hopkins University

<https://www.arcgis.com/apps/opsdashboard/index.html#/bda7594740fd40299423467b48e9ecf6>

# CUMULATIVE CASES AND DEATHS, US 5/1/20

>1,075,000 cases  
(33% of confirmed global cases)

>63,000 deaths  
(27% of reported global deaths)



Confirmed and probable cases, *New York Times*

<https://www.nytimes.com/interactive/2020/us/coronavirus-us-cases.html>

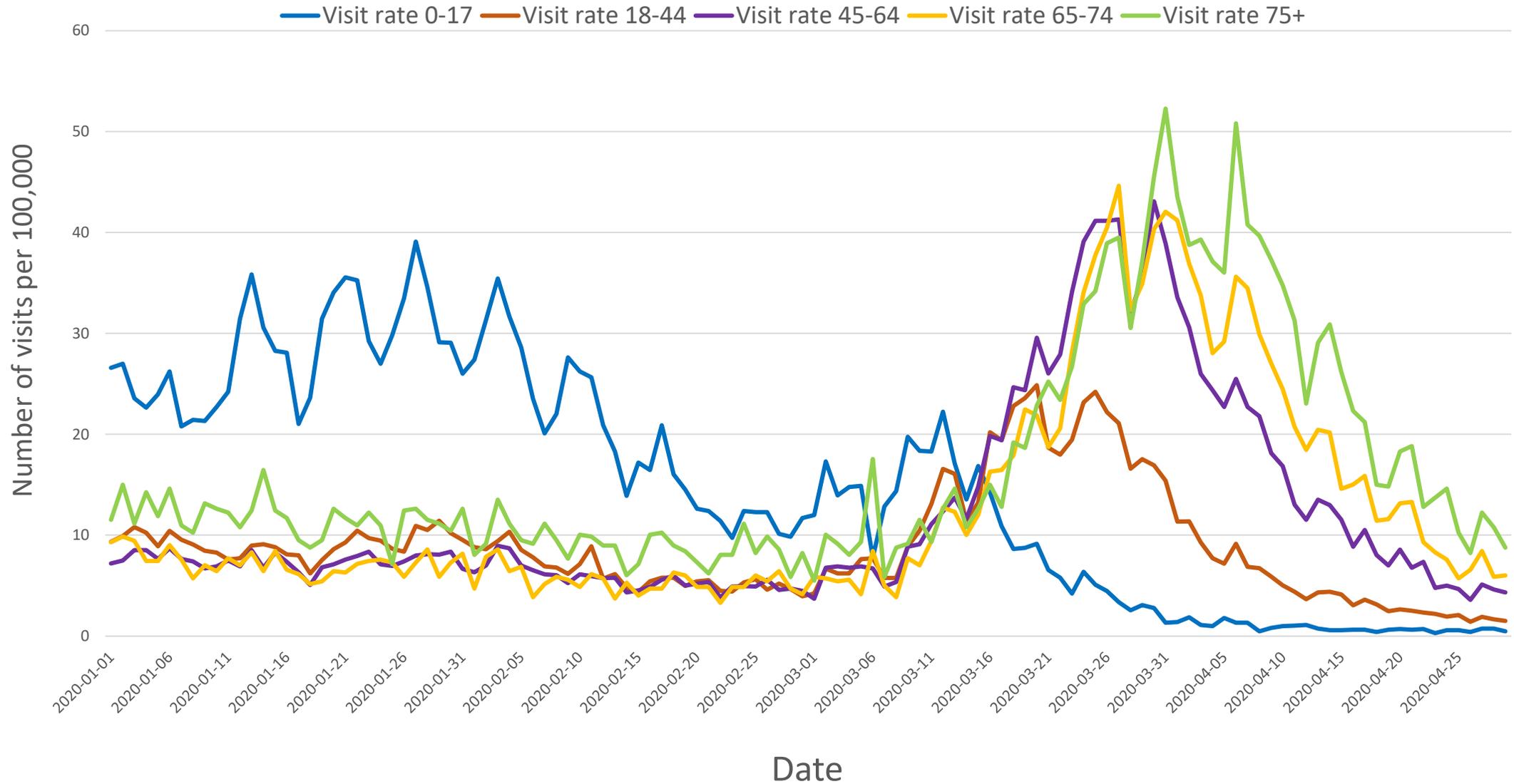
CURRENT  
STATUS OF  
OUTBREAK,  
NYC  
4/30/20,  
1:30PM

Laboratory confirmed cases	162,212
Hospitalized	41,648
Deaths (confirmed)	12,571
Deaths (probable)	5,295

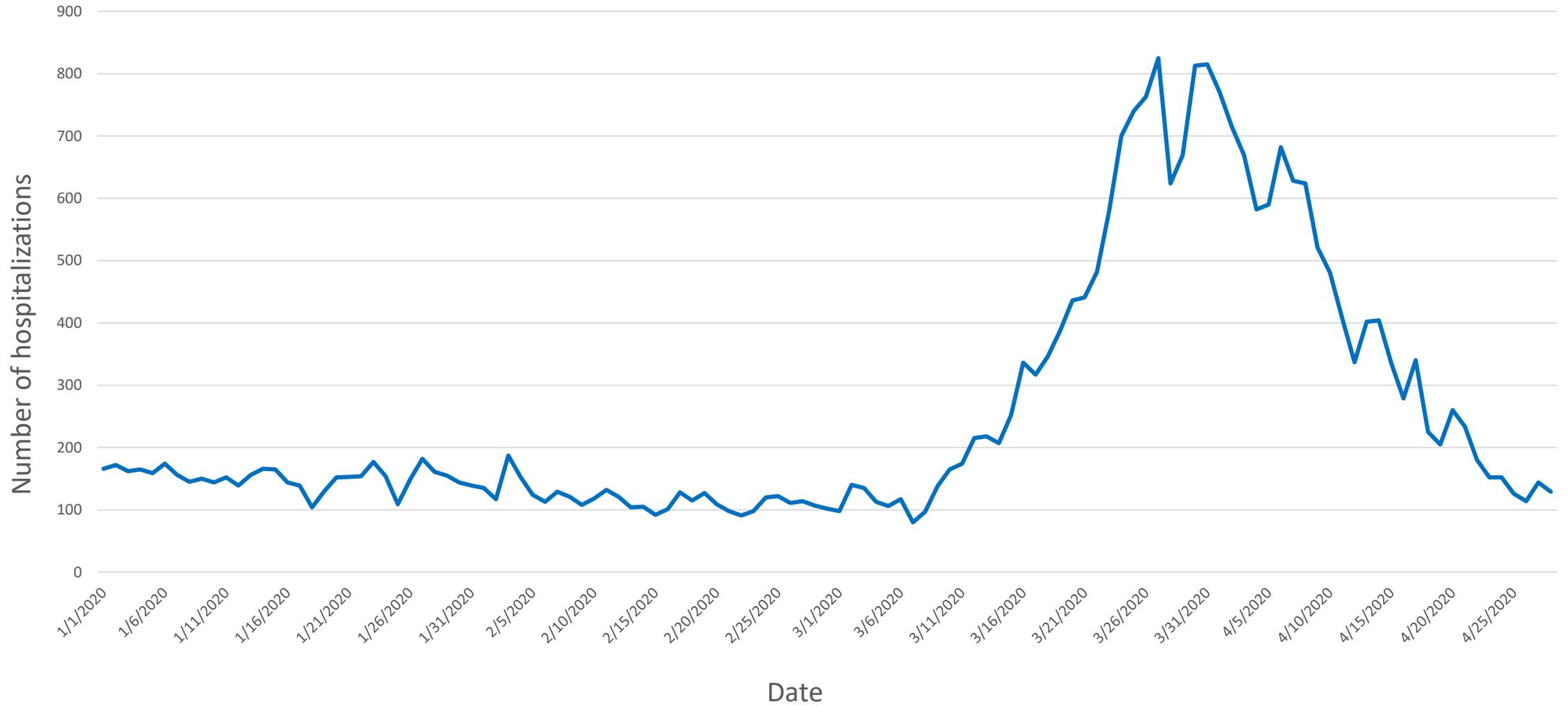
[NYC Health Department Coronavirus Data](#)

NYC Health Department Data Portal – updated daily

# Influenza-like Illness and Pneumonia Emergency Department Visits per 100,000 Population, by Age Group, NYC January 1 - April 29, 2020



# Number of Influenza-like Illness or Pneumonia Hospitalizations, NYC January 1 – April 28, 2020



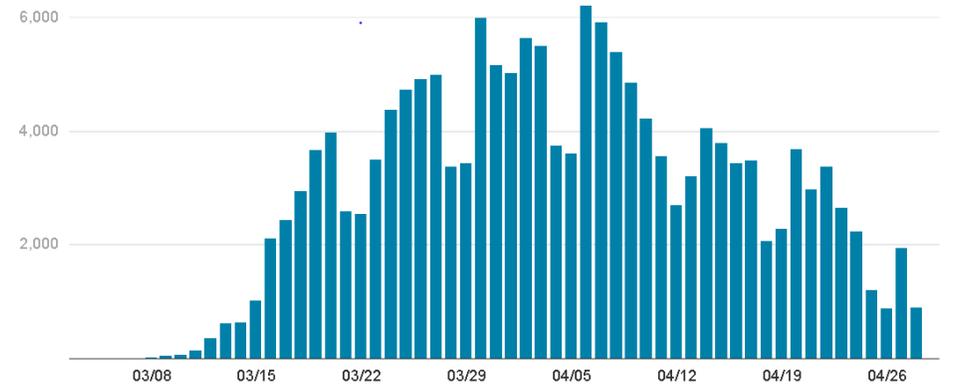
# COVID-19 CASES, NYC

3/6/20 – 4/29/20

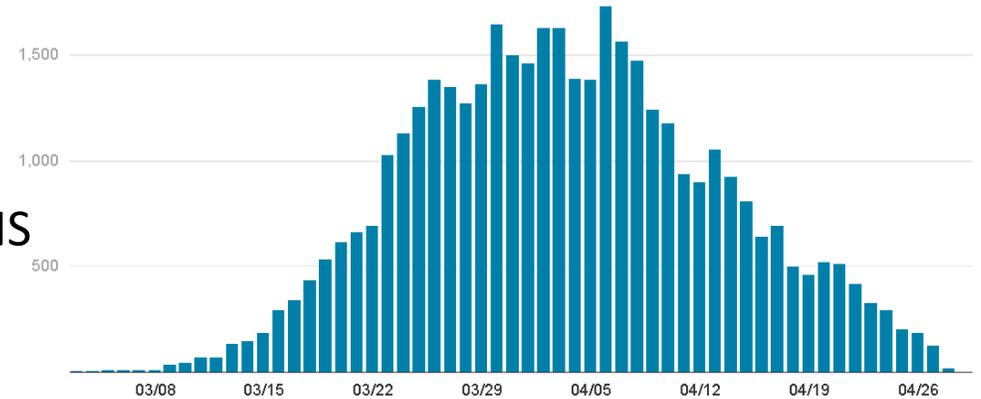
Shows number of COVID-19  
cases, hospitalizations, and  
deaths by date

Deaths lag 1-2 weeks after  
hospitalizations

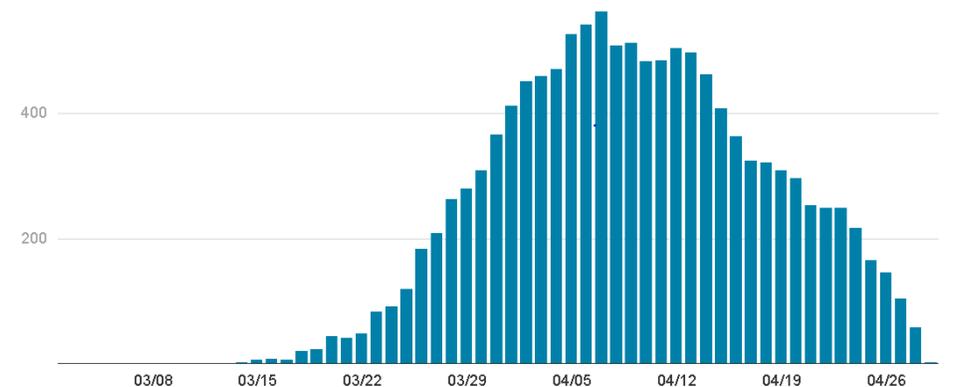
CASES



HOSPITALIZATIONS



DEATHS



DATE

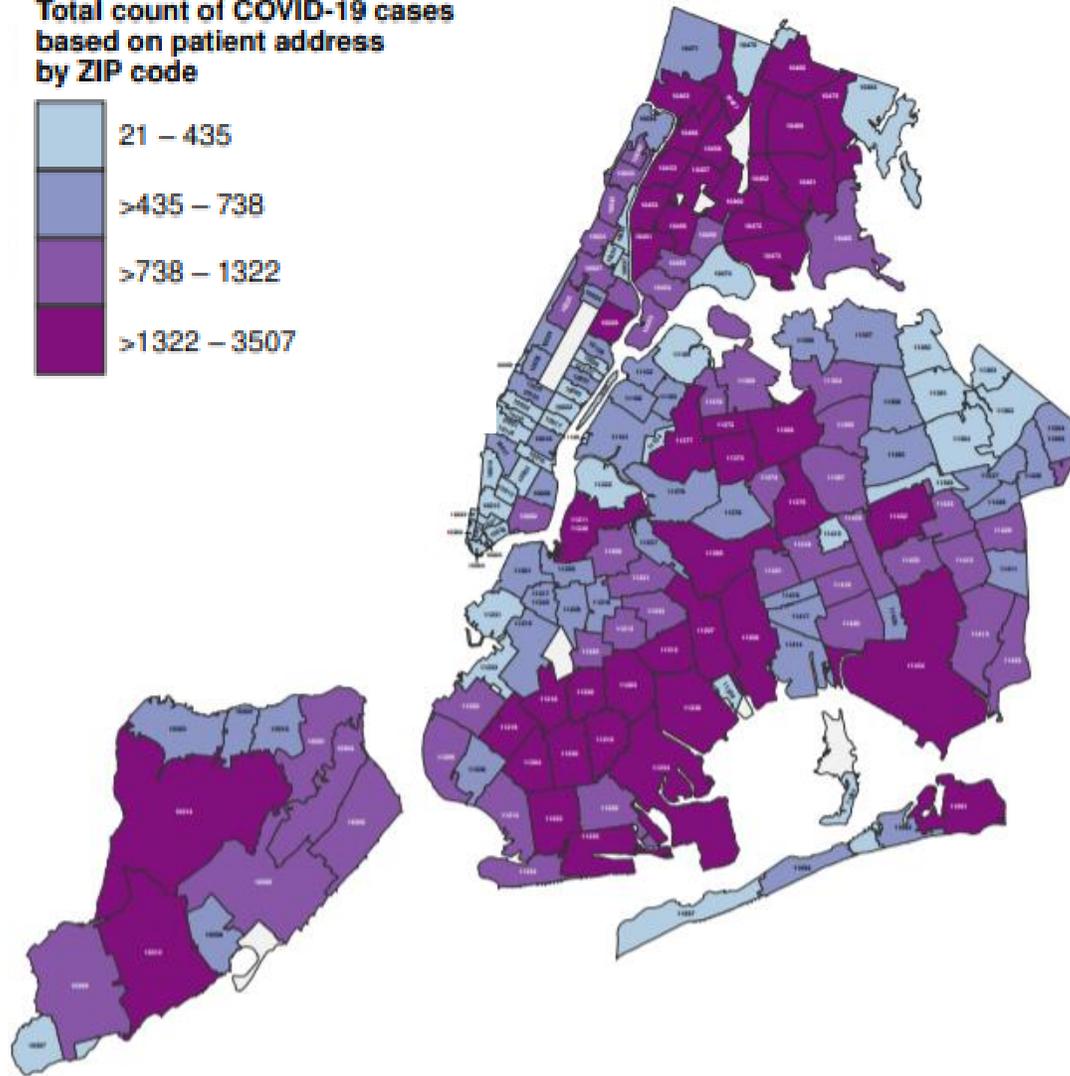
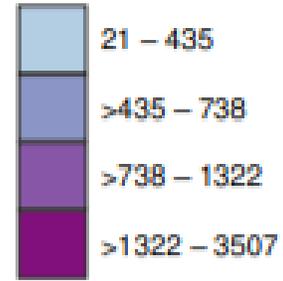
# COVID-19 RATES BY BOROUGH, NYC 4/29/20

Shows number of positive cases  
per 100,000 people in each  
borough

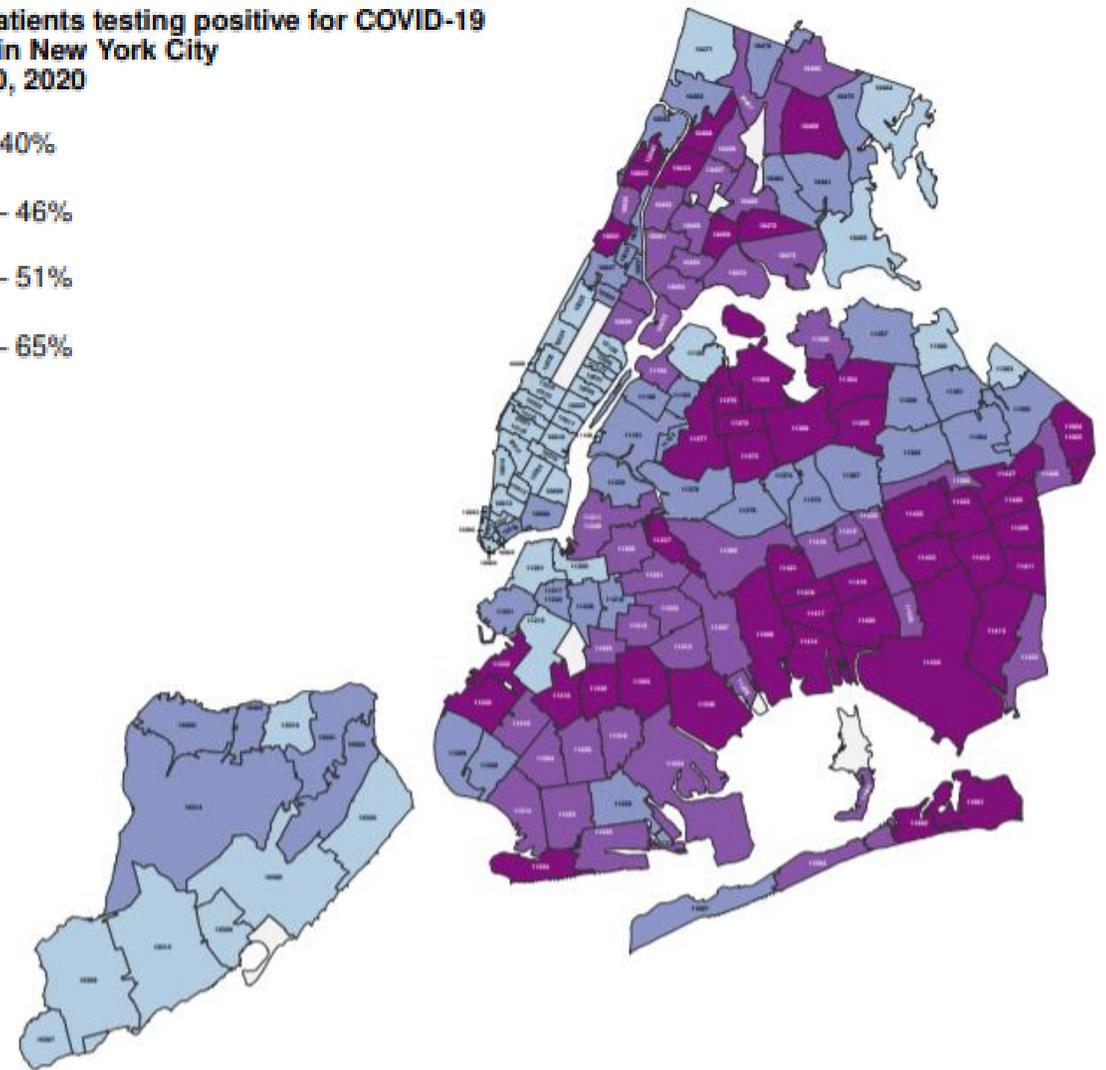
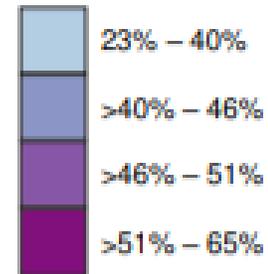
	▼ Rate per 100,000 people	Count
The Bronx	2,513	36,969
Staten Island	2,339	11,752
Queens	2,011	50,304
Brooklyn	1,585	42,996
Manhattan	1,069	20,121
Citywide		162,212

# COUNT OF COVID-19 CASES AND PERCENT OF PATIENTS TESTING POSITIVE BY ZIP CODE AS OF 4/30/20

Total count of COVID-19 cases based on patient address by ZIP code

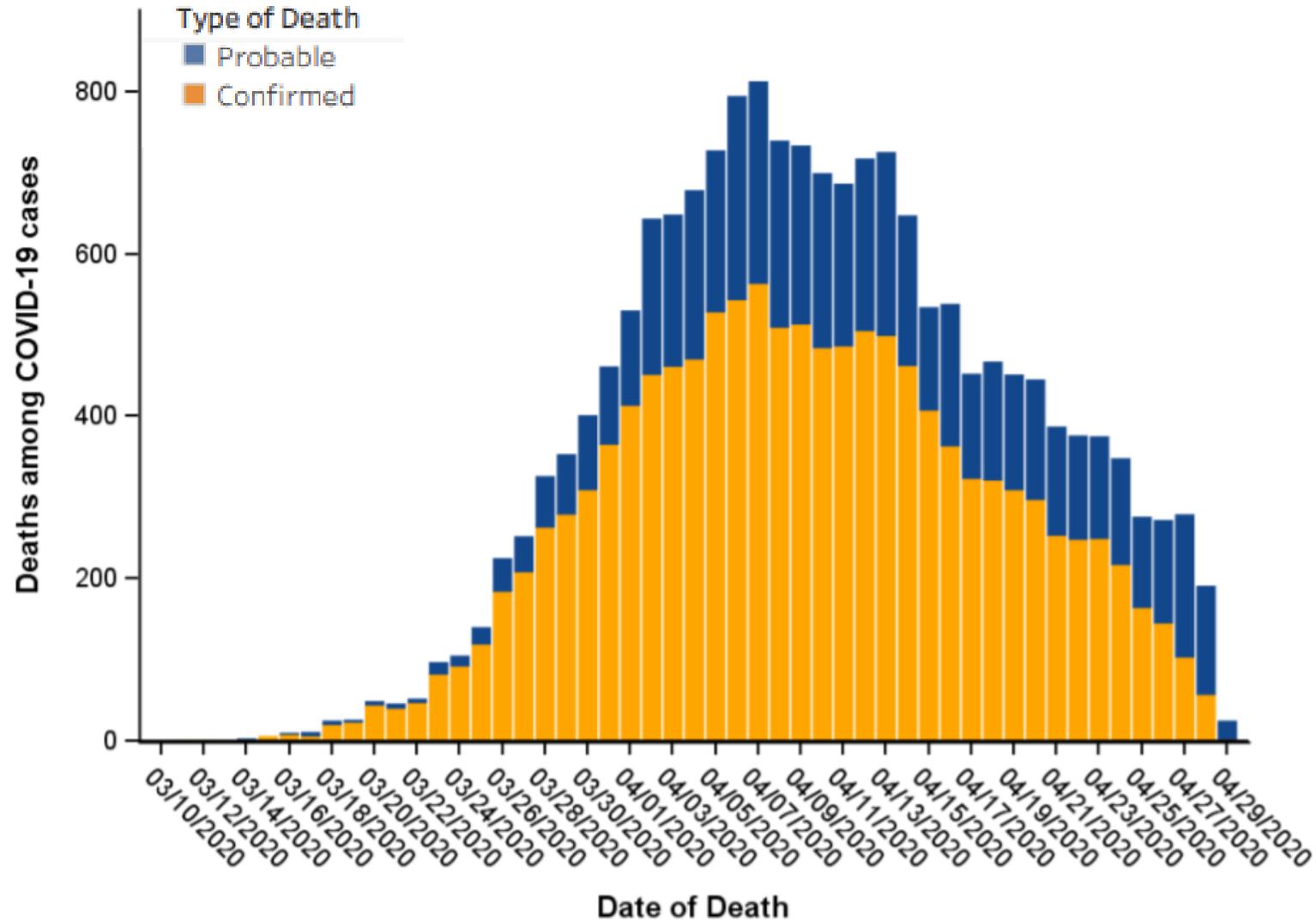


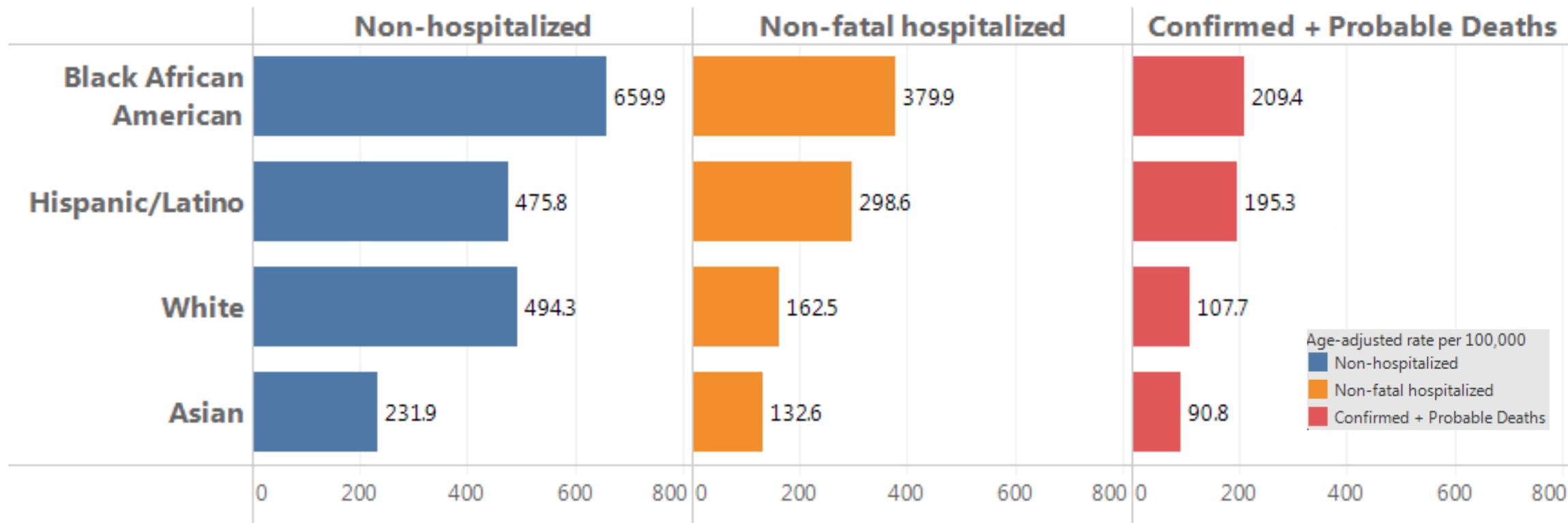
Percent of patients testing positive for COVID-19 by ZIP code in New York City as of April 30, 2020



# NUMBER OF DEATHS DUE TO PROBABLE OR CONFIRMED COVID-19, NYC

This chart shows the number of probable and confirmed COVID-19 deaths by date as of 4/29/20





RACIAL DEMOGRAPHIC DATA COMPLETE\* FOR

**37%** of non-hospitalized cases, **75%** of non-fatal hospitalizations and **82%** of persons known to have died

# COVID-19 HOSPITALIZATIONS AND DEATHS BY RACE/ETHNICITY, NYC

Age-adjusted rates of lab-confirmed COVID-19 non-hospitalized cases, estimated non-fatal hospitalized cases, and patients known to have died per 100,000 by race/ethnicity group, as of 4/27/2020

# Location of COVID-19-related Deaths (as of April 29, 2020)

LOCATION*	CONFIRMED COVID-19-RELATED* N=12,571	PROBABLE COVID-19-RELATED N=5,295
Hospital/emergency room	90%	51%
Nursing home/long-term care/hospice	6%	23%
Home	3%	25%
Dead on arrival/other/unknown	1%	1%

\*Location of death pending for 654 confirmed cases

## ER VISITS FOR NON-COVID-19 CONDITIONS

- At least 1,700 of the 17,866 deaths attributed to confirmed or probable COVID-19 in NYC occurred in homes or other non-healthcare settings
- Emergency department visits for non-COVID-19-related conditions have been at a historic low
- New Yorkers may be underutilizing emergency services

ADVISE PATIENTS  
TO SEEK  
EMERGENCY  
MEDICAL CARE

- Remind patients that, even during a pandemic, there are some symptoms for which treatment should always be sought immediately, including:
  - Trouble breathing
  - Persistent pain or pressure in the chest or abdomen
  - Cyanosis
  - Alterations in mental status
  - Seizure
  - Signs of stroke (e.g., new-onset weakness or numbness in the face, arm, or leg)
  - Uncontrolled bleeding
  - Severe or persistent vomiting or diarrhea
  - Any sudden and severe pain

## FACTORS ASSOCIATED WITH INCREASED RISK OF SEVERE COVID-19

- Data suggest that people aged  $\geq 50$  have an increased risk for severe COVID-19 (people aged  $\geq 65$  are at greatest risk), as do people with certain comorbidities
- Health conditions that may increase risk include:
  - Cancer
  - Diabetes
  - Heart disease
  - Kidney disease
  - Liver disease
  - Lung disease
  - Moderate to severe asthma
  - Obesity
  - Weakened immune system

## ADVICE FOR PATIENTS WITH RISK FACTORS FOR SEVERE COVID-19

- Advise patients with risk factors for severe COVID-19 to notify a health care provider if they develop symptoms of possible COVID-19
- This will enable timely recognition of symptoms that require escalation of care
- Consider proactively contacting such patients to support chronic disease management during physical distancing

## CLINICAL CHARACTERISTICS OF HOSPITALIZED NYC PATIENTS

- Retrospective study of 393 persons admitted to two NYC hospitals with COVID-19
  - Median age, 62 years; 61% male
- Most common presenting symptoms: cough (79%), fever (77%), dyspnea (57%)
  - Proportion with gastrointestinal symptoms (diarrhea, 24%; nausea and vomiting, 19%) higher than in large case series from China
- One-third required mechanical ventilation
- Substantial proportion deteriorated after hospitalization
  - 31% of those ultimately ventilated did not require supplemental oxygen during the first three hours after presenting to emergency room

Goyal P, Choi JJ, Pinheiro LC, et al. [Correspondence: Clinical Characteristics of Covid-19 in New York City](#). *NEJM*. April 17, 2020. doi: 10.1056/NEJMc2010419.

# CLINICAL CHARACTERISTICS OF AND INITIAL OUTCOMES AMONG HOSPITALIZED PATIENTS

- Case series of 5,700 patients hospitalized for COVID-19 in a single NYC health care network (March 1 – April 4, 2020)
- Common comorbidities: hypertension, obesity, diabetes
- Of those mechanically ventilated (1,151), 88% died
  - Mortality calculation only included those with known disposition at end of study period
    - 38 discharged, 282 died – included in calculation
    - 831 (72%) remained hospitalized – excluded from calculation
  - Patients included in mortality calculation had a short length of stay (median, 4 days)
    - Unlikely to be representative of typical course of a critical illness
  - Mortality may be much lower than 88% when all patients have been followed to either death or hospital discharge

Richardson S, Hirsch JS, Narasimhan M, et al. [Presenting Characteristics, Comorbidities, and Outcomes Among 5700 Patients Hospitalized With COVID-19 in the NYC Area](#). *JAMA*. April 22, 2020. doi:10.1001/jama.2020.6775.

# KAWASAKI- LIKE DISEASE WITH CARDIAC DYSFUNCTION

- Providers in United Kingdom, Italy, and some U.S. cities reporting pediatric patients with “overlapping features of toxic shock syndrome and atypical [incomplete] Kawasaki disease (KD)”<sup>1</sup>
  - Some patients positive by PCR for SARS-CoV-2
- Initial outreach to NYC pediatric ICUs identified 9 cases of incomplete or typical KD (Ages: toddler – adolescent)
  - Clinical presentation: Fever, abdominal pain, GI symptoms, conjunctivitis, rash, lymphadenitis, myocarditis, shock
  - PCR results for SARS-CoV-2: positive, negative, and indeterminate
- Relationship to COVID-19 infection not yet defined
- **Report to NYC DOHMH:** incomplete KD, typical KD, OR a toxic shock-like presentation in a patient aged ≤18 years
  - Report by calling the Provider Access Line: **(866) 692-3641**

<sup>1</sup><https://picsociety.uk/wp-content/uploads/2020/04/PICS-statement-re-novel-KD-C19-presentation-v2-27042020.pdf>

<sup>2</sup>Jones VG, Mills M, Suarez D, et al. [COVID-19 and Kawasaki disease: Novel Virus and Novel Case](#). *Hosp Pediatr*. 2020. doi: 10.1542/hpeds.2020-0123.

## SEROLOGY ASSAYS FOR SARS-COV-2

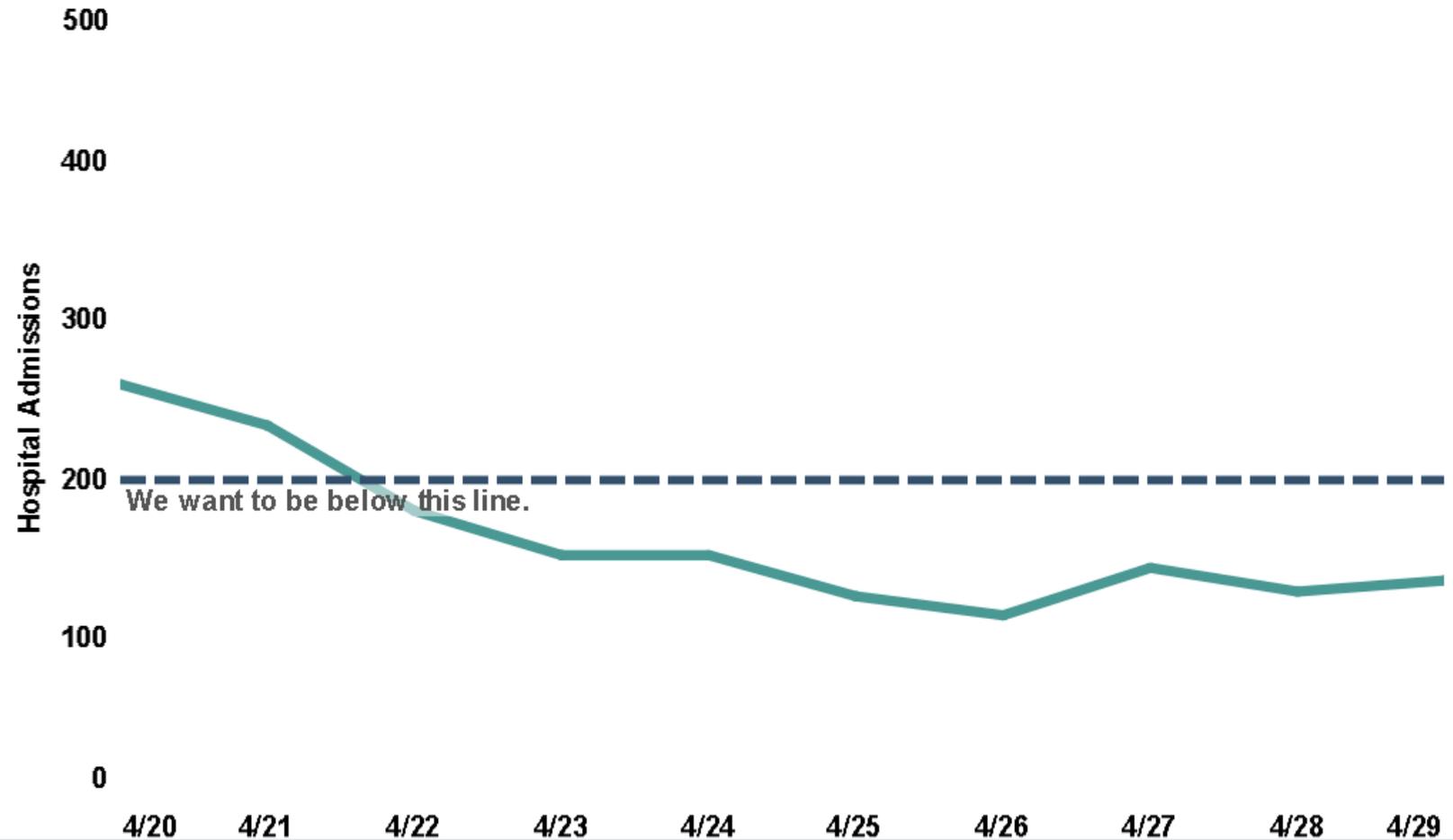
- **There is no evidence that people who recovered from COVID-19 and have antibodies are protected from future infection**
- Currently, serologic tests should **not** be used to:
  - Diagnose acute or past COVID-19
  - Assess immune status
- Potential utility of currently available serologic tests:
  - Serosurveys, clinical studies, identifying plasma donors
- Be cautious of numerous unvalidated and inaccurate SARS-CoV-2 serology test kits coming into the U.S. marketplace

See <https://www1.nyc.gov/assets/doh/downloads/pdf/han/alert/2020/covid-19-status-of-serologic-testing.pdf>;  
<https://www.idsociety.org/globalassets/idsa/public-health/covid-19/idsa-covid-19-antibody-testing-primer.pdf>; World Health Organization Scientific Brief April 24, 2020; Infectious Disease Society of America Antibody Testing Primer April 29, 2020

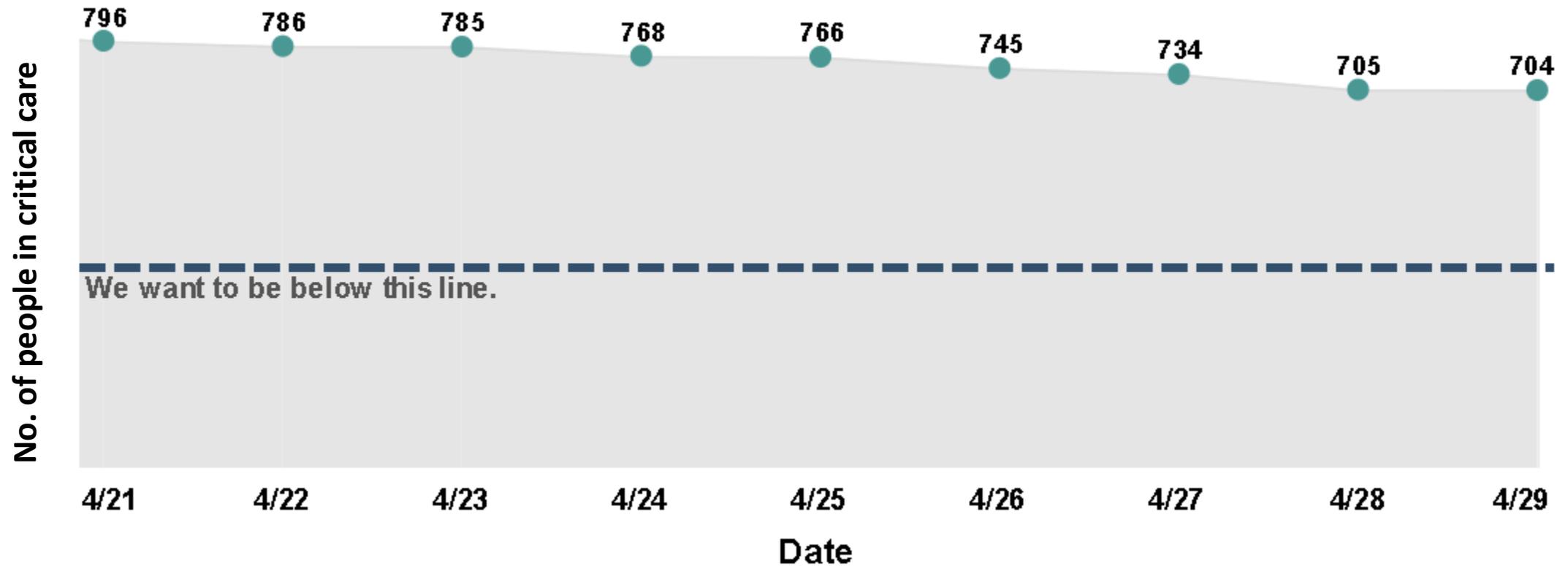
# WHEN CAN PHYSICAL DISTANCING BE RELAXED?

- NYC Health Department is closely monitoring key indicators to guide mitigation recommendations
- Indicators include:
  - Hospital admissions
  - Critical care capacity
  - Proportion of tests with a positive result
- Relaxation of restrictions will likely occur in phases
  - Instituted gradually, with careful monitoring of impact to calibrate response measures and prevent resurgence
  - Restrictions may be retained longer in certain settings or populations to protect persons at risk for severe COVID-19
- Updated COVID-19 Public Health Milestones:  
<https://www1.nyc.gov/site/doh/covid/covid-19-goals.page>

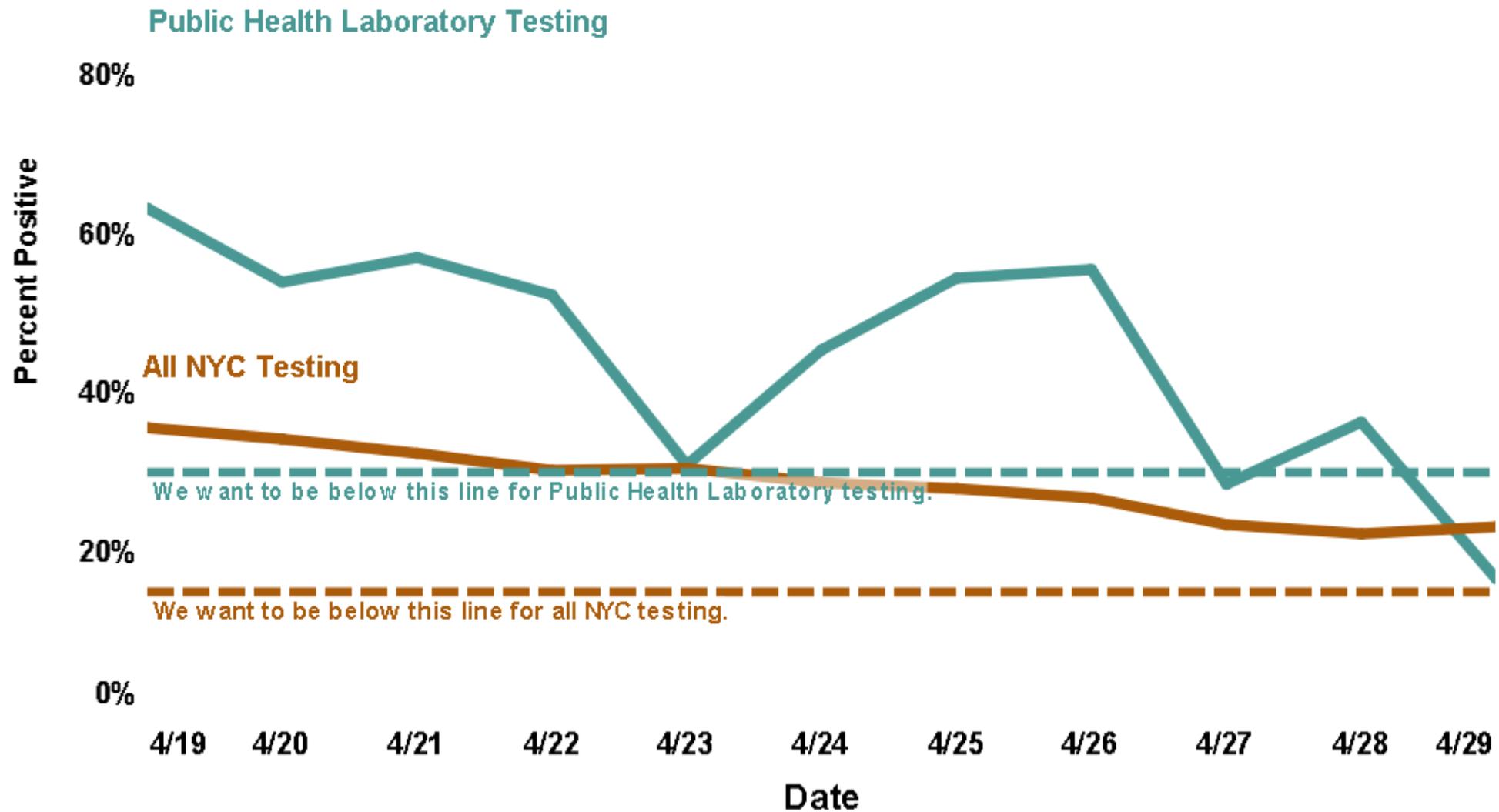
# PEOPLE ADMITTED TO NYC HOSPITALS FOR COVID-19-LIKE ILLNESS



# PEOPLE IN CRITICAL CARE ACROSS NYC HEALTH + HOSPITALS



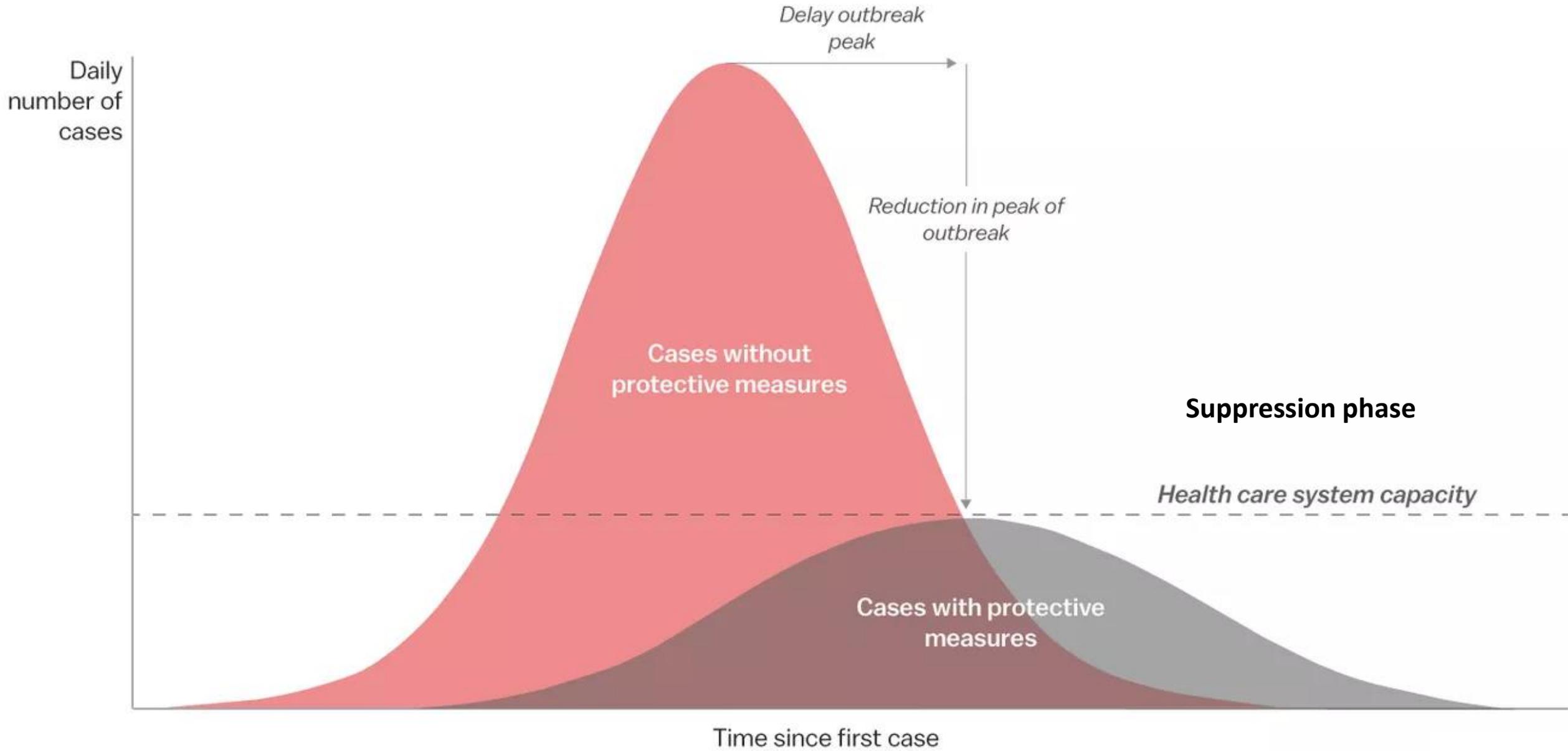
# PERCENT OF COVID-19 PCR TEST RESULTS THAT ARE POSITIVE



CONTACT  
TRACING FOR  
COVID-19 IN  
NYC

**Sarah Braunstein, PhD, MPH**  
NYC Contact Tracing Task Force  
Director, HIV Epidemiology Program  
Bureau of HIV

# Flattening the curve

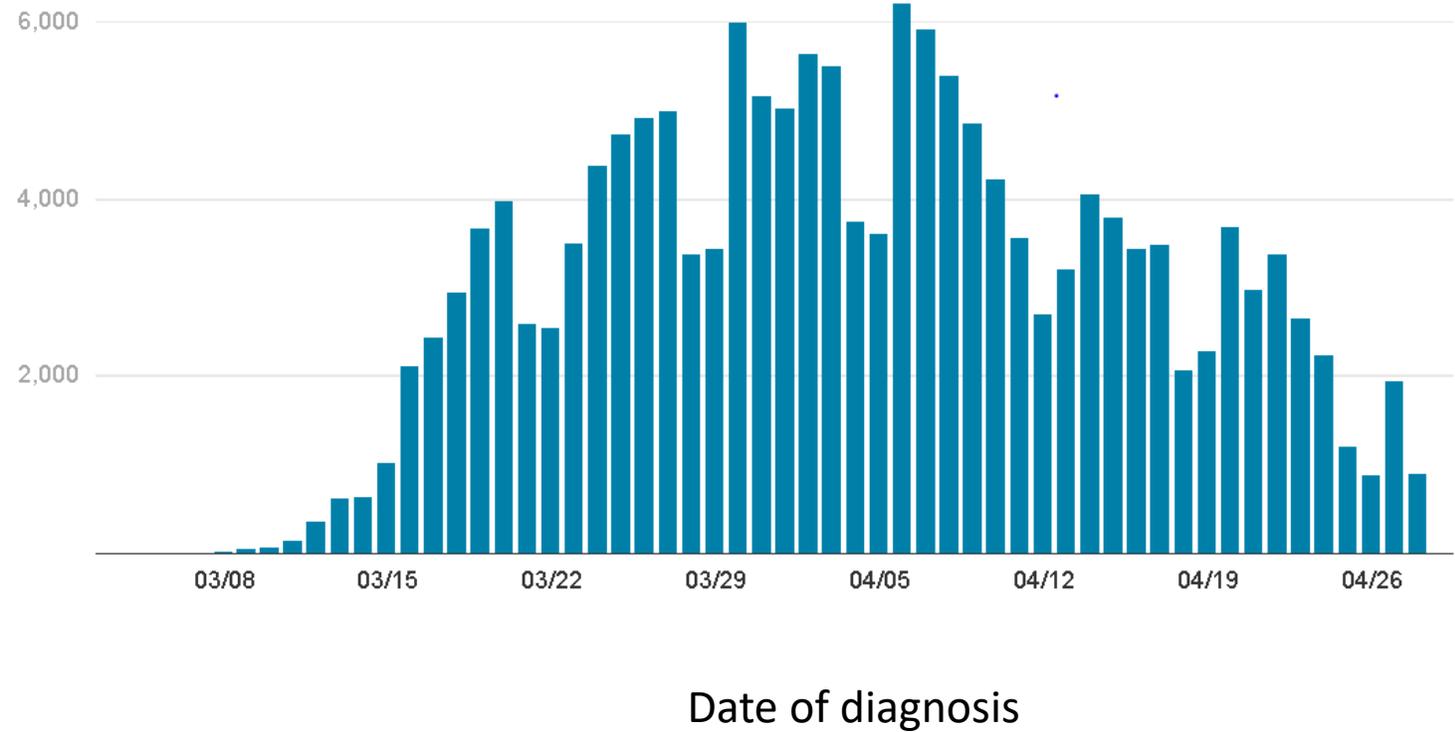


RECAP:  
WHERE  
WE ARE IN  
THE NYC  
COVID-19  
EPIDEMIC

- There is still widespread community transmission of COVID-19 in New York City and around the world
- We continue to see high numbers of new diagnoses and hospitalizations
- Together, we have begun to “flatten the curve,” evidenced by recent declines in daily case counts, emergency department visits and admissions
- During the eventual transition from mitigation to suppression, public health interventions will be needed to maintain control of the outbreak

# NUMBER OF COVID-19 CASES BY DIAGNOSIS DATE

3/3/20-4/29/20



# CONTACT TRACING

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## KEY STEPS

- Starts with a positive test that indicates a new case
- Case interviewed by public health staff, educated about isolation
- Case asked to recall everyone with whom they have had close contact during the timeframe while they may have been infectious
- Staff notify those individuals (“contacts”) of their potential exposure as rapidly as possible
- Contacts provided with education about quarantine, risk, and connection to testing (if indicated) and other services
- Contacts who develop symptoms counseled to isolate, referred for testing, and evaluated for need for medical care

<https://www.cdc.gov/coronavirus/2019-ncov/php/principles-contact-tracing.html>

# CONTACT TRACING

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## CORE PRINCIPLES

- Protect case confidentiality
- Approach individuals identified as cases and contacts in a sensitive manner
- Promptly identify and act on any new illness among contacts
- Provide comprehensive wrap-around services so that additional interventions (e.g., isolation/quarantine) are safe, feasible, acceptable and effective
- In NYC, health department staff including epidemiologists, public health nurses and public health advisors routinely conduct contact tracing for diseases such as TB, HIV and other STI, measles, etc.

# NYC COVID-19 Contact Tracing Program

Test ordered by provider is positive for SARS-CoV-2 and reported electronically to DOHMH

Contacts elicited from case using contact definition

Self-quarantine recommended until 14 days after their last exposure to case

Case and contacts enrolled in daily active monitoring program

Case interviewed by public health staff; isolation recommended

Contacts notified and educated about COVID-19 risk

Needs for services to support isolation/quarantine assessed

Referrals to supportive services, including medical care

# Contact tracing in congregate settings

Contact tracing of patients with COVID-19 potentially exposed at work and of patients in health care facilities and other residential and non-residential congregate settings is complex and will require specialized protocols and staffing

Priority settings include:

- Nursing homes and other long-term care facilities
- Homeless shelters
- Adult living residences
- Correctional facilities
- Crowded, multigenerational housing

# Workforce

**Contact tracing is a specialized skill that requires a strong, scalable network of staff with relevant knowledge and skills, including:**

- An understanding of and ability to maintain patient confidentiality
- Understanding of relevant medical terms and principles (e.g., exposure, infection, infectious period, incubation period, symptoms of disease, pre-symptomatic and asymptomatic infection)
- Excellent interpersonal and interviewing skills
- Basic skills in crisis counseling, and ability to refer patients and contacts for care and services
- Cultural competency appropriate to the local community
- Job roles such as disease investigation specialists, public health nurses, community health workers, public health social workers, and epidemiologists

<https://www.cdc.gov/coronavirus/2019-ncov/php/principles-contact-tracing.html>

<file:///C:/Users/sbraunstein/Documents/DOHMH/Covid-19/Contact%20tracing/Workforce/NACCHO%20Contact-Tracing-Statement-4-16-2020.pdf>

# WHEN MIGHT CONTACT TRACING PROGRAM BEGIN?

- Indicators being followed to guide the initiation of contact tracing include:
  - Hospital admissions
  - Critical care capacity
  - Positive test rates
- We are currently developing data systems and workforce to support program launch

# RESOURCES ON COVID-19

## NYC DOHMH:

- Provider page: [on.nyc.gov/covid19provider](https://on.nyc.gov/covid19provider)
- Data page: [on.nyc.gov/covid19data](https://on.nyc.gov/covid19data)
- Weekly webinars: Fridays, 2 PM (sign up on provider page)
- Dear Colleague COVID-19 newsletters (sign up for *City Health Information* subscription at: [nyc.gov/health/register](https://nyc.gov/health/register))
- NYC Health Alert Network (sign up at <https://www1.nyc.gov/site/doh/providers/resources/health-alert-network.page>)
- Provider Access Line: **866-692-3641**

## Other sources:

- CDC: <https://www.cdc.gov/coronavirus/2019-ncov/index.html>
- Vital Strategies/Resolve to Save Lives: <https://www.vitalstrategies.org/covid>
- ASTHO: <https://www.astho.org/COVID-19>
- NACCHO: <https://www.naccho.org/programs/our-covid-19-response>

QUESTIONS?

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