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## Implementation and Outcomes of COVID-19 Vaccinations at a Child and Adolescent Psychiatric Hospital



### To the Editor:

**I**ncreasing coronavirus disease 2019 (COVID-19) vaccination rates has been identified by the US Centers of Disease Control and Prevention as

critical to ending the COVID-19 pandemic.<sup>1</sup> On May 10, 2021, the Pfizer-BioNTech COVID-19 vaccine (BNT162b2; Pfizer, Inc, New York, New York, and BioNTech SE, Mainz, Germany) was approved for emergency use authorization by the US Food and Drug Administration for patients 12 years of age or older. Here we report a retrospective study describing the implementation of a COVID-19 vaccination program at our child and adolescent psychiatric hospital. To our knowledge, this is the first report detailing the administration of the COVID-19 vaccination in this setting.

Our facility, a freestanding, 84-bed, academic child and adolescent psychiatric hospital (The University of Kansas Health System [TUKHS]–Marillac campus) began offering COVID-19 vaccinations for all adolescents aged 12–17 years in May 2021. Nurses screened all patients meeting age requirements on admission for COVID-19 vaccination history and willingness to receive vaccination along with contraindications. Contraindications to the vaccine include history of severe allergic reaction or anaphylaxis to polyethylene glycol, history of severe allergic reactions to vaccines or injectable products, received passive antibody treatment for COVID-19, solid organ or stem cell transplant recipient within the last 6 months, or currently COVID-19 positive. For patients screening as both accepting of the vaccine and lacking contraindications, the Pfizer-BioNTech COVID-19 vaccine was ordered per protocol. Both first and second doses were offered to eligible patients. The goal of our study was to assess rates of, side effects of, and barriers to administering COVID-19 vaccines to adolescents admitted to a psychiatric hospital.

We conducted a 4-week retrospective chart review of all patients aged 12–17 years admitted to TUKHS–Marillac campus from May 27, 2021, to June 23, 2021. Our Institutional Review Board approved this study. The results are summarized in Table 1. Overall, 121 patients (68.4%) screened were unvaccinated. Of the 121 unvaccinated patients, 68.6% declined vaccination, and 29.8% requested and consented to vaccination. Overall, 33 vaccinations were administered (29 first doses and 4 second doses). Seven patients who requested the vaccine were unable to receive the vaccination. Reasons that vaccines were not administered included unable to obtain parental consent, being discharged before a vaccine was prepared, discharged on a weekend, and concerns of wasting a vial owing to low number of requests for vaccinations on a specific day. Because most vaccinations occurred on the day of discharge, overall side effects are unknown. However, no adverse events were registered through our reporting system, and no vaccinations delayed discharge.

**TABLE 1** Patient Demographics and COVID-19 Vaccine Information

	All patients screened for vaccine		Patients received COVID-19 vaccine in hospital	
Demographics, n (%)	174	(100)	33	(19.0)
Age, median (range)	14.5	(12–17)	14.5	(12–17)
Sex, n (%)				
Female	114	(65.5)	21	(63.6)
Male	60	(34.5)	12	(36.4)
Race, n (%)				
Caucasian/non-Hispanic	132	(75.9)	30	(90.9)
Black/African American	14	(8.8)	1	(3)
Hispanic/Latino/Spanish origin	6	(3.4)	0	(0)
Other	15	(8.6)	2	(6.1)
Declined	7	(4.0)	0	(0)
Primary discharge diagnosis, n (%)				
Attention-deficit/hyperactivity disorder	8	(4.6)	3	(9.1)
Adjustment disorder	19	(10.9)	2	(6.1)
Anxiety disorder or trauma-related disorder	16	(9.2)	3	(9.1)
Autism spectrum disorder	4	(2.3)	0	(0)
Disruptive mood dysregulation disorder	17	(9.8)	4	(12.1)
Major depressive disorder/suicidal ideations	99	(56.9)	18	(54.5)
Others	11	(6.3)	3	(9.1)
COVID-19 vaccine status on admission, n (%)				
Completion of vaccine series	30	(17.2)		N/A
Partial completion of vaccine series	23	(13.2)	4	(12.1)
No prior vaccine administration	121	(68.4)	29	(87.9)
Declined vaccine	83/121	(68.6)		N/A
Unable to assess or no family present	2/121	(1.6)		N/A
Requested first vaccine in hospital	36/121	(29.8)		N/A
Contraindication to vaccine	0/36	(0)		N/A
Requested first vaccine but did not receive it in hospital	7/36	(19.4)		N/A

Note: COVID-19 = coronavirus disease 2019; N/A = not applicable.


Additionally, patients and family members were appreciative that we offered the COVID-19 vaccine in this setting.

Our study found a 29.8% acceptance rate in adolescent inpatients with mental illness and found that 30.5% had already received one dose of the vaccine before admission. This is comparable to the national average on June 30, 2021, with 30.9% of adolescents aged 12–15 years having at least one dose of the vaccine.<sup>2</sup> However, this is significantly less than a 52% intention rate reported in an April 2021 survey of adolescents.<sup>3</sup> The main reasons for vaccine hesitancy found in the aforementioned study were concern over safety and efficacy from parents. Our study was unable to evaluate reasons for vaccine hesitancy in this population, but possible cited reasons could include safety and efficacy concerns, antivaccine movements, distrust in authorities, conspiracy theories, and religious


beliefs.<sup>4</sup> Additionally, previous misinformation of links of vaccines to autism could add to mistrust in vaccines. Remarkably, one study of medically complex youths aged 16–25 years in a long-term care facility had a 100% acceptance rate.<sup>5</sup> However, these study participants had significant medical comorbidities making them highly vulnerable to the COVID-19 infection. Limitations of our study include its retrospective design and the short evaluation period.


The long-term mental health impact of the COVID-19 pandemic in children and adolescents is relatively unknown. Reduced access to mental health care is a major concern of the pandemic. Our facility is currently at half-capacity (42 beds), secondary to social distancing recommendations to allow for single occupancy. Patients with mental illness often have reduced medical care, including vaccinations.<sup>6</sup> Previous studies have demonstrated positive

increases in seasonal vaccine rates when vaccines are easily accessible to adults with mental illnesses.<sup>7</sup> Having vaccines available in an inpatient setting is one way to increase the accessibility for adolescents with mental health diagnoses. It is evident from this study that significant barriers remain to COVID-19 vaccine acceptance within this population. As clinicians, it is essential that we properly educate our patients on the health benefits of the vaccine and dispel misinformation and advocate for all patients with mental illness to have access to the COVID-19 vaccine.

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## Virtual Arts and Movement Therapies for Youth in the Era of COVID-19



### To the Editor:

The COVID-19 pandemic has had a significant impact on youth, including through increased isolation, the transition to online schooling, decreased access to arts and sports programming, exposure to illness, and anxiety. The pandemic has also affected the delivery of therapeutic services at a time when youth have needed more help building coping skills and reducing stress. Creative arts and movement therapies promote creativity and adaptability to better develop cognitive flexibility<sup>1</sup> while enhancing self-regulation and self-direction, adaptive skills that are protective in the face of stress.<sup>2</sup> Creative arts and movement-based group therapies delivered through community settings—such as resettlement agencies, schools, and community recreation centers—are feasible, cost-effective, and increase accessibility, especially for populations often underrepresented in the therapeutic space.<sup>3</sup> Offering such interventions at the group level benefits both those who are experiencing significant stress and anxiety<sup>4,5</sup> and those who are not experiencing such symptoms, as they still reap the long-term benefits of building stress-relaxation and emotion regulation skills. Having previously demonstrated the efficacy of art therapy (AT) and dance/movement therapy (DMT) in improving posttraumatic stress and anxiety symptoms for youth,<sup>4,5</sup> our laboratory—the Stress, Trauma, and Anxiety Research Clinic—shifted programming to virtual formats, in partnerships with local resettlement agencies and schools.

Throughout the pandemic, we have brought AT to youths resettled as refugees, as well as DMT to school children in high-risk, low-resource regions via online formats. Sessions are led by certified art therapists and dance/movement therapists who also hold a joint master's degree in counseling; the team was supported by a psychiatrist specializing in trauma-informed care. Case managers from resettlement agencies and educators from schools shadow sessions and have the opportunity to learn and to adapt techniques from the therapeutic space for their clients and classrooms well beyond the end of programming. This integration also allows for transference of trusting rapport to facilitators, with whom participants may never have had the chance to meet in person. For youths resettled as refugees, AT is delivered weekly via Zoom, and case managers provide Zoom literacy trainings in advance of programming. For youth in high-risk, low-resource regions, DMT is delivered during their regular school day via students' online