An Equitable, Community-Based Approach to COVID-19 Vaccinations

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Introduction

Given the indisputable safety and effectiveness of COVID-19 vaccinations in protecting individuals from severe illness, hospitalization and death, providing this invaluable means of primary prevention to all eligible individuals is a top health care priority.[1-3] To date, roughly 10.6 million (37%) children ages 5-11 have received at least one dose of the COVID-19 vaccine[4], indicating there is opportunity to encourage the uptake of vaccines.

Challenge

Health care providers and health systems are working to overcome challenges to administering the COVID-19 vaccine. These challenges include vaccine hesitancy, particularly among marginalized groups, or a lack of trusted information. Pediatricians have extensive expertise in discussing and providing vaccinations in the ambulatory setting, and patients and families have long viewed pediatricians as a reliable source for vaccine information.[3, 5] Despite this, the logistics, tensions and urgency surrounding the COVID-19 vaccine present several obstacles to achieving the desired vaccination rates for children and their caregivers.

Solutions and strategies

Like many health care organizations, Golisano Children's Hospital in Rochester, New York, understands the advantages of using the pediatric outpatient medical home to vaccinate both pediatric patients and their caregivers for COVID-19.[3, 6] Given the critical need to capitalize on all opportunities to provide vaccinations, and to overcome the challenges in providing vaccines broadly, the hospital expanded its vaccination efforts. This included a multimodal team- and community-based approach of shared expertise to meet patients and caregivers wherever they are—including primary care, community and inpatient settings.

Rochester, New York, and the surrounding region have a long-standing collaboration among community and academically based pediatricians. For almost a century, since the founding of the medical school and the Department of Pediatrics at the University of Rochester Medical Center in 1926, all pediatricians have benefited from working together, eventuating in a collaborative, one-system approach to pediatric care for all children.

Despite competitive adult health care systems in the market, this system has preserved independent pediatric practice, fostered collaboration with community-based organizations, and promoted high-quality, whole-child health care. These relationships and networks were activated at the beginning of the pandemic to preserve, protect and prioritize the needs of children and families.[7]

In fall 2021, in anticipation of the need for robust COVID-19 vaccine delivery prior to approval for children ages 5-11, this collaborative network developed a coordinated, multi-pronged vaccination approach that:

- Respected and provided opportunities for questions and concerns from caregivers.
- Offered tools and support to primary care practices to prepare for on-site COVID-19 vaccinations.

SUMMARY

The logistics, tensions and urgency surrounding the COVID-19 vaccine present challenges to achieving the desired vaccination rates for children and their caregivers. Golisano Children's Hospital in Rochester, New York:

- Achieved higher vaccination rates among 5- to 11-year-olds than the national average.
- Vaccinated parents and caregivers.
- Leveraged inpatient processes and county resources while working alongside primary care providers.

RESULTS

These initiatives have led to more than 26,000 children ages 5 to 11 years old in Monroe County, New York, receiving at least their first dose of the COVID-19 vaccine.

At least one dose
National average: 38.2%
Monroe County, New York: 46.6%

Fully vaccinated
National average: 31.1%
Monroe County, New York: 41.6%

QUESTIONS

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CHILDREN'S HOSPITAL ASSOCIATION

- Continued to leverage equitable approaches to access through mobile vaccination and vaccine clinics in trusted community sites.
- Provided new vaccination opportunities in inpatient settings.
- Promoted partnership among county health departments, primary care practices, local hospitals, and retired health care providers to share staffing and logistical resources at a time when the barriers from profound staffing shortages and competing patient needs seemed insurmountable.

Workflows extend reach

Despite the familiarity and competence with providing vaccines in primary care, the COVID-19 vaccine required specific workflows and supportive resources. Early in the vaccine rollout, most independent primary care practices and school-based health centers in the region succeeded in establishing on-site COVID-19 vaccine workflows. Local county health departments provided small and manageable allotments of vaccine to those settings, with a flexible ordering and distribution arrangement. Hospital-owned practices and networks developed similar arrangements with their hospital pharmacy teams.

Some of these practices, such as the Golisano Children's Hospital Pediatric Practice, were able to offer vaccines for adult caregivers and family members, providing a model for patient- and family-centered success in promoting COVID-19 vaccine access.[6] The work within primary care has been augmented by numerous and ongoing pop-up vaccination pods in locations throughout the city, including churches, recreation centers and schools. In addition, a mobile van staffed with providers and nurses administered vaccines to individuals who lived in group home settings and who had mobility challenges.

Supporting primary care practices

In a perfect storm, the vaccine for 5- to 11-year-old children was approved as both COVID-19 rates and hospital staffing shortages were climbing. This limited many primary care practices that would normally have offered large-scale vaccine clinics—like those for the influenza vaccine. Golisano Children's Hospital responded by establishing an evening and weekend pediatric COVID-19 vaccination clinic at the medical center, with on-site child life staff and therapy dogs.

In Monroe County, New York, Accountable Health Partners, an accountable care organization with many affiliated pediatric and family medicine practices, developed a new partnership with the county health department. Through this relationship, primary care practices could contract with the county to have select "vaccine days" for their patients at various community locations. This Pediatric Ambassador program provided financial support equivalent to the vaccine administration fees for the number of patients scheduled at the vaccination site.

Each week, practices were assigned scheduling links to a county vaccine site close to their practice. The practices provided outreach and scheduling for their patients and sent two ambassadors (pediatricians, nurses and practice managers) to greet their patients and families, assist with questions and provide comfort. County staffing was augmented by hospital pharmacists and active and retired nurses and physicians working together to fulfill key responsibilities. In all settings, second dose appointments were automatically scheduled, promoting a high completion rate for the primary vaccine series.

Inpatient outreach and initiatives

Golisano Children's Hospital provides the opportunity for COVID-19 vaccination in the inpatient setting. This effort takes advantage of the patient's physical location in the hospital and prevents families from needing to overcome the financial, transportation and other barriers that sometimes preclude outpatient visits. In addition, hospital admissions staff provide families with access to trusted interprofessional teams with whom they can discuss the benefits of vaccination and have questions and concerns addressed.

Inpatient vaccinations can also be coupled with sedated procedures, overcoming developmental or behavioral challenges to pediatric vaccination in the outpatient setting. In September 2021, an interprofessional team convened to develop an inpatient vaccination program, leveraging expertise from other hospitals with successful inpatient initiatives.[8] The program went live in early December 2021, and so far, has provided vaccinations for more than 50 hospitalized children.

This team also partnered with the outpatient pharmacy to offer patient caregivers 24/7 access to vaccination within the children's hospital. The pediatric inpatient vaccine initiative was subsequently scaled institution-wide to systematically offer vaccines to hospitalized adults.

Community education efforts

All of these efforts were complemented by multiple virtual and in-person community forums held over the last year, bringing together youth, families, trusted community members and health care providers to promote dialogue and encourage questions about COVID-19 vaccination. Pediatric vaccination infographics and chat-bot tools have been developed in collaboration with families and translated into multiple languages for distribution by health care providers, schools and community partners through a collaborative task force.

Primary care teams across the community continue to engage daily in individual conversations with families who have questions about COVID-19 vaccination. These efforts remain critical to maintaining thoughtful discourse and preserving trust and relationships between providers and patients and families.

References

1. Moss, W.J., L.O. Gostin, and J.B. Nuzzo, "Pediatric COVID-19 Vaccines," JAMA, 2021. 326(22): p. 2257.
2. Lv, M., et al., "Safety, Immunogenicity, and Efficacy of COVID-19 Vaccines in Children and Adolescents: A Systematic Review," Vaccines, 2021. 9(10): p. 1102.
3. De St. Maurice, A., et al., "Pediatrician's role in vaccinating children and families for COVID-19: no one left behind," Pediatric Research, 2021. 90(6): p. 1105-1107.
4. AAP and CHA https://www.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/children-and-covid-19-vaccination-trends/
5. Freed, G.L., et al., "Sources and Perceived Credibility of Vaccine-Safety Information for Parents," Pediatrics, 2011. 127(Supplement): p. S107-S112.
6. Milne Wenderlich, A., C. Rand, and J. Halterman, "COVID-19 Vaccination for Caregivers in the Pediatric Medical Home: A Call to Action to Improve Community Vaccination Rates," JAMA Pediatrics, 2022. 176(1): p. 16-17.
7. Yaeger, J.P., J. Kaczorowski, and P.D. Brophy, "Leveraging Cross-sector Partnerships to Preserve Child Health: A Call to Action in a Time of Crisis," JAMA Pediatrics, 2020. 174(12): p. 1137-1138.
8. Berger, R.E., et al., "Implementation of an Inpatient Covid-19 Vaccination Program," NEJM Catalyst, 2021. 2(10).

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