COVID-19 HEALTHCARE PROVIDER UPDATE

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

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

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

<table>
<thead>
<tr>
<th>Borough</th>
<th>Rate per 100,000 people</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Bronx</td>
<td>2,513</td>
<td>36,969</td>
</tr>
<tr>
<td>Staten Island</td>
<td>2,339</td>
<td>11,752</td>
</tr>
<tr>
<td>Queens</td>
<td>2,011</td>
<td>50,304</td>
</tr>
<tr>
<td>Brooklyn</td>
<td>1,585</td>
<td>42,986</td>
</tr>
<tr>
<td>Manhattan</td>
<td>1,059</td>
<td>20,121</td>
</tr>
<tr>
<td>Citywide</td>
<td></td>
<td>162,212</td>
</tr>
</tbody>
</table>
COUNT OF COVID-19 CASES AND PERCENT OF PATIENTS TESTING POSITIVE BY ZIP CODE AS OF 4/30/20
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
COVID-19 HOSPITALIZATIONS AND DEATHS BY RACE/ETHNICITY, NYC

RACIAL DEMOGRAPHIC DATA COMPLETE* FOR
37% of non-hospitalized cases, 75% of non-fatal hospitalizations and 82% of persons known to have died

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)

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

*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
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 ≥50 have an increased risk for severe COVID-19 (people aged ≥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

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

**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)”\(^1\)
  - 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: \((866) 692-3641\)

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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

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

We want to be below this line.
PEOPLE IN CRITICAL CARE ACROSS NYC HEALTH + HOSPITALS

No. of people in critical care

We want to be below this line.

Date

PERCENT OF COVID-19 PCR TEST RESULTS THAT ARE POSITIVE

Public Health Laboratory Testing

We want to be below this line for Public Health Laboratory testing.

We want to be below this line for all NYC testing.

Date

Percent Positive

0% 20% 40% 60% 80%


All NYC Testing
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

- Delay outbreak peak
- Reduction in peak of outbreak
- Cases without protective measures
- Cases with protective measures
- Health care system capacity

Time since first case

Source: CDC
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

- 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

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

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
- Data page: 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)
- 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:
- Vital Strategies/Resolve to Save Lives: https://www.vitalstrategies.org/covid
- ASTHO: https://www.astho.org/COVID-19
QUESTIONS?