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Joining forces to administer COVID-19 vaccines

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Abstract: The national vaccination effort for novel coronavirus 2019 (COVID-19) is among the greatest operational challenges America has ever faced, the success of which depends upon reaching communities across the United States. In this Commentary, the Executive Dean of Ohio University's Heritage College of Osteopathic Medicine (OUHCOM) describes the logistics and processes of vaccine delivery at OUHCOM, both on campus and beyond. Among those logistical considerations is a partnership with the local health department and hospital system, as well as student involvement in vaccination efforts.

Keywords: COM; coronavirus; COVID-19; distribution; logistics; vaccination.

The national vaccination effort for novel coronavirus 2019 (COVID-19) is one of the greatest operational challenges America has ever faced, the success of which depends upon reaching communities across the United States, according to the National Strategy for the COVID-19 Response and Pandemic Preparedness document issued by President Biden in January 2021 [1]. As the federal government works to expand vaccination supply, community healthcare organizations are facing a daunting logistical charge: getting shots into patients' arms as quickly as possible.

In small rural settings, where resources, staff, and venues may be limited, the task requires "all hands on deck." In Athens, Ohio, public health servants and local providers found a valuable vaccination partner in Ohio University's Heritage College of Osteopathic Medicine.

The story of the Heritage College is a familiar one among colleges of osteopathic medicine. Situated in the rolling Appalachian foothills, the university's main campus is the county's largest employer and major economic driver [2]. This economic support is paralleled by the healthcare

support afforded to the region by the university in partnership with the Athens City-County Health Department (ACCHD) and OhioHealth, the predominate healthcare provider in our area.

Through health education, screenings, and immunizations, the college's institutes and community health programs have long bolstered the efforts of our local healthcare teams, most notably in service to southeast Ohio's medically underserved populations – but COVID-19 raised the bar.

It quickly became apparent that a coordinated pandemic response – particularly immunizing people in the county against COVID-19 – would require an unprecedented synthesis of public health, education, private healthcare, and care provision efforts. Protecting our community became the highest priority, and the bright lines that have traditionally defined the boundaries of our respective organizations blurred, with each organization filling needs from logistics to personnel.

Logistics

One distinct advantage that our team has at its disposal is the college's newly constructed medical education center, Heritage Hall. Designed to enhance the health and well-being of occupants, the facility features a large and open atrium, state of the art ventilation systems, and full accessibility. Three stories of glass conference spaces and classrooms lend themselves to patient monitoring. Above all, the building is not slated for occupancy for another seven months, making it an ideal location for patient vaccinations.

With the realization that we had capacity to administer mass vaccinations at a single facility, ACCHD and OhioHealth O'Bleness Hospital agreed to pool their vaccines. A referral process from the health system to public health was developed, and an electronic scheduling system was quickly put in place for patients – a great relief to the local health department, which fielded approximately 2,500 calls on the day it opened its phone lines for vaccination appointments.

In close coordination with ACCHD, we worked to develop a circular pedestrian flow through Heritage Hall. Our goal was to mitigate risks related to viral spread

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without impeding the efficiency of our operations. Upon entering the building, patients are funneled into a long hallway, where separate stations are set up for registration and completing paperwork. The hallway opens into a 2,500 square foot space, which serves as a socially distanced waiting room and our vaccination room. Multiple vaccination stations staffed with public health nurses are scattered along the far side of the room.

After their shot is administered, patients make their way to a postvaccination checkout table, then proceed down a parallel hallway to our grand atrium. At 4,000 square feet, the atrium is currently set up to safely accommodate observations of up to 60 people at a time, with capacity to nearly double that figure. A separate room off the atrium serves as an emergency treatment center, in case of adverse reactions.

Communication via two-way radios (“walkie talkies”) helps staff to facilitate a steady, yet socially distanced, flow of patients through the facility. The city police department handles traffic and vehicular flow with dedicated personnel.

Personnel

On clinic days, ACCHD’s 13 full time employees – including nurses, a physician director, and administrative staff – take the lead. Each has a designated role to prepare for and fulfill in the clinic. Staff assignments include logistics management, check in, shot preparation, shot administration, check out and postvaccination monitoring.

University personnel are tasked with organizing clinic volunteers. These include clinical faculty volunteers (overseen by the Heritage College’s executive director for Community Health Programs) and student volunteers (overseen by the senior director of community relations in Ohio University’s College of Health Sciences and Professions).

Currently, student roles include assisting with check in, guiding patients to the various stations, monitoring for adverse effects after vaccination, and disinfecting surfaces. To date, only professional staff are assisting with vaccinations, but we are planning to integrate student vaccinators under supervision as clinic volume increases.

Adaptability and perpetual communication have been key to our collective success in this constantly shifting landscape. Each week, team leaders gathers virtually to

identify issues and plot logistics for the following week’s clinics.

The marriage of public health, education, private healthcare, and care provision has resulted in innovative problem solving at every step. As of February 22, 2021, the clinic had administered first vaccine doses to 3,398 patients and second vaccine doses to 1,570 patients since the clinic launched on January 7, 2021. We expect that our singular, county wide vaccination clinic could administer over 1,000 vaccines per day in its current form. At this pace, we could theoretically vaccinate our entire county [3] via this collaborative effort in a period of two to three months, given adequate vaccine supply. Many colleges of osteopathic medicine, with their focus on primary care and impacting communities, are well poised to have a similar impact in their communities and regions.

Our efforts will not stop there. The Heritage College Community Health Programs was recently recognized as an Ohio COVID-19 vaccine provider and is currently working with Ohio Department of Health and the Ohio Emergency Management Agency to take vaccines on the road to underserved communities throughout our service region through the use of our two fully equipped mobile health units. But my hope is that the most impactful changes are yet to come, as local healthcare partners build upon these bonds forged during the pandemic to better serve our community in postpandemic times.

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