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Vaccine

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Letter to the Editor

Drive through COVID19 vaccination for developmentally disabled persons



Dear Editors,

We read with interest the Commentary by Wood et al. [1] describing a walk-through mass vaccination center, which is highly efficient but not possible for a segment of developmentally disabled and non-ambulatory patients. It was necessary for our agency of group homes serving people with intellectual and developmental disabilities to find a solution for vaccinating high risk residents who live in congregate settings. This population has a historical disproportionate burden of COVID19 mortality compared to the general population. The United States Centers for Disease Control recognized the priority needed for developmentally disabled adults as well as recognition of barriers to delivery [2]. Banks et al. [3] reported a median throughput of 5 minutes per vaccination in a drive-through clinic of neurotypical adults and children receiving influenza vaccine. Review of PubMed could not identify any literature specifically describing the logistics of vaccine delivery in patients with developmental disability except for sparse historical accounts in large institutions.

We formed a partnership with Garnet Health to achieve vaccination of the patients who could not be served by the Federal Program of on-site vaccination. A pilot cohort of 70 potential patients was identified on 1/25/21.

The following measures were taken to increase the speed and ease comfort for the participants. Consent was obtained whenever possible from the patients themselves and when not possible from family or legally constituted surrogates ahead of time. All documentation was collated in advance of arrival at the Vaccination Clinic. Staff provided a list of residents with demographic information in advance of the vaccination clinic. Electronic records were pre-loaded. Vaccinators were selected for their experience with people with developmental and intellectual disabilities and with forensic backgrounds. Immediately prior to first appointments of the day, vaccinators were reminded of safety protocols, including ceasing efforts if the patient appeared distressed. Vaccinees were dressed in clothing that easily exposed the shoulder for vaccination. Residents described in this report include people with isolated intellectual disability (IQ < 70), people with developmental disability (low IQ and various genetic conditions), people with both developmental disability and high risk medical conditions, and people with developmental disabilities and psychiatric/forensic histories. None of the residents in this group had previously experienced anaphylaxis or had a history of severe allergic reactions.

Garnet Health Pharmacy prepared pre-filled syringes to vaccinate all planned vaccinees plus doses for the staff accompanying patients in the drive-through. Staff drove residents to the vaccination clinic in multi-passenger vans or wheelchair vans. Residents

were placed in seats nearest the door and rotated as vaccinations were given. Staff were then vaccinated after the residents received their vaccines. The time of the last vaccination was recorded in marker on the windshield of the vehicle. Observation was accomplished by the physician rotating around active parking spaces during patients' 15 min post-vaccination observation period. Actual times of vaccinations were 8:30 AM–11:30 AM, despite appointments from 8AM to Noon.

Characteristic	Pilot Cohort (n = 41)	2nd Cohort (n = 42)
Resident Age Range	32 yrs. – 84 yrs.	23 yrs. –92 yrs.
# Residents Age > 65 yrs.	16 (39%)	18 (43%)
Residents in a SOIRA (forensic history)	3 (4%)	13 (31%)

Second vaccinations were accomplished 4 weeks later with 3 exceptions (3/83 = 4%) due to hospitalizations. There were no anaphylactic or allergic reactions. There were no injuries during the vaccination process. One non-verbal patient refused vaccination when the team came to the van.

There were no injuries among staff or patients and no immediate adverse reactions. This vaccination experience had relatively high throughput (13 per hour) For comparison, the CDC projects 30 vaccinations per hour per vaccinator when treating healthy mobile adults and children [4]. The CDC's recommendations should result in 2 min per inoculation, but that assumes mobile vaccinees and no rotation. Our measured throughput of 13 residents per hour (4.6 min per resident) compares favorably with a 5 min time described by Banks et al. [3]. Our residents achieved vaccination when other venues were closed to them due to their special requirements, and at a pace consistent with drive-through vaccination of neurotypical adults and children. The model of drive-through vaccination should be generalizable to many populations.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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