

Letter to the Editor

Identifying community spread of COVID-19 via a free drive-through screening event

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To the Editor—The lack of resources for and limitations placed upon testing for the 2019 novel coronavirus disease (COVID-19) have been well documented.^{1–3} On March 12, 2020, the governor of Delaware declared a state of emergency with identification of the first local cases of COVID-19, which led to an increase in testing interest among the public. To offload emergency department demand, on March 13, Delaware's largest private not-for-profit healthcare system conducted a 1-day drive-through testing event.

The 4-hour event was held in a public space separate from the healthcare system's campuses. Staff wore appropriate personal protective equipment (gowns, gloves, and masks with eye protection). They changed gloves and performed hand hygiene between each participant. Participants remained in their vehicles and were registered utilizing paper forms. Insurance information was not collected. All were provided instructions regarding self-isolation until results were available. At the time, testing was only available via the state public health laboratory and was restricted to those demonstrating symptoms and having a defined risk factor, such as travel or contact with a known case. For this event, asymptomatic persons could not be tested, but risk factors were not required to be present. All specimens were sent to a reference laboratory (Viracor Eurofins, Lee's Summit, MO) and no other viral testing was performed. Negative cases were notified of their results by text, e-mail, or phone, according to their preference; positive cases were called, were provided with self-isolation and other instructions, and were reported to the Delaware Division of Public Health for follow-up.

Participants provided demographic information and attested to the following factors: (1) presence of symptoms: fever and/or chills, difficulty breathing, cough, or sore throat; (2) risk factors such as close contact with a known case or travel from an area with COVID-19 transmission during that period (eg, China, Italy, Iran, Japan, South Korea; Washington or New York); and/or (3) under self-quarantine or being monitored by a health department. Descriptive statistics examined the prevalence of demographic characteristics, clinical characteristics, and risk factors in this population, including χ^2 statistics to assess bivariate associations.

Analyses were conducted using Stata version 15.1 software (StataCorp, College Station, TX).

We screened 539 individuals; 2 results were invalid, leaving 537 individuals with completed testing. Table 1 reports the demographic and clinical characteristics of the positive cases and the total participant population. One-quarter of those tested reported only 1 symptom, while nearly half indicated having 2 symptoms. We detected no differences in symptoms or risk factor profiles by gender, age, or state of residence (all $P > .05$).

Of the 537 persons tested, we confirmed 12 positive cases, for a COVID-19 prevalence rate of 2.2%. Fever and/or chills were the most commonly reported symptoms, followed by cough, sore throat, and difficulty breathing. Of the 12 positive cases, 2 reported a positive risk-factor profile. There were no statistically significant differences in demographic characteristics or risk-factor profiles between positive and negative cases. Positive cases were more likely to report fever and/or chills than were negative cases (83% vs 56%, respectively; $P = .05$).

This drive-through event documented community transmission for the first time in our state. In the 2 months after the event was held (as of May 28, 2020), 9,096 additional positive cases were identified in Delaware, with numbers increasing daily. Public screening events, including drive-through testing, are effective strategies for identifying disease transmission and providing additional details on the ever-changing risk of COVID-19 to the community.⁴

These events are also critical for identifying individuals at high risk for transmission, but they would not have been identified with the strict criteria used by the state and federal government at the time. Of the 12 positive cases identified, 1 was a teacher and 1 was a healthcare worker; neither qualified for testing by the state health department. Both individuals, if not identified, could have unknowingly infected many susceptible individuals. As our understanding of the disease deepens, it is critical to relax strict testing criteria to identify both symptomatic and asymptomatic individuals who can unknowingly transmit this virus.

Everyone tested at this event had at least 1 clinical symptom. Although fever and chills were more likely to be reported among cases than noncases, we detected no difference in the total number of symptoms reported between these 2 groups, with approximately one-quarter reporting 3 or more symptoms. Clearly, many other respiratory infections are cocirculating, although we did not conduct additional testing to confirm other pathogens. This highlights

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Cite this article: Drees ML, et al. (2021). Identifying community spread of COVID-19 via a free drive-through screening event. *Infection Control & Hospital Epidemiology*, 42: 778–780, <https://doi.org/10.1017/ice.2020.341>

Table 1. Demographic and Clinical Characteristics of 537 Participants in COVID-19 Drive-through Testing Event, March 13, 2020

Characteristic	Positive Cases N = 12		Total Population N = 537	
	No.	%	No.	%
Gender				
Female	5	41	306	56.9
Male	7	58	231	43.0
Age, y				
0–9	0	0	17	3.1
10–19	1	8	29	5.4
20–29	1	8	83	15.4
30–39	2	16	123	22.9
40–49	2	16	91	16.9
50–59	3	25	92	17.1
60–69	3	25	72	13.4
70–79	0	0	26	4.8
≥80	0	0	4	0.7
State of residence				
Delaware	8	66	407	75.7
Other	4	33	130	24.2
Clinical symptom present				
Fevers/Chills	10	83	304	56.6
Cough	9	75	428	79.7
Difficulty breathing	2	16	174	32.4
Sore throat	3	25	236	43.9
1 symptom	3	25	128	23.8
2 symptoms	6	50	240	44.6
3 symptoms	3	25	126	23.4
All 4 symptoms	0	0	43	8.0
Risk factor present				
Traveled to area with local transmission	1	8	67	12.4
Close contact with a positive case	0	0	56	10.4
Quarantined or monitored by health department	1	8	55	10.2
No risk factors	10	83	379	70.5
Only 1 risk factor	2	16	139	25.8
2 risk factors	0	0	18	3.3
All 3 risk factors	0	0	1	0.19

the ongoing challenge of differentiating COVID-19 from more common respiratory illnesses in the absence of widespread testing. As we enter the fall, officials estimate that we may see a second wave of COVID-19 occur simultaneously with other more common respiratory illnesses including influenza. Healthcare systems will need to prepare for the impact of this on hospital resources. Similar symptomology and a lack of testing will lead to challenges in differentiating COVID-19 from other respiratory illnesses.

This public event was free, financially supported by a private healthcare system, and set up in <24 hours. The need for such an event to document community spread of COVID-19 speaks to

the failure in the United States to support a public health system that could provide easily available testing to identify, isolate, and halt community spread of this highly contagious disease. Both private and public health systems need to work together to expand capacity for testing, enabling the public health system to perform the necessary isolation and contact tracing that are required to slow and eventually stop the continued spread of COVID-19.

Acknowledgments. We acknowledge the healthcare providers who screened members of the community during this drive-through testing event, the clerical

staff who entered data, and Maddie Brooks, who geocoded the address information for all study participants.

Financial support. This study was funded by ChristianaCare, Wilmington, Delaware.

Conflict of Interest. All authors report no conflicts of interest relevant to this article.

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The role of multidisciplinary infection prevention teams in identifying community transmission of SARS-CoV-2 in the United States

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To the Editor—The first case cluster of what would be later called coronavirus disease 2019 (COVID-19) was reported in Wuhan, China, on December 31, 2019.¹ By January 20, 2020, the first imported case in the United States was identified in a returning traveler.² The first community-transmitted case of COVID-19 was not identified in the United States until February 26, 2020, at the University of California Davis Medical Center (UCDMC) in Sacramento, California, in a patient without known travel to China or contacts with a known patient with COVID-19. Prior to this, the Centers for Disease Control and Prevention (CDC) guidance had recommended SARS-CoV-2 testing only in these patient populations. Through the coordinated efforts of UCD’s multidisciplinary infection prevention (IP) program, the patient was identified as a possible COVID-19 case and obtained SARS-CoV-2 testing.

On February 15, 2020, the case patient presented to a local community hospital with complaints of a flu-like illness. She decompensated shortly after her admission, requiring intubation, vasopressors, and progressively greater ventilatory support. Arrangements were therefore made to have her transferred to UCDMC for the possible initiation of extracorporeal membrane oxygenation for acute respiratory distress syndrome. She arrived at UCDMC on hospital day 5 (HD5). On HD7, UCDMC’s IP team conducted its weekly rounds in the medical intensive care unit.

The IP team is a multidisciplinary team of an infectious diseases (ID)-trained physician, an ID-trained pharmacist, an IP nurse, and a unit nurse champion (Table 1). This team rounds daily in a different ICU with a recurring weekly schedule for individual units. During rounds, each patient is reviewed through the electronic medical record and via discussion with the bedside nurse to evaluate for possible infection prevention and antimicrobial stewardship interventions. Efforts are focused on reducing

unnecessary lines and devices, ensuring appropriate use of isolation precautions, and improving antibiotic utilization. Recommendations are given directly to the bedside nurse when applicable or are later directed to the primary physician. At times, patients with complicated, presumed infectious processes are also referred to the Infectious Diseases Consultation Service for further evaluation. Rounds typically require an hour daily, depending on the complexity of the patient population and the size of the unit. These teams have been active at UCDMC since the beginning of 2018 and are considered an important arm of UCDMC’s IP program.

At this point, the patient remained intermittently febrile but stable on the ventilator with an improving PaO₂/FiO₂ and minimal respiratory secretions. Laboratory testing was remarkable, with a white blood cell count of 8.0 cells/mm³ (2.5% lymphocytes), sodium of 126 mmol/L, and worsening creatinine of 1.89 mg/dL. Computed tomography images of the chest showed confluent consolidative and ground glass opacities in the right upper and (to lesser extent) middle lobes. Testing for common respiratory pathogens was negative. She had been in good health prior to her illness, with no significant travel or exposure histories. The patient’s case was discussed with her bedside nurse, who confirmed that SARS-CoV-2 was considered by her primary team, but given the absence of exposures, testing for this agent was not pursued. We then made the decision for the bedside nurse to further clarify patient’s occupational, travel, and potential exposure histories with her family, with plans for the IP team to reassess later that morning.

The patient’s bedside nurse subsequently reported that the patient worked in the service industry and had had direct and close interaction with multiple individuals on a daily basis. One of these individuals had returned from China a few weeks prior and was briefly detained by customs upon arrival. No further details of this encounter were available. The community in which she worked was located southwest of Sacramento near a local Air Force base, where a number of diplomatic evacuees had been in recent quarantine. We then elected to review her case with the Director of

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Cite this article: Crabtree SJ and Cohen SH. (2021). The role of multidisciplinary infection prevention teams in identifying community transmission of SARS-CoV-2 in the United States. *Infection Control & Hospital Epidemiology*, 42: 780–781, <https://doi.org/10.1017/ice.2020.360>

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