School-Located Vaccination Clinics for COVID-19 and Influenza

INSIGHTS INTO STATE AND LOCAL LEVEL PRACTICES, POLICIES, AND LESSONS LEARNED FOR PROVIDING COVID-19 AND ROUTINE VACCINATIONS IN SCHOOLS

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Environmental Scan Report





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The Association of Immunization Managers (AIM) and the National Association of School Nurses (NASN) contracted with Mathematica to conduct an environmental scan and virtual roundtables to assess the landscape of school-located vaccine clinics (SLVs) held in AIM and NASN member jurisdictions since August 2019. The goal of this work is to provide critical insights into how to strengthen and sustain SLVs to promote public health and respond to infectious disease threats.

We would also like to thank the state immunization program managers, staff, and school nurses who participated in the roundtables and provided valuable information and resources to help inform this report.



This report was prepared with a complementary report summarizing findings from the roundtables and taken together, the reports describe various models of SLVs implemented, successes and challenges, and opportunities to continue supporting SLVs to promote influenza, COVID-19, and childhood vaccinations.

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Introduction

Vaccination is a key strategy against the COVID-19 pandemic, and school-located vaccination clinics (SLVs) bring vaccine access directly into communities. To combat the spread of COVID-19 and make in-person instruction as safe as possible, schools across the country have been hosting on-site COVID-19 vaccination clinics for several months. In July, the White House released a <u>statement</u> recognizing the role SLVs are playing in increasing vaccination among adolescents and facilitating safe in-person instruction. Moving forward, SLVs will continue expanding their contribution to public health as COVID-19 vaccine eligibility expands to include children under 12 and immunization strategies shift from mass vaccination sites toward localized, convenient community clinics in places like schools, pharmacies, doctor's offices, and workplaces.²

Beyond the COVID-19 pandemic, SLVs have been offering influenza and routine childhood immunizations for some time. SLVs have been used in the U.S. since the 1850s and have helped to combat smallpox, polio, and varicella. Since the early 2000s, SLVs have largely focused on vaccinating school-aged children against influenza because many children do not see their primary care providers during the short influenza season. This role expanded when the Advisory Committee on Immunization Practices recommended annual influenza immunization for children 6 months to 18 years old and in response to the H1N1 pandemic. SLVs have also been opportunities to promote healthy behaviors, such as handwashing and remaining home while sick, to school-aged children.

An SLV typically occurs on school property with the primary intention to vaccinate students, often as a partnership between public health departments and school districts.^{5,6} For our scan, we expanded this definition of SLV to include any clinic that had a K-12 school partnership regardless of the target population for the SLV (i.e., clinics to vaccinate school staff and clinics at schools to vaccinate other community members).

COVID-19 SLVs have gained traction since vaccines became more widely available in 2021. However, running these clinics successfully is not always easy. Challenges for clinic organizers may include securing funding, hiring staff, managing vaccine logistics, and adapting to the local context.⁷ Guidance and resources can maximize the efforts of schools and immunization program

¹ The White House, "Fact Sheet: President Biden to Announce New Actions to Get More Americans Vaccinated and Slow the Spread of the Delta Variant," Washington, DC, July 29, 2021, Available at https://www.whitehouse.gov/briefing-room/statements-releases/2021/07/29/fact-sheet-president-biden-to-announce-new-actions-to-get-more-americans-vaccinated-and-slow-the-spread-of-the-delta-variant/.

² Joseph R. Biden, "Remarks by President Biden on the COVID-19 Response and the Vaccination Program," The White House, July 6, 2021, https://www.whitehouse.gov/briefing-room/speeches-remarks/2021/07/06/remarks-by-president-biden-on-the-covid-19-response-and-the-vaccination-program-6/.

³ Centers for Disease Control and Prevention, "Influenza School-Located Vaccination (SLV): Information for Planners," https://www.cdc.gov/flu/pdf/school/SLV_information.pdf.

⁴ Donna Mazyck, "School Located Vaccination Clinics: Then and Now," *The Journal of School Nursing*, vol. 26, suppl. 1, August 2010, pp. 3S-6S. DOI: 10.1177/1059840510369231.

⁵ Centers for Disease Control and Prevention, "Vaccines & Immunizations," https://www.cdc.gov/vaccines/covid-19/planning/school-located-clinics.html.

⁶ Centers for Disease Control and Prevention, "Influenza School-Located Vaccination (SLV): Information for Planners," https://www.cdc.gov/flu/pdf/school/SLV information.pdf.

⁷ Ibid.

managers. In this document, we review existing resources on planning and implementing SLVs, show examples from SLVs around the country, and highlight SLVs as a flexible strategy for delivering COVID-19, influenza, and other vaccinations.

Resources and Guides for Planning SLVs Are Available

There are several comprehensive guidance documents for planning and implementing SLV clinics. These include resources from the Centers for Disease Control and Prevention (CDC), the National Association of County and City Health Officials (NACCHO), and state and local health departments. Most of these resources were written in the context of hosting influenza vaccine clinics and draw on years of experience planning and implementing flu SLVs. They address key issues such as the importance of establishing strong partnerships in preparation for SLVs, the benefits and challenges that accompany different staffing models, and techniques for engaging parents and obtaining consent. Several documents offer detailed checklists for planning SLVs, as well as examples of outreach and education materials, consent forms, and even ledgers to track shots administered. These resources are useful foundational documents for schools and immunization program managers seeking to host any type of SLV, including influenza or COVID-19 clinics, and can save implementers considerable time and effort in planning and carrying out vaccination events. See Table 1, starting on page 4, for a list of the resources discussed below.

Although differences exist between influenza and COVID-19 clinics, such as vaccine storage requirements, many of the key considerations addressed by these resources span influenza and COVID-19. For example, a Mobile Immunization Toolkit developed by the Spokane Regional Health District provides six checklists identifying the responsibilities of the lead agency and partner agencies in the six weeks leading up to a vaccination event. While the urgency of the COVID-19 pandemic may not always allow for a full six weeks of advanced planning and partnership, these checklists may be condensed and adapted for planning an SLV event for COVID-19. This toolkit, along with others from NACCHO and Shoo the Flu provide useful templates of consent forms, promotional materials, materials for staff and volunteers, and communications such as letters to parents, which can be easily adapted for a COVID-19 SLV. An issue brief from the Association of State and Territorial Health Officials details legal considerations for SLVs, including staff liability issues concerning both non-medical and licensed medical staff and site liability issues, which are applicable to both flu and COVID-19 SLVs. These are essential resources for implementers hoping to use best practices from decades of flu SLVs at their COVID SLVs.

Schools and immunization program managers may also refer to existing resources to help them establish why SLVs are beneficial and to coalesce stakeholders around an SLV. CDC guidance includes compelling evidence about the benefit of incorporating SLV sites into public health immunization strategy. Benefits of SLV clinics are that they can reach a large population of children already present at schools and their accessibility is convenient for families and other community members. Additionally, schools are typically trusted institutions, often have facilities for vaccination clinics like gyms, parking, and bathrooms, and can contact parents for

announcements and consent. 8,9 SLV clinics also provide access to vaccination across socioeconomic levels. 10

Resources Specific to COVID-19 SLVs

While most published guidance on SLVs that we encountered was focused on influenza, we did find some early resources offering guidance and best practices for SLVs administering COVID-19 vaccinations. The CDC's "Considerations for Planning School-Located Vaccination Clinics" web page includes a brief section on "special considerations for COVID-19 SLV," which addresses COVID-19-related legal issues, communication strategies, and staff training. ¹¹ This page links to additional resources, such as a COVID-19 vaccine toolkit specifically for use by school staff to encourage staff and administrators to promote and support vaccination efforts in schools and communities. ¹² The CDC has also published guidance on "How Schools Can Support COVID-19 Vaccination," including, but not exclusive to, hosting SLVs. In Los Angeles, the County Public Health department recently created a toolkit on planning and implementing SLVs specially for COVID-19. This toolkit is not as comprehensive as some of the toolkits focused on flu, but it provides a good starting point for planning a COVID-19 SLV. School nurses interested in planning or participating in COVID-19 SLVs can also find key guidance in an article published by the National Association of School Nurses (NASN) describing how a group of school nurses planned an SLV in St. Louis. ¹³

⁸ Centers for Disease Control and Prevention, "Influenza School-Located Vaccination (SLV): Information for Planners," https://www.cdc.gov/flu/pdf/school/SLV information.pdf.

⁹ Council of the Great City Schools, Letter to Joseph R. Biden Jr., President of the United States, January 22, 2021, https://www.cgcs.org/cms/lib/DC00001581/Centricity/Domain/4/Biden%20letter.pdf.

¹⁰ Mississippi State Department of Health, "COVID-19 Community Vaccination Program," 2021, https://msdh.ms.gov/msdhsite/_static/resources/14906.pdf.

¹¹ Centers for Disease Control and Prevention, "Considerations for Planning School-Located Vaccination Clinics," May 25, 2021, https://www.cdc.gov/vaccines/covid-19/planning/school-located-clinics.html.

¹²Centers for Disease Control and Prevention, "COVID-19 Vaccine Toolkit for Staff in School Settings and Childcare Programs," July 9, 2021, https://www.cdc.gov/coronavirus/2019-ncov/vaccines/toolkits/schools-childcare.html.

¹³ Park, K., Cartmill, R., Johnson-Gordon, B., Landes, M., Malik, K., Sinnott, J., Wallace, K., and Wallin, R, "Preparing for a School-Located COVID-19 Vaccination Clinic," *NASN School Nurse*, May 2021. https://doi.org/10.1177/1942602X21991643.

Table 1. Essential resources for planning and implementing SLVs

Source	Title	Description
National Association of County and City Health Officials (NACCHO)	School-Located Influenza Vaccination Toolkit	This resource is a large and comprehensive toolkit focused on influenza vaccination. It contains many helpful sample resources for planning, relationships and communications, educational materials, implementation, and evaluation. While this resource is focused exclusively on influenza, the content is applicable to COVID-19 SLVs.
Centers for Disease Control and Prevention (CDC)	Influenza School-Located Vaccination (SLV): Information for Planners	This resource targets state and local health department immunization and preparedness staff and contains useful guidance regarding planning, including: • Developing a timeline for hosting an SLV
		• Establishing strong partnerships between local health departments, schools, private organizations, and community-based organizations to prepare for SLVs, and the need to clearly establish the roles and responsibilities of different partners at the outset
		Benefits and drawbacks of different staffing models
		• Ideas for promoting SLVs and educating students and parents
		Considerations for obtaining parental consent
Centers for Disease Control and Prevention (CDC)	Considerations for Planning School-Located Vaccination Clinics	This resource includes COVID-19-specific guidance regarding legal issues and communications strategies. It includes a link to a COVID-19 training module for SLV staff.
Centers for Disease Control and Prevention (CDC)	Guidance for Planning Vaccination Clinics Held at Satellite, Temporary, or Off- Site Locations	This checklist is a step-by-step guide for individuals overseeing COVID-19 vaccination clinics held at satellite, temporary, or off-site locations – including schools. The checklist covers vaccine shipment, storage, and administration; clinic preparation and supplies; measures to prevent the spread of COVID-19 at the clinic; and appropriate documentation. The checklist lists activities and considerations for before, during, and after a vaccination clinic. It is a comparatively short checklist, making it an accessible tool for SLV implementers.

Source	Title	Description
Immunity Community	Mobile Immunizations Toolkit	This toolkit was developed by the Spokane Regional Health District and piloted at 26 schools in Spokane, Washington. It is a tool for local health departments working with schools and healthcare providers to administer SLVs, but it contains resources that may be useful to a wide variety of SLV implementers. It provides several detailed checklists for preparing to host an SLV clinic, with different checklists covering the activities that should be carried out in each of the six weeks preceding an SLV. Embedded in each checklist are dozens of sample documents, ranging from consent forms to a vaccination-themed coloring book for children.
Association of State and Territorial Health Officials (ASTHO)	Vaccination Clinics in Schools	This issue brief from the Association of State and Territorial Health officials is a general resource for planning an SLV regardless of the vaccine to be administered. It details legal and policy issues to consider, scope of practice and licensing for healthcare professionals, and considerations regarding obtaining consent and sharing records.
National Association of School Nurses (NASN)	Preparing for a School- Located COVID-19 Vaccination Clinic	This journal article describes how school nurses in St. Louis, MO planned a set of SLV clinics. It details the history of SLVs and explains how school nurses drew on lessons learned from high-performing SLVs in the past, as well as their assumptions about additional COVID-19-specific factors, to create a plan for a COVID-19 SLV.
Shoo the Flu	A Helpful Guide for School- located Influenza Vaccination Programs	The Shoo the Flu Toolkit is an evidence-based model for implementing SLVs for influenza in partnership with county health departments, state departments of public health, and school districts. It offers guidance and checklists on planning, budgeting, scheduling, establishing strong partnerships, staffing, training, obtaining consent, and program evaluation.
Centers for Disease Control and Prevention (CDC)	How Schools Can Support COVID-19 Vaccination	This resource describes ways schools can support COVID-19 vaccination – including, but not limited to, hosting an SLV. It encourages schools to partner with local health departments, healthcare providers, and local businesses to support vaccination and provides resources for staff to enable them to educate and promote vaccinations in the community. Adopting these suggestions may further the success of SLV clinics as well as vaccination goals more broadly.
County of Los Angeles Public Health	Best Practices for School Based Clinics: COVID-19 Vaccine Clinic Toolkit	This is a toolkit specific to COVID-19 SLV clinics produced by Los Angeles Public Health. It contains a table outlining key considerations for planning COVID-19 SLVs as well as an appendix of supporting documents including consent forms, materials checklists, and sample emails to school administrators and parents/guardians. Some information in this toolkit and appendix is specific to Los Angeles County, but much of it can be adapted for an SLV in any part of the country.

Landscape of SLVs During the COVID-19 Pandemic

The COVID-19 pandemic has drawn some attention away from public health activities to combat influenza and other infectious diseases, and this was reflected in the SLVs conducted during the timeframe of this environmental scan. Our scan included SLVs conducted or planned between August 2019 and late summer 2021. We reviewed publicly available information on school and health department websites, news articles reporting on SLVs, and internal documents provided by AIM and NASN members who have hosted SLVs. In this section, we describe characteristics of SLVs that we identified. We found many examples of SLVs across 48 states, Washington, D.C., and 2 territories (Guam and Puerto Rico), the majority of which were focused on vaccinating against COVID-19.

The breadth and variety of examples highlights the versatility of the SLV model and demonstrates how clinic structure can be adapted for success in diverse environments. Collectively, the examples we reviewed showed how SLVs can promote access and equity, how clinic reach and scope vary widely, that partnerships were common and crucial, and that messaging, incentives, and approaches to obtain consent varied. Prospective clinic organizers may consider these SLVs when planning and implementing SLVs in their communities. We also highlight the impact of the COVID-19 pandemic on influenza vaccine programs and conclude with remarks on the future of SLVs.

SLVs May Promote Equitable Access to Vaccinations

SLV organizers tailored their implementation strategies to the needs of specific communities to promote access and reduce barriers. In diverse communities, several SLVs provided outreach materials and consent forms in multiple languages. Los Angeles, CA has a Spanish-language website for making vaccine appointments and a phone number for those without internet access. Walk-in clinics may also reduce barriers associated with registration for communities with limited internet access or digital literacy. According to SLV guidance from the LA County Public Health Department, practices for promoting equity include allowing walk-ins, selecting sites that are accessible for people with limited mobility, and choosing a time that is convenient for students and parents, such as around school events. An SLV in Anchorage, AK that was designed for healthcare workers saw many seniors show up to receive the vaccine. Clinic organizers and the school district knew that many students live in multigenerational homes and expanded the clinic to include the seniors. The school district hoped their role in vaccinating seniors would help families feel more confident in their children attending in-person learning.

SLVs also used community-based organizations (CBOs) to reach underserved populations and promote access and equity. Like schools, CBOs work at the local level and are uniquely positioned to understand the needs of the communities they serve, for example:

- A clinic at an elementary school in south Phoenix, AZ was coordinated by Equality Health to bring vaccines to communities that had suffered most during the pandemic and included efforts to address vaccine hesitancy.¹⁴
- The City of Birmingham, Birmingham City Schools, Jefferson County, and the University of Alabama worked together to conduct an SLV with a goal of reaching underserved populations. The university partnered with community leaders to identify and conduct outreach to individuals who may have experienced barriers to earlier opportunities for vaccination like transportation and internet access and offered walk-in appointments each day for these community members.¹⁵
- The Council of the Great City Schools (CGCS), a group of 76 of the largest urban public-school systems in the United States, committed to playing a key role in meeting the nation's COVID-19 vaccination targets. CGCS highlighted several characteristics that uniquely positioned the organization to contribute to reaching vaccination targets, including community trust of public schools and proximity to communities that would benefit from greater access and equity. For instance, 81% of CGCS students are African American or Hispanic, 72% are low-income, and 20% are English language learners. The Council also offered conveniently located facilities including in low-income communities, school buses and drivers that could provide transportation or serve as mobile clinics, wide-reaching communication systems, and staff to support the clinics such as school nurses, custodians, security, HR, and IT professionals. 16

We noted some SLVs have prioritized high-need areas. The Mississippi COVID-19 Community Vaccination program providers are focused on areas with high vulnerability indices, high

SLVs expanded COVID vaccine access points for rural populations.

COVID-19 caseloads, and/or low COVID-19 vaccination rates.¹⁷ New York City launched a pilot vaccination program to bring vaccines to schools in neighborhoods disproportionately impacted by COVID-19 that have low vaccination rates.¹⁸ School districts and immunization managers may consider using zip code data or the CDC's <u>Social Vulnerability Index</u> to target high-need areas. Schools are also uniquely positioned within their communities to know which population groups and families may have the highest need for vaccination.

SLVs that provided transportation or used mobile clinics brought vaccine access to rural areas and areas with low vaccination coverage. To expand rural access in Summit County, UT, health officials decided to hold a vaccination clinic at the local high school because students living in rural areas were not always able to go to Salt Lake County where vaccination primarily took

¹⁴ Meena Venkataramanan and N., Onneweer, "Arizona's first children, ages 12–15, start getting COVID-19 vaccinations," *Arizona Republic*, May 13, 2021, https://www.azcentral.com/story/news/local/arizona-health/2021/05/13/first-children-ages-12-15-begin-covid-19-vaccinations-arizona/5080691001/.

¹⁵ Tyler Greer, "Parker High School COVID vaccination site set to open Thursday," *UAB News*, February 10, 2021, https://www.uab.edu/news/campus/item/11849-parker-high-school-covid-vaccination-site-set-to-open-thursday.

¹⁶ Council of the Great City Schools, Letter to Joseph R. Biden Jr., President of the United States, January 22, 2021, https://www.cgcs.org/cms/lib/DC00001581/Centricity/Domain/4/Biden%20letter.pdf.

¹⁷ Mississippi State Department of Health, "COVID-19 Community Vaccination Program," PowerPoint presentation, 2021, https://msdh.ms.gov/msdhsite/_static/resources/14906.pdf.

¹⁸ Sophia Chang, "NYC to Install COVID Vaccine Clinics at 4 Bronx Schools," *Gothamist*, June 2, 2021, https://gothamist.com/news/nyc-install-covid-vaccine-clinics-4-bronx-schools.

place.¹⁹ In Davis County, UT, the health department partnered with the school district and a private healthcare company to hold clinics at high schools and sent 6 vaccination vans to more remote areas to reach rural populations.²⁰ To boost low vaccination rates, school and health officials in New Orleans, LA brought vaccines to children in summer camps.²¹

SLV Reach and Scope Vary

The populations SLVs are reaching have shifted in response to vaccine eligibility and availability. Several early COVID-19 SLVs were focused on vaccinating teachers and staff because COVID-19 vaccines were first granted emergency use authorization for adults and eligibility recommendations prioritized professions such as first responders and teachers. ^{22,23} SLVs also served adults in the broader community. Now that the Pfizer vaccine has been granted emergency use authorization for children ages 12 and older, the focus is on vaccinating students.

In some cases, SLVs had a sizable impact on vaccination rates in their communities. For example, in February 2021, the Anchorage, AK school district had delivered 13% of all COVID-19 vaccine doses in the municipality. One of the

Rhode Island's influenza campaign vaccinated 28,784 people through SLVs.

staff from that clinic described her participation as, "one of the most rewarding experiences of my life to be able to give back to the community... the amount of gratitude was just profound". ²⁴ In Salt Lake County, UT, the health department is establishing clinics in public, private, and charter high schools with a goal of providing access to close to 40,000 students. ²⁵ Rhode Island has a comprehensive influenza clinic program. From October to December 2020, the state sponsored 249 clinics with participation by 385 schools. The SLVs provided the vaccinations free, offered injectable and FluMist vaccines, and opened evening clinics to everyone in the community 3 years of age and older. In total, they vaccinated 28,784 people through the program. ²⁶

There is reason to believe that vaccinations provided at SLVs can have an impact on community spread of disease. While there has not been time to conduct comprehensive studies of COVID-19 SLVs impact on rates of COVID-19 transmission, a study of a city-wide influenza SLV

¹⁹ Paul Nelson, "Districts find ways to administer COVID-19 vaccine to Utah students," KSL News Radio, April 20, 2021, https://kslnewsradio.com/1947145/districts-find-ways-to-administer-covid-19-vaccine-to-utah-students/.

²⁰ Sean P. Means, "More than 100l Utahns ages 16 and 17 are eligible for COVID-19 vaccine. Clinics are going to high schools to get it to them," *The Salt Lake Tribune*, April 29, 2021, https://www.sltrib.com/news/2021/04/29/more-than-k-utahns-ages/.

²¹ Emily Woodruff, "COVID vaccinations for Louisiana kids are off to a slow start. Could summer camps help?" *Nola.com*, June 4, 2021, https://www.nola.com/news/coronavirus/article_8b2c97c6-c578-11eb-b3b3-9345eb9049f7.html.

²² "COVID-19 vaccination clinics continue for school-based employees," *Pacific News Center*, January 26, 2021, https://www.pncguam.com/covid-19-vaccination-clinics-continue-for-school-based-employees/.

²³ Dooling K., M. Marin, M Wallace, N McClung, M Chamberland, G.M. Lee, H.K. Talbot, J.R. Romero, B.P. Bell, and S.E. Oliver, "The Advisory Committee on Immunization Practices' Updated Interim Recommendation for Allocation of COVID-19 Vaccine – United States, December 2020," *Morbidity and Mortality Weekly Report*, no. 69, January 2021, pp. 1657-1660, http://dx.doi.org/10.15585/mmwr.mm695152e2.

²⁴ Catherine Gewertz, "How School Districts Can Run a COVID-19 Vaccine Clinic," *Education Week*, February 4, 2021, https://www.edweek.org/leadership/how-school-districts-can-run-a-covid-19-vaccine-clinic/2021/02.

²⁵ Sean P. Means, "More than 1001 Utahns ages 16 and 17 are eligible for COVID-19 vaccine. Clinics are going to high schools to get it to them," *The Salt Lake Tribune*, April 29, 2021, https://www.sltrib.com/news/2021/04/29/more-than-k-utahns-ages/.

²⁶ Office of Immunization, Rhode Island Department of Health, "School Located Vaccination (SLV) Influenza Program: Rhode Island Annual Report 2019-2020 school year," Rhode Island Health Department, January 2020, https://health.ri.gov/publications/annualreports/2019-2020SLVFluStateReport.pdf.

campaign in Oakland, CA found an association between SLV coverage and decreased student absenteeism from illness and reduced influenza-related hospitalizations for all age groups.²⁷

However, we found several reports of SLVs that reached a fraction of their target population and administered far fewer doses than planners anticipated.

- In early May 2021, an SLV in Cranston, RI administered only 130 doses, a fraction of the 900 shots that were prepared based on projections from the Rhode Island Department of Health.²⁸
- In Chattahoochee County, GA, the district cancelled a planned SLV after registering only five students, sending the students to a partnering provider's office instead.²⁹
- In Marion County, IN, a pop-up SLV aimed specifically at vaccinating 12–17 year-olds reported that only about a third of the roughly 100 people who registered belonged to the target student population.³⁰

SLV implementers cited various reasons for low turnout, including vaccine hesitancy among students and families, lack of urgency to get the vaccine, and large numbers of students that were already vaccinated at the time of the SLV.³¹ Even in instances of low turnout, implementers celebrated SLVs as a way to make vaccination convenient and comfortable for students and to reach students that might otherwise not get a vaccine.³² Additionally, some SLVs that struggled to attract students were nonetheless able to reach other community members, such as a high school clinic in southeast Michigan that vaccinated 1,350 community members despite only reaching 100 out of 1,000 eligible students.³³

Partnerships Play a Key Role in SLVs

Conducting an SLV involves many roles and resources, and partnerships are key. CDC guidance outlines the various tasks that implementers must accomplish prior to, during, and after an SLV, from promoting the clinic, managing vaccine supply and logistics, administering vaccines, recording and reporting doses, and maintaining a safe space for holding the clinic.³⁴ Depending on the type of vaccine offered at a clinic, the tasks may vary. In the context of SLVs during the COVID-19 pandemic, additional tasks include disinfecting each vaccination station and

²⁷ Benjamin-Chung, J., B.F. Arnold, C.J. Kennedy, K. Mishra, M. Pokpongkiat, A. Nguyn, W. Jilek, K. Holbrook, E. Pan., P.K. Kirley, T. Libby, A.E. Hubbard, A. Reingold, and J.M. Colford, "Evaluation of a city-wide school-located influenza vaccination program in Oakland, California, with respect to vaccination coverage, school absences, and laboratory-confirmed influenza: A matched cohort study," *PloS Medicine*, vol. 18, no. 8, August 2020, e:1003238. DOI: 10.1371/journal.pmed.1003238.

²⁸ Daniel A. Kittredge, "High school vaccination campaign kicks off in Cranston," *Cranston Herald*, May 5, 2021, https://cranstononline.com/stories/high-school-vaccination-campaign-kicks-off-in-cranston,161333.

²⁹ Mark Rice, "These Columbus area school districts will host COVID vaccine clinics for students," *Ledger-Inquirer*, May 20, 2020, https://www.ledger-enquirer.com/news/coronavirus/article251544943.html.

³⁰ Carson TerBush, "COVID vaccine hesitancy among Black and Latino students concerns Indianapolis officials." *Chalkbeat*, June 14, 2021, https://in.chalkbeat.org/2021/6/14/22533973/covid-vaccine-children-school-masks-indianapolis.

³¹ Robin Erb and F., Ron, "History, algebra...and Pfizer? Michigan high schools host vaccine clinics," *Bridge Michigan*, April 30, 2021, https://www.bridgemi.com/michigan-health-watch/history-algebra-and-pfizer-michigan-high-schools-host-vaccine-clinics.

³² Daniel A. Kittredge, "High school vaccination campaign kicks off in Cranston," *Cranston Herald*, May 5, 2021, https://cranstononline.com/stories/high-school-vaccination-campaign-kicks-off-in-cranston,161333.

³³ Robin Erb and F., Ron, "History, algebra...and Pfizer? Michigan high schools host vaccine clinics," *Bridge Michigan*, April 30, 2021, https://www.bridgemi.com/michigan-health-watch/history-algebra-and-pfizer-michigan-high-schools-host-vaccine-clinics.

³⁴ Centers for Disease Control and Prevention, "Influenza School-Located Vaccination (SLV): Information for Planners," https://www.cdc.gov/flu/pdf/school/SLV_information.pdf.

maintaining social distancing.³⁵ School nurses often do not have time to carry out these activities independently. Many SLVs we reviewed benefited from partnerships with other organizations because the partner's staff are experienced in planning vaccine clinics, managing vaccine sourcing, providing supplies, and staffing the clinic with qualified providers and support staff.

While public health departments have historically led influenza SLVs in partnership with school districts, the COVID-19 vaccination effort has broadened the range of partnerships.³⁶ School districts that held SLV clinics for COVID-19 vaccines have used many different partners including local colleges and universities, state and local public health departments, private companies, and the National Guard, among others. Examples of other partnerships and each partner's role in the SLV are discussed below.

Medical Centers and Health Systems

Some SLVs partnered with medical centers and health systems in their area. In Maine, one school district worked with a local hospital system to source the vaccine used at their SLV. Using the partner not only helped the SLV source the vaccine, but it provided access to their network for transferring unused doses of the vaccine to minimize waste.³⁷ The Hawaii Pacific Health medical system brought a mobile clinic called the 'Vax Squad Bus' to a local school. The bus brought all the supplies and equipment required to provide safe administration of the vaccine. It also brought a team of trained medical and clinical staff to administer the vaccines.³⁸

Local Providers and Pharmacies

Some SLVs we reviewed noted that partnerships with local providers and pharmacies were useful. For example, Mississippi has an Adopt-a-School program to facilitate partnerships between local providers and schools for COVID-19 vaccines.³⁹ A central Texas school district partnered with a local non-profit and influenza provider that gave free flu shots at an SLV for students and families in fall 2020 after seeing flu-like illnesses account for 48% of school absences in the region.⁴⁰ An administrator for the Lodi, WI school district stated that their SLV clinic was only possible due to the partnership the district developed with the local pharmacy.⁴¹ Organizers may also consider the Federal Pharmacy Program, a joint program between the federal government, states and territories, and 21 pharmacy partners designed to expand access

³⁵ Catherine Gewertz, "How School Districts Can Run a COVID-19 Vaccine Clinic," *Education Week*, February 4, 2021, https://www.edweek.org/leadership/how-school-districts-can-run-a-covid-19-vaccine-clinic/2021/02.

³⁶ Centers for Disease Control and Prevention, "Influenza School-Located Vaccination (SLV): Information for Planners," https://www.cdc.gov/flu/pdf/school/SLV_information.pdf.

³⁷ Patty Wight, "As More Teens Become Eligible for Coronavirus Vaccine, School Based Clinics Help Spread Immunity," Maine Public Radio, https://www.mainepublic.org/health/2021-05-11/vaccine-clinics-in-maine-schools-help-spread-covid-19-immunity-as-more-teens-become-eligible.

³⁸ Web Staff, "Coronavirus vaccination clinic held at Punahou School", Khon2 News, https://www.khon2.com/coronavirus/coronavirus-vaccination-clinic-held-at-punahou-school/.

³⁹ Mississippi State Department of Health, "Adopt-a-School: Provider Partnerships for COVID-19 Vaccinations in Schools," https://msdh.ms.gov/msdhsite/static/14,23483,420,976.html#schools.

⁴⁰ Salazar, M. "Central Texas school districts will have free flu vaccine clinics in October; Austin groups advocate for flue education." KVUE, September 2020. Available at https://www.kvue.com/article/news/health/central-texas-school-districts-free-flu-vaccine-clinics-october-groups-advocate-flu-education/269-999ce5b1-6486-4bbe-ada7-0fedce28c5aa.

⁴¹ Plindblad, "Lodi School District to host COVID-10 vaccination clinic May 27," *Lodi Enterprise Press*, May 24, 2021, https://www.hngnews.com/lodi_enterprise/news/covid-19/article_f5be2575-96b0-57d8-9048-20e178ff272d.html.

to COVID-19 vaccinations with an emphasis on equity. Through their 40,000 locations, they have already administered over 123 million doses, including through pop-up clinics.⁴² School districts can find out what pharmacies belong to the Federal Pharmacy Program in their state and reach out directly to form a partnership.

Community Organizations and Non-Profits

A few SLVs partnered with community organizations and non-profit groups. In Vermont, the Waterbury Ambulance held a pop-up, drive-through vaccine clinic at the high school and administered the vaccines.⁴³ In Cranston, RI, the fire department managed an SLV at a local high school and brought experienced staff to the clinic. The non-profit Kids'-Doc-On-Wheels provided a series of COVID-19 vaccination clinics for community members 12 years and older at Rockdale County Public Schools in Georgia.⁴⁴ The non-profit is experienced in providing mobile health services and the school district leveraged their expertise, supplies, and staff to implement the clinic.

School Nurses and School Staff Actively Work with Partners

Although partners planned and staffed several of the SLVs we reviewed, school nurses can be involved in several ways. Because of their role in the school, school nurses are well-positioned to take the lead in working with the partner, answering parents' questions, and engaging stakeholders. The CDC recommends identifying and connecting with stakeholders like superintendents, principals, school boards, and union representatives early in the planning process. The CDC also notes that it is important to identify a single point of contact for each school to handle communications and prepare staff assisting with the clinic to answer basic questions and escalate advanced questions. School nurses may fulfill roles like those suggested by the CDC, and they also participate as clinical partners. At one clinic in Anchorage, AK, school nurses administered vaccines. The SLV had 15-20 registered school nurses administer shots and monitor for adverse reactions and 20 non-clinical staff members to greet people, answer questions, help with booking appointments, disinfect stations, and help people move through the clinic smoothly. As

⁴² Centers for Disease Control and Prevention, "Vaccines & Immunizations: Federal Retail Pharmacy Program," https://www.cdc.gov/vaccines/covid-19/retail-pharmacy-program/index.html.

⁴³ Tracy Wrend, "Pfizer Vaccine Approved for Children 12 and Up," *Lamoille South Unified Union*, *Announcements*, May 13, 2021, https://lsuu.org/2021/05/13/pfizer-vaccine-approved-for-children-12-and-up/.

⁴⁴ "Reopening 2021–2022: COVID-19 Vaccinations," Rockdale County Public Schools, https://www.rockdaleschools.org/reopening/covid-19_vaccination.

⁴⁵ Centers for Disease Control and Prevention, "Influenza School-Located Vaccination (SLV): Information for Planners," https://www.cdc.gov/flu/pdf/school/SLV information.pdf.

⁴⁶ Catherine Gewertz, "How School Districts Can Run a COVID-19 Vaccine Clinic," *Education Week*, February 4, 2021, https://www.edweek.org/leadership/how-school-districts-can-run-a-covid-19-vaccine-clinic/2021/02.

SLV Organizers Can Promote Clinics through Messages about Vaccine Eligibility, Safe Return to School, and Incentives

SLVs have considered who is eligible to receive the brand of vaccine the clinic will offer and shared that information when promoting the clinic. In the COVID-19 context, most SLVs, and all who served individuals under 18, have used the Pfizer vaccine. In Fairfield-Suisun City, CA, the school district held an SLV for students 12 and older to receive the Pfizer vaccine but also made the Johnson & Johnson vaccine available to older family members as a single-dose option. ⁴⁷ Erie County, NY made the Moderna vaccine available to community members in addition to the Pfizer vaccine for adolescents at their clinic. ⁴⁸ While we did not uncover examples of concurrent vaccination in our review, SLVs may need to consider offering both flu and COVID-19 vaccinations concurrently moving into the 2021–2022 flu season.

"We want the entire community to be safe and healthy...and we also want a safe return to school for our students, faculty, and staff. This is our best shot." The most common messaging around COVID-19 SLVs has been a safe return to school. SLVs may be able to contribute to the success of their clinic by including this message in materials distributed to students, parents, and school staff. Other SLVs have mentioned the clinic's cost and involved school staff to share personal messages about

vaccination. For example, in Rhode Island, fliers emphasized that vaccination was free regardless of insurance status and no immigration information would be collected.⁴⁹ In Los Angeles, CA, the public health department recommends identifying a team of stakeholders to promote the clinic (such as teachers, students, school nurses, coaches, parents, and ESL coordinators) and using student or school staff testimonials about why they got vaccinated in outreach materials.⁵⁰

Some organizers used incentives to encourage participation in an SLV. The incentives offered by states and schools varied, but most were material or financial. One SLV organized a social event to draw participants. A school in the Bronx, NY hosted a clinic with a DJ, games, and ice cream. Students in New York state ages 12–17 who received their first dose of the vaccine in a certain time frame were also eligible to receive one of 50 full

Incentives used to promote SLVs

- iPhones
- Food
- Gift cards
- College scholarships

⁴⁷ Corey, K, "Press Release: Grange Middle School to Host Vaccine Clinic Students Age 12 and Older," *Daily Republic*, May 20, 2021, https://www.dailyrepublic.com/all-dr-news/community/community-news-and-views/press-release-grange-middle-school-to-host-vaccine-clinic-students-age-12-and-older/.

⁴⁸ WGRZ Staff, "Erie County hosting Pfizer vaccine clinic for teenagers Tuesday," WGRZ, May 17, 2021, https://www.wgrz.com/article/news/local/erie-county-hosting-pfizer-vaccine-clinic-for-teenagers-tuesday/71-7960378b-a30d-4ab7-a169-a19ca96e8c3.

⁴⁹ Rhode Island Department of Health, SLV Flu FAQ document, Accessed by AIM Resources.

⁵⁰ County of Los Angeles Public Health, "Best Practices for School Based Clinics: COVID-19 Vaccine Clinic Toolkit", Accessed at http://publichealth.lacounty.gov/acd/ncorona2019/vaccine/checklist/.

⁵¹ Chang, S, "NYC to Install COVID Vaccine Clinics at 4 Bronx Schools," *Gothamist*, June 2, 2021, https://gothamist.com/news/nycinstall-covid-vaccine-clinics-4-bronx-schools.

scholarships to any New York public college or university.⁵² Other schools have provided food from local businesses during the SLV and held an iPhone raffle.⁵³ In Washington, D.C., residents 12 and older receive a \$51 VISA gift card when they receive their first dose or when they help an unvaccinated community member plan to get vaccinated and go with them to get their shot at one of three specific sites, two of which are schools.⁵⁴

Adults and adolescents vaccinated at an SLV may be eligible for state-wide incentives, though states have had varied success with incentives. For instance, Ohio observed a short-term, 53% increase in vaccination rates in the week after announcing their Vax-a-Million lottery for \$1 million and one full college scholarship, while Arkansas's and Louisiana's incentive programs have not produced such a spike. In general, a small percentage of the population responds to such incentives, and experts recommend prioritizing outreach over incentives.⁵⁵

Some states offer non-material incentives like increased in-person opportunities and socialization that may motivate students and families. In Los Angeles, CA, promotional materials highlighted hanging out with friends and summer break in addition to personal and community health as benefits to vaccination. ⁵⁶ In Kentucky, if a fully vaccinated student is exposed to the virus, they will not have to quarantine, enabling them to miss fewer school days and school events. ⁵⁷ The Lodi, WI district also has this policy and emphasized it in parent communication about SLV clinics. ⁵⁸ Promoting messages about participation in school sports as a benefit of vaccination may also encourage participation. In the 2020–2021 school year, quarantine contributed to many days of in-person learning lost, with one parent reporting his child missed 60 days of school or sports due to quarantine. ⁵⁹ State requirements for participation in sports may also be mentioned. For example, in Utah, schools require students participating in extracurricular activities such as sports to be tested for COVID-19 unless they are fully vaccinated—and high school SLVs have leveraged this message to promote vaccination. ⁶⁰

⁵² Ibid.

⁵³ Powell Crain, T. "Alabama school district hosts COVID vaccine clinic for students." AL.com, April 29, 2021. Available at https://www.al.com/news/2021/04/alabama-school-district-hosts-covid-vaccine-clinic-for-students.html.

⁵⁴ Press Release Desk. "District of Columbia Public Schools: Mayor Bowser and DC Health to Announce Upcoming Vaccine Clinics For Residents Ages 12–18." *Patch*, July 1, 2021. Available at https://patch.com/district-columbia/georgetown/district-columbia-public-schools-mayor-bowser-dc-health-announce.

⁵⁵ Pereira, Ivan. "Why COVID-19 vaccine incentives didn't really work". ABC News, July 15, 2021, Available at https://abcnews.go.com/Health/vaccine-incentives-best-answer-hesitancy-experts/story?id=78695407.

⁵⁶ State of California, Vaccine Clinic Toolkit for Schools, Accessed by AIM Resources.

⁵⁷ Patrick, M. "Only 1/4 of eligible Kentucky school children have received a COVID-19 vaccine; schools use varied approaches to offer them." *The Times-Tribune*, July 12, 2021. Available at https://www.thetimestribune.com/news/only-1-4-of-eligible-kentucky-school-children-have-received-a-covid-19-vaccine-schools/article_1d774e3a-e2a9-11eb-b978-bffbe4ba01ed.html.

⁵⁸ Plindblad. "Lodi School District to host COVID-10 vaccination clinic May 27." *Lodi Enterprise Press*, May 24, 2021. Available at https://www.hngnews.com/lodi_enterprise/news/covid-19/article_f5be2575-96b0-57d8-9048-20e178ff272d.html.

⁵⁹ Ferguson, D. "Experts urge youth vaccinations, but COVID-19 vaccine hesitancy is strong in South Dakota." *Watertown Public Opinion*, June 9, 2021. Available at https://www.thepublicopinion.com/story/news/2021/06/09/covid-19-youth-vaccinations-vaccine-south-dakota-news-watch/7592191002/.

⁶⁰ Means, S.P. "More than 100 Utahns ages 16 and 17 are eligible for COVID-19 vaccine. Clinics are going to high schools to get it to them." *The Salt Lake Tribune*, April 29, 2021. Available at https://www.sltrib.com/news/2021/04/29/more-than-k-utahns-ages/.

SLVs Approaches to Consent Vary and Consider State Requirements

Staff organizing an SLV may review resources from the CDC and FDA on the COVID-19 vaccines to inform their approach to consent. The resources are in multiple languages, including fact sheets for the vaccines with emergency use authorization. For SLVs focusing on adolescents, CDC guidance suggests multiple approaches to distributing consent materials including sending materials home with students, sending materials through the mail, providing materials at school events, linking materials online, and having

Care in the wording used in promotional materials matters. Parents were concerned that their children would be vaccinated without their consent when a notice said, "we will be administering" rather than "we will be offering" the COVID-19 vaccine.

materials on-site. Forms sent out in advance should have an option to decline vaccination so clinic staff can differentiate between students missing consent forms and where consent was denied. Because states and jurisdictions establish requirements for obtaining informed consent, the CDC also suggests clinic organizers consult state and local legal advisors about the SLV's proposed consent process. ⁶¹

SLV consent processes varied by state and considered state-specific consent requirements. In some states, eligible students are able to provide their own consent, such as children 15 and older in Oregon and children 16 and older in Rhode Island. At clinics in other states, a guardian had to accompany minors to get vaccinated.

- In Los Angeles, CA, minors were required to be accompanied by an adult and show photo identification and proof of age.⁶⁴
- In Washington, D.C., a guardian is required to sign the consent form at the clinic and state their relationship to the minor. 65
- Michigan vaccinates students if they have a signed consent form or a parent accompanying them.⁶⁶

⁶¹ Centers for Disease Control and Prevention. "Influenza School-Located Vaccination (SLV): Information for Planners." Available at https://www.cdc.gov/flu/pdf/school/SLV information.pdf.

⁶² Brown, J. "Eugene School District to hold on-campus COVID-19 vaccine clinic for students." *The Register Guard*, May 4, 2021. Available at https://www.registerguard.com/story/news/2021/05/04/covid-vaccine-clinic-students-held-eugene-school-district/4943069001/.

⁶³ Kittredge, D. "High school vaccination campaign kicks off in Cranston." *Cranston Herald*, May 5, 2021. Available at https://cranstononline.com/stories/high-school-vaccination-campaign-kicks-off-in-cranston,161333.

⁶⁴ Lin, Rong-Gong and H. Smith. "Younger teenagers will start getting COVID-19 vaccine Thursday in L.A. County" *Los Angeles Times*, May 12, 2021. Available at https://www.latimes.com/california/story/2021-05-12/l-a-county-to-offer-covid-19-vaccines-to-younger-teens-thursday.

⁶⁵ District of Columbia Public Schools. "DC Public Schools to Open COVID-19 Vaccination Clinics for Students and Families Starting June 1." New release, May 27, 2021. Available at https://dcps.dc.gov/release/dc-public-schools-open-covid-19-vaccination-clinics-students-and-families-starting-june-1.

⁶⁶ Erb, R., and R. French. "History, algebra...and Pfizer? Michigan high schools host vaccine clinics." *Bridge Michigan*, April 30, 2021. Available at https://www.bridgemi.com/michigan-health-watch/history-algebra-and-pfizer-michigan-high-schools-host-vaccine-clinics.

 At an SLV in Vermont, parents could provide consent in multiple ways, such as registering for the vaccine online, registering for the vaccine through a call, signing a permission slip, attending the clinic with their child, or over the phone during the clinic.⁶⁷

Consent may also be built into the clinic registration process. Some SLVs required or encouraged patients to register in advance using state or county online or phone vaccine registration platforms. Another patient registration option SLVs may use is PrepMod, a web-based software application that manages key aspects of mass vaccination efforts. Sites that utilize PrepMod benefit from online registration, consent forms, and reporting; and patients can register themselves using the application.

Vaccine Hesitancy May Influence Participation in SLV Activities

Vaccine hesitancy may impact an SLV, so organizers should consider the level of hesitancy that they expect in the school and community. Hesitancy may manifest in low turnout rates or tensions surrounding SLVs.

- In South Dakota, many eligible students have opted not to be vaccinated for reasons including peer pressure, parental opinions, and vaccine misinformation.⁶⁸
- In Marion County, IN, a teacher cited historical medical mistreatment among Black and Latino
 communities as a factor contributing to their low vaccination rates, even reporting that some
 students make fun of people who get vaccinated.⁶⁹
- At two SLVs in Utah, anti-vaccination flyers with misinformation about COVID-19 vaccine side effects were placed on vehicles outside planned SLV clinics.⁷⁰

In one state, under pressure from state legislators, the health department temporarily stopped all adolescent vaccine outreach for COVID-19 and all other diseases but has now resumed most activities, including SLVs. ⁷¹ The pause generated concern about rural access as in many counties, school gyms are one of the few

School nurses can form community relationships through influenza SLVs and become a trusted resource for questions about other vaccines.

spaces that meet the needs of vaccination clinics in terms of size, air conditioning, and space for social distancing. With hesitancy in mind, SLVs may consider taking steps to ensure outreach materials, such as vaccine reminder postcards and automated emails, go to parents rather than

⁶⁷ Wrend, T. "Pfizer Vaccine Approved for Children 12 and Up." *Lamoille South Unified Union*, *Announcements*, May 13, 2021. Available at https://lsuu.org/2021/05/13/pfizer-vaccine-approved-for-children-12-and-up/.

⁶⁸ Ferguson, D. "Experts urge youth vaccinations, but COVID-19 vaccine hesitancy is strong in South Dakota." *Watertown Public Opinion*, June 9, 2021. Available at https://www.thepublicopinion.com/story/news/2021/06/09/covid-19-youth-vaccinations-vaccine-south-dakota-news-watch/7592191002/.

⁶⁹ TerBush, C. "COVID vaccine hesitancy among Black and Latino students concerns Indianapolis officials." *Chalkbeat*, June 14, 2021. Available at https://in.chalkbeat.org/2021/6/14/22533973/covid-vaccine-children-school-masks-indianapolis.

⁷⁰ McGurk, N. "Anti-vaccine flyers placed outside high schools ahead of on-site clinics." ABC4, April 29, 2021. Available at https://www.abc4.com/news/local-news/anti-vaccine-flyers-placed-outside-high-schools-ahead-of-on-site-clinics/.

⁷¹ Coleman, Justine, "Tennessee resuming nearly all adolescent vaccine advocacy". *The Hill*, 7/23/21, Available at https://thehill.com/policy/healthcare/564556-tennessee-resuming-nearly-all-adolescent-vaccine-advocacy.

adolescents and use visual media that show adolescents receiving vaccines with a parent present.⁷²

Schools are uniquely positioned to promote vaccinations and work to overcome hesitancy. Schools can disseminate vaccine information and engage community members who are hesitant. A Phoenix, AZ school district held family engagement forums to provide information about COVID-19 vaccines.⁷³ In two Colorado districts, teachers created lessons to educate students about vaccine science to debunk vaccine myths. In Alamogordo, NM, school nurses formed relationships in the community while administering flu vaccinations, hoping this would make them a trusted resource for questions about the COVID-19 vaccine.^{74,75}

Schools have also involved important state and community voices to show support for vaccination. Students at Rangeview High School in Colorado organized a clinic at their school that delivered over 800 shots to the community through a program for equity clinics in underserved communities. The family event was complete with food, drinks, and music in the observation area, and was attended by the Governor. ⁷⁶ In West Virginia, the Governor announced that there would be vaccination clinics at schools in all counties in the state when the Pfizer vaccine was approved for children 12-15 years old, with all eligible West Virginians welcome. ⁷⁷

The COVID-19 Pandemic Has Impacted Influenza SLVs

SLVs have been used to deliver flu vaccinations and routine immunizations to children and their families in communities across the country for many years. However, the majority of the SLVs that we identified in our scan were focused on COVID-19. This is likely due to the severity and novelty of the pandemic and the relative newsworthiness of COVID-19 SLVs. Many of these COVID-19 SLVs were influenced by the experience and expertise of implementers of flu SLVs, as well as existing guidance documents and toolkits that were created for influenza SLVs. We found instances of the COVID-19 pandemic influencing the planning and implementation of flu SLVs in different ways.

⁷² Ibid.

⁷³ Venkataramanan, M., and N Onneweer. "Arizona's first children, ages 12–15, start getting COVID-19 vaccinations." Arizona Republic, May 13, 2021. Available at https://www.azcentral.com/story/news/local/arizona-health/2021/05/13/first-children-ages-12-15-begin-covid-19-vaccinations-arizona/5080691001/.

⁷⁴ Meltzer, E. "How Colorado schools are helping teenagers – and their families – get the COVID vaccine." *Chalkbeat Colorado*, May 13, 2021. Available at https://co.chalkbeat.org/2021/5/13/22435327/covid-vaccine-teens-families-colorado-schools.

⁷⁵ Schnell, L. "Meet Flo, an old Winnebago delivering COVID-19 tests, flu shots, and food to students in need." *USA Today*, January 30, 2021. Available at https://www.usatoday.com/story/news/nation/2021/01/30/nm-school-uses-cares-buy-winnebago-offer-mobile-covid-tests/4014393001/.

⁷⁶ Lenthang, M. "Student-organized COVID-19 vaccine clinic at Colorado high school gives out over 800 shots." ABC News, June 5, 2021. Available at https://abcnews.go.com/Health/student-organized-covid-19-vaccine-clinic-colorado-high/story?id=78062970.

⁷⁷ Officer of the Governor Jim Justice. "COVID-19 Update: Gov. Justice announces West Virginia ready to offer vaccines to children ages 12–15 at schools upon federal approval." Press release, May 5, 2021. Available at https://governor.wv.gov/News/press-releases/2021/Pages/COVID-19-UPDATE-Gov-Justice-announces-WV-ready-to-offer-vaccines-to-children-ages-12-15-at-schools-upon-federal-approval.aspx.

In a few cases, flu SLV programs that had taken place in prior years were suspended or altered during the 2020–2021 flu season. For example, in Knox County, TN, the Knox County Health Department decided against carrying out flu SLVs during the 2020 flu season. Due to the COVID-19 pandemic, the department instead opted to host flu clinics aimed at school-aged children in public clinics instead of SLVs but emphasized that flu vaccinations remained a high public health priority. Similarly, in Oakland, CA, the Shoo the Flu program that had in previous years delivered flu shots in schools throughout Oakland and surrounding cities cancelled its flu SLVs in 2020. Instead, Shoo the Flu and the Alameda County Public Health Department worked together to carry out community-located mass flu vaccination events.

Some flu and routine immunization SLVs that did go forward in fall 2020 were adapted to ensure social distancing and other precautions to prevent the spread of COVID-19. In Alaska, the Anchorage Health Department and local school district built on a longstanding relationship and past experience carrying out SLVs to host drive-through clinics providing free flu shots to the public and routine immunizations including DTap, Tdap, Hepatitis A, Hepatitis B, Polio, MMR, Varicella, and combination vaccines for students. The health department provided supplies and equipment for use at the clinics and responded to specific safety needs and staffing priorities presented by the COVID-19 pandemic.⁸⁰

Implementers of flu SLVs emphasized the importance of the flu vaccine during the pandemic, pointing to the need to prevent a "twindemic" that could occur if a bad flu season were to concur with the ongoing COVID-19 pandemic. In Grand Island, NE, a community hit particularly hard by the COVID-19 pandemic, the public school system partnered with the local health department, a health center, and an insurance company to launch an SLV campaign aimed at reaching all 10,000 of the students in the district. Public health officials cited concerns about the possibility of a "twindemic" and the strain that flu puts on local health resources as a driver for the SLV. ⁸¹ In Maricopa County, AZ, the Department of Public Health held dozens of flu vaccination events in late 2020, encouraging community members to get a flu shot with the message that limiting the spread of influenza reduces stress on the health system during the COVID-19 pandemic. These events included special precautions to prevent transmission of COVID-19, including social distancing, mask requirements, and enhanced cleaning and disinfecting procedures. ⁸²

We identified one SLV planning to offer both COVID-19 vaccines and other back-to-school routine immunizations. In Alamogordo, NM, a school nurse used Coronavirus Aid, Relief, and Economic Security Act (CARES) funding to convert a 40-foot Winnebago into a mobile nurse's station named Florence Nightingale. The school nurses used the station to deliver flu vaccinations to district staff, including one teacher who used receiving hers during a lesson as an

⁷⁸ Robert Holder, "Knox County Health Department opts for community clinics instead of school visits for flu vaccine," WATE, September 18, 2020, https://www.wate.com/news/local-news/knox-county-health-department-opts-for-community-clinics-instead-of-school-visits-for-flu-vaccine/.

⁷⁹ Alameda County Public Health Department, "Shoo the Flu Out of Alameda County!" https://acphd.org/flu/shoo-the-flu/.

⁸⁰ Morgan Krakow, "Anchorage School District will offer free flu shots to the public and free vaccines for students," *Anchorage Daily News*, September 23, 2020, https://www.adn.com/alaska-news/2020/09/22/anchorage-school-district-will-offer-free-flu-shots-for-the-public-and-free-vaccines-for-students/.

⁸¹ Steve White, "GIPS to offer free flu shots for 10,000 kids," NTV News, October 12, 2020, https://nebraska.tv/news/local/gips-to-offer-free-flu-shots-for-10000-kids.

⁸² Maricopa County Office of Communications, "Flu event attendees: 'I don't want to get sick again," Maricopa County, https://www.maricopa.gov/CivicAlerts.aspx?AID=1835.

educational opportunity for students, to provide food boxes to families, and to administer hundreds of COVID-19 tests. They plan to use it to deliver COVID-19 vaccines as well as standard childhood vaccinations for students.⁸³

Looking Ahead at Future Opportunities for SLVs

The significant experience modeled by SLVs for influenza and childhood immunizations laid the foundation for states and school districts to quickly implement SLVs to combat COVID-19. Moving forward, states and schools have opportunities to continue these models and expand COVID-19 SLVs to younger children as vaccine authorization allows. Pfizer and Moderna have ongoing clinical trials for children 5-11 and could receive emergency use authorization for those age groups in fall 2021 or spring 2022, expanding the population of students eligible for vaccination.⁸⁴

Conducting COVID-19 SLVs may have further built-up local capacity for SLVs more generally. The partnerships established with community-based organizations, pharmacies, and health systems could be leveraged for SLVs focused on influenza and other childhood immunizations. Additional research into the nuances of some partnerships could be useful in understanding which organizations are effective partners and why. Additionally, the observations about how some SLVs expanded COVID-19 vaccine access for rural and underserved populations may be incorporated into other vaccination campaigns that want to improve health equity.

The urgency of the COVID-19 pandemic diverted some public health resources previously used for other immunization programs and limited access to providers for routine immunizations for part of 2020 and 2021. Organizers may consider hosting SLVs for "catch-up" vaccinations for students that missed them during the pandemic. Moreover, as masking and public and private gathering precautions have eased since the height of the pandemic, the upcoming flu season could be more significant than last year, underscoring the need to continue or resume influenza SLVs. Clinic organizers could also explore opportunities for concurrent influenza and COVID-19 vaccination clinics in the fall. SLVs for influenza and COVID-19 can also contribute to reducing absenteeism after 18 months of remote learning or in-person learning interrupted by quarantines. SLV organizers were curious about pursuing concurrent influenza and COVID-19 clinics but were hesitant to move forward without additional guidance on administering two vaccines within the same SLV, and because it is not clear the impact COVID-19 vaccine hesitancy may have on flu vaccinations. Additional research to explore instances of hesitancy in communities that have hosted SLVs may inform approaches to concurrent vaccination and

⁸³ Lindsay Schnell, "Meet Flo, an old Winnebago delivering COVID-19 tests, flu shots, and food to students in need," *USA Today*, January 30, 2021, https://www.usatoday.com/story/news/nation/2021/01/30/nm-school-uses-cares-buy-winnebago-offer-mobile-covid-tests/4014393001/.

⁸⁴ McGinley, L., C.Y. Johnson, and Y Abutaleb. "FDA asks Pfizer, Moderna to test their vaccines in more children to help rule out safety issues." *The Washington Post*, July 26, 2021. Available at https://www.washingtonpost.com/health/2021/07/26/fda-asks-pfizer-moderna-test-their-vaccines-more-children-under-12-help-rule-out-safety-issues/.

⁸⁵ Georgia Immunization Program, Georgia Department of Public Health, "Georgia School Based Flu Program Health Department Guidance" Atlanta, GA, 2020.

effective messaging more broadly for COVID-19, influenza, and other vaccines. Also, interviewing other stakeholders, such as school administrations, parent-teacher organizations, and SLV partners could inform SLV planning and further illuminate how SLVs may address hesitancy. Further research that evaluates COVID-19 SLVs could assess community impact and inform how to leverage SLVs in eliminating vaccine-preventable illnesses moving forward.

APPENDIX A Complete List of Source Documents

Table A.1. Complete list of sources

Title/description	Source
CDC Guide on SLVs	Centers for Disease Control and Prevention. "Influenza School-Located Vaccination (SLV): Information for Planners." Available at https://www.cdc.gov/flu/pdf/school/SLV information.pdf.
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