

## COVID-19 Outbreaks at Two Construction Sites — New York City, October–November 2020

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## **Abstract**

During October 23–November 16, 2020, the New York City Department of Health and Mental Hygiene investigated COVID-19 outbreaks at two construction sites. Challenges in adhering to the New York State Department of Health “Interim COVID-19 Guidance for Construction” were reported. To minimize outbreaks, jurisdictions should increase tailored outreach to the construction industry emphasizing infection prevention.

**Key words:** COVID-19, SARS-CoV-2, Construction, New York City

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On June 8, 2020, months after the construction industry had ceased non-essential construction operations in New York City (NYC) due to the coronavirus disease 2019 (COVID-19) pandemic, 33,556 non-essential construction sites were allowed to reopen [1]. To proceed with reopening, owners of construction projects and their employees and contractors were required to comply with the New York State Department of Health (NYS DOH) “Interim COVID-19 Guidance for Construction” [2]. This case report of COVID-19 outbreaks at two construction sites investigated by NYC Department of Health and Mental Hygiene (DOHMH) during October 23–November 16, 2020 highlights challenges within the construction industry in adhering to aspects of the reopening guidelines, contributing to delays in identifying, intervening in, and slowing COVID-19 outbreaks at construction sites.

## **Case Report**

### **Site A**

On October 23, 2020, four employees of a heating, ventilating, and air conditioning (HVAC) company who worked during October 16–20 and had positive SARS-CoV-2 test results during October 20–23 were referred to DOHMH investigators. The referral process is standardized, and came from a non-DOHMH agency leading contacting tracing and the DOHMH COVID-19 call center, both of whom refer persons with positive SARS-CoV-2 test results associated with a facility to DOHMH investigators. On October 27, DOHMH investigators received a separate referral for three employees working for an electrical company during October 16–20 and had positive SARS-CoV-2 test results during October 20–21. Through conversations with construction company managers, and as needed with the employees with positive SARS-CoV-2 test results, investigators obtained information about 1) presence (yes/no) and onset date of symptoms, 2) dates worked, 3) close co-worker contacts, and 4) adherence to the reopening guidelines at the worksite. Through these conversations, investigators determined that both the HVAC and electrical companies worked at the same construction site, a 10,000 square foot Midtown Manhattan penthouse occupying the 55<sup>th</sup>–57<sup>th</sup> floors (site A), and that five additional companies were also working onsite. Employees reported a single elevator was used

to transport the 35-person crew once each morning and evening, with daytime use prohibited. Lunches were eaten and breaks were taken indoors at the work site, which were the only times employees reported not using face coverings. HVAC systems were being repaired, windows could not be opened, and stairway doors remained closed because of fire code regulations. Managers reported different paid sick leave policies and testing requirements for returning to work after quarantine, used to keep persons who might have been exposed to COVID-19 away from others, or isolation, used to separate persons infected with COVID-19 from those who are not infected [3]. Managers also discussed differences in their understanding about 1) who was required to report employees exposed to and testing positive for SARS-CoV-2 and 2) if they had to report to DOHMH or NYS DOH or to both. Onsite health screening assessments, which included a temperature check, symptom, travel and exposure history, and attendance for all employees, were recorded daily in a logbook.

During October 20–27, among the 35-person crew working at site A, a total of 16 (46%) employees tested positive for SARS-CoV-2. They worked for six of the seven companies working at site A, only two of whom reported employees exposed to or testing positive for SARS-CoV-2. Among the employees who tested positive for SARS-CoV-2, 11 were confirmed cases, four probable cases, and one suspected case [4]. Two employees worked for the general contractor and 14 worked for subcontractors (three electricians, three carpenters, four HVAC technicians, two metalworkers, and two plumbers). Among 12 employees with symptom history available, 10 were symptomatic, with onsets occurring during October 18–23. All employees were male, and the median age was 38 years (range = 18–60 years). Among 12 employees with race/ethnicity available, one was non-Hispanic Asian, one was non-Hispanic Black/African American, six were Latino/Hispanic, and four were non-Hispanic White.

During conversations, 19 employees were identified as exposed, 17 of whom quarantined for 14 days. The general contractor “bomb cleaned” the site and voluntarily stopped all work during

October 20–November 2, 2020. None of the exposed employees later tested positive for SARS-CoV-2.

### **Site B**

Five days after initiating the site A investigation, on October 28, four employees who worked for a different general contracting company during October 21–26 and had positive SARS-CoV-2 test results during October 23–26 were referred to DOHMH investigators. The same day, DOHMH received a separate referral for four employees from an electric company who worked during October 19–21 and had positive SARS-CoV-2 test results during October 21–23. Through conversations with construction company managers, and as needed with the employees with positive SARS-CoV-2 test results, DOHMH investigators determined that the two companies were working at the same Upper West Side of Manhattan construction site (site B) that included two above-grade buildings and a three-level below-ground cellar. Managers and employees reported using face coverings except during lunch and breaks. They also reported different types of lunch and break spaces; some used enclosed shanties or trailers, while others used a three-sided structure or an outdoor space. HVAC and electric systems were being installed, and windows in parts of site B could not be opened. Managers expressed differences in their understanding about the requirements for reporting employees exposed to and testing positive for SARS-CoV-2 to DOHMH and NYS DOH. Daily health screening assessments, which included a temperature check, symptom, travel and exposure history, and attendance of employees, were documented in a logbook. A negative SARS-CoV-2 test result was required for all employees to return to work after isolation or quarantine.

During October 21–29, among the 450 employees working at site B, a total of 20 (4%) employees tested positive for SARS-CoV-2. They worked for six of the 70 companies working at site B, only two of whom reported employees exposed to or testing positive for SARS-CoV-2. Among the employees who tested positive for SARS-CoV-2, 13 were confirmed cases, five probable cases, and two

suspected cases [4]. No hospitalizations or deaths were reported. Included among these employees were four who worked for a general contractor and 16 who worked for subcontractors (13 electricians, one carpenter, and two metal workers). Among 13 (65%) employees with symptom history available, nine were symptomatic, with onsets during October 20–26. Information about sex was available for 15 (75%) employees, 12 of whom were male. The median age was 44 years (range = 25–59 years) and among eight (40%) persons with information on race/ethnicity, two were non-Hispanic Black/African American, three were Latino/Hispanic, and three were non-Hispanic White. DOHMH recommended that 15 exposed employees follow CDC recommendations to quarantine for 14 days [3]. During October 30–November 1, all construction work was voluntarily halted. The general contractor “fog cleaned” the worksite and offered free onsite SARS-CoV-2 testing. No new cases were identified among the 201 employees tested. One of the exposed employees later tested positive for SARS-CoV-2 on November 14.

## **Discussion**

Prior to the COVID-19 pandemic, construction workers were already at risk for severe job-related injury and death [5]. Through these two investigations, DOHMH found that construction workers face the additional risk of exposure to SARS-CoV-2. Consistently maintaining physical distance was difficult given the limited access to an elevator at site A, use of the enclosed break and lunch spaces at site B, and work done in small spaces and in pairs. Additionally, managers described confusion about who was responsible for communicating with the health departments, what type of information was reportable, and to which health department (NYS DOH, DOHMH, or both) they should be reporting. Employees also reported confusion about COVID-19 protocols and policies given companies working at the same construction site had varied approaches to isolation, quarantine, SARS-CoV-2 testing, and paid sick leave. Although sites A and B both documented health

screening assessments and attendance of employees onsite in logbooks, the logs were often incomplete and inaccurate.

In 2019, NYC residents working in the construction industry self-identified as Asian (10%), Black/African-American (18%), Hispanic/Latino (42%), and White (28%) [6]. And in these two investigations, 20 cases (56%) with information on race/ethnicity self-identified as non-Hispanic Asian (5%), non-Hispanic Black/African American (15%), Latino/Hispanic (45%), and non-Hispanic White (35%). Given the SARS-CoV-2 exposure risks to construction workers and the increased COVID-19-associated morbidity and mortality faced by racial and ethnic minority groups [7, 8], tailored programs and practices are needed to expand testing, contact tracing, isolation, quarantine, and vaccination to help mitigate the hazards from SARS-CoV-2 transmission at construction sites [9].

In response to these two outbreaks, DOHMH assisted construction companies with improved implementation and adherence to reopening guidelines. Outreach included helping employers understand the rationale for the duration of a worksite closure; physical distancing; limiting the number of persons in and use of shanties, trailers and elevators; risk reduction while eating lunch and taking breaks; when and how to clean equipment; proper ventilation; isolation and quarantine requirements; offering paid sick leave; proper documentation of health screening assessments and attendance logs; and detailed instructions on communicating with and reporting to NYS DOH and DOHMH. This assistance is now available to all construction companies and also includes tools to enable construction companies to conduct their own contact tracing.

The findings in this report are subject to limitations. Determining where construction workers were exposed to SARS-CoV-2 was challenging, especially in the setting of community transmission. Given inconsistencies in the health screening assessment and attendance logs from site A, it is possible that attack rates and number of exposed employees differed from those reported. Finally, race/ethnicity are missing for more than one third of cases described in these outbreaks.

Adhering to some reopening guidelines, including consistent physical distancing, communicating with health departments, training workers on COVID-19 guidelines, and conducting accurate health screenings and attendance was challenging for owners of construction projects and their employees and contractors. Health departments are therefore encouraged to work with construction companies and their employees in proactive SARS-CoV-2 exposure risk mitigation efforts to minimize future COVID-19 outbreaks.

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