

Evaluation of a multischool collaborative COVID-19 vaccination project

Jessica LeClair PhDc, MPH, RN Clinical Instructor  |

Susan J. Zahner DrPH, RN, FNAP, FAAN Professor and Associate Dean for Faculty Affairs 

School of Nursing, University of Wisconsin-Madison, Madison, Wisconsin

Correspondence

Susan J. Zahner, School of Nursing, University of Wisconsin Madison, 5226D SSCH, 705 Highland Avenue, Madison, WI 53705, USA.
Email: sjzahner@wisc.edu

[Correction added on 15 September 2022, after first online publication:

Acknowledgements section and the ORCID ID for Jessica LeClair have been included in this version.]

Abstract

To describe experiences of student nurses and faculty who participated in COVID-19 vaccine delivery through a multischool collaboration. Cross-sectional survey. Student nurses and faculty members from five university schools and colleges of nursing who participated in one or more COVID-19 vaccination or education events in 2021. Surveys were designed for students and faculty to document process and outcome experiences associated with project participation. Surveys were administered through an online survey platform. Overall, 648 students and 68 faculty members participated in the project. The evaluation survey was completed by 115 students (18%) and 58 faculty members (85%). Students valued increasing their clinical skills and reported the experience influenced their perspectives on nursing, fueling their passion and informing future career choices. Students reported that it was personally important to contribute to the vaccination effort. Few students reported challenges in participating in the project. Faculty reported positive experiences including gaining knowledge about public health and their communities, fueling their passion for nursing education, feeling a deeper connection with students, and experiencing personal satisfaction from contributing to the pandemic response. This project resulted in meaningful student learning opportunities, enhanced capacity for the public health emergency response, and strengthened partnerships among nursing programs and between academia and public health community partners.

KEYWORDS

COVID-19, public health nursing, student nurses, vaccination

1 | BACKGROUND

The availability of effective vaccines contributes to the prevention of serious illness and death due to COVID-19. Tremendous effort and coordination are required across many public and private organizations, governmental agencies, faith communities, and businesses to

educate and vaccinate an entire population against a novel infection. Academic health professions programs are part of many communities' emergency response plans. In partnership with community agencies and public health agencies, schools of nursing have responded during past public health emergencies by engaging faculty, staff, and students in providing education and vaccinations.

This is an open access article under the terms of the [Creative Commons Attribution-NonCommercial-NoDerivs](https://creativecommons.org/licenses/by-nc-nd/4.0/) License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

© 2022 The Authors. *Public Health Nursing* published by Wiley Periodicals LLC.

In 2021, as COVID-19 vaccinations became available, schools and colleges of nursing in Wisconsin began working with community and campus partners to staff vaccination clinics. The Wisconsin Partnership Program provided funding to the University of Wisconsin (UW)—Madison School of Nursing to support university engagement in vaccination efforts. The Badger Nurse COVID-19 Vaccination and Education (BNCoVED) project (Second author, Co-Principal Investigator (Co-PI)) had three aims: (1) Prepare students, faculty, and alumni volunteers to safely provide COVID-19 vaccinations and education about COVID-19 prevention and vaccination; (2) Develop systems and mechanisms to support recruitment, scheduling, oversight, and evaluation of COVID-19 vaccination and education programs by UW—Madison prenursing and nursing students (graduate and undergraduate), volunteer faculty, and volunteer alumni members, and (3) Provide staffing for vaccination clinics and community education programs as requested by UW—Madison School of Nursing, local health departments in surrounding counties, and other community partners. The grant period for BNCoVED was from January to June 2021.

This project was extended when the Wisconsin Partnership Program provided additional funding to support the engagement of student nurses enrolled in the public university system in the statewide COVID-19 vaccination effort. The second author and Co-PI on the grant reached out to the five other University of Wisconsin System nursing schools about the funding opportunity and four of the five agreed to participate (UW—Oshkosh College of Nursing, UW—Eau Claire College of Nursing and Health Sciences, UW—Green Bay College of Health, Education, and Social Welfare, and UW—Stevens Point RN to BSN Program). Contracts were established to transfer funds to the four additional schools. A coordinating committee of faculty representatives from the five schools was formed in February 2021 to coordinate the extended BNCoVED project. The coordinating committee, facilitated by the second author, met 10 times (approximately every 2 weeks) between February and June for 1 h using a remote meeting platform to coordinate activities, share experiences, and plan for evaluation. The grant budget supplemented resources at the schools for the education of faculty and students, administrative support for scheduling and tracking vaccination efforts, and faculty time for student supervision.

Activities included organizing for action (creating contracts, workplans, meeting schedules, and hiring staff); training for action (creating training modules for safe vaccine delivery for students and faculty, sharing educational resources and materials, and documenting completion of training); vaccinating (staffing vaccination sites organized by our universities, local public health departments, tribal health departments, faith communities, and others), and educating (collecting and curating high quality, accurate community education materials and delivering education to groups via outreach and requests). Faculty members at UW—Madison School of Nursing compiled COVID-19 educational materials from the Centers for Disease Control and Prevention (CDC) and other sources and uploaded the materials into two learning management system (Canvas) courses, one for students and one for faculty. Examples of materials in the courses include: four

CDC e-learning courses that were required to be completed, injection site landmarks, personal protective equipment (PPE), vaccine-specific fact sheets and comparison information, patient education resources, and site-specific information. Students and faculty at UW—Madison School of Nursing were required to upload certificates of completion of the training prior to being authorized by a faculty member on the team to participate in a vaccination clinic. While training for students and faculty was not standardized across schools, links to the two UW—Madison School of Nursing Canvas courses were shared with the collaborating schools. Each school provided its own training supplemented by the materials provided by UW—Madison School of Nursing and assessed readiness and competency for providing vaccination and education. Collaborating schools also were responsible for scheduling vaccinators and providing oversight for their own students and faculty members. In a separate funding initiative supported by the University of Wisconsin System, student nurses from all five schools were eligible to receive a \$500 tuition credit for serving the public as vaccinators.

The remainder of this paper describes the outcomes of the BNCoVED Initiative which was evaluated through (1) a set of process metrics submitted for 5 months (February to June 2021) by each school, and (2) surveys distributed to faculty members and students who participated in COVID-19 vaccination and education efforts across the five schools. The overall aim of the evaluation surveys was to answer the question, "What were the experiences of nursing students and faculty members with the BNCoVED Initiative?"

2 | METHODS

The BNCoVED evaluation was designed to address the processes and outcomes of the program (Hodges & Videto, 2011). Process evaluation focused on understanding the processes that participants experienced during the initiative and outcome evaluation focused on understanding the effects of the initiative on the participants.

2.1 | Design and sample

The coordinating committee identified a uniform set of metrics to monitor project outcomes across programs. These were documented by month in a Microsoft Excel spreadsheet and transmitted to UW—Madison School of Nursing for compilation.

Two evaluation surveys (one for students and one for faculty members) containing a mix of quantitative and qualitative questions were designed by the coordinating committee and refined by the second author (Co-PI) (see Table 1). Students and faculty were invited to participate in the survey by their respective schools using an embedded email link and two reminder emails, also with the embedded link. The surveys were administered through an online survey platform (Qualtrics) from April 30 to May 31, 2021. The survey met the criteria to be classified as program evaluation and not research by the UW—Madison Institutional Review Board.

TABLE 1 Survey questions

Student evaluation survey	Faculty evaluation survey
Which school do you attend for your nursing education? (select one from list of schools)	Which school are you affiliated with? (Check one from list of schools)
Which type of nursing student are you? (Pre-licensure or Post-licensure)	
Did you provide or assist with COVID-19 vaccination efforts in your role as a student (not as paid employment) at one or more sites in 2021? (yes or no)	Did you provide supervision of students, COVID-19 vaccinations, or other vaccination-related assistance at one or more sites in 2021? (yes or no)
How many clinics or events did you attend for the purpose of providing or assisting with COVID-19 vaccinations? (1, 2, 3, or more)	How many clinics or vaccination events did you attend for the purpose of providing supervision, vaccinations, or other vaccine-related assistance? (1, 2, 3, or more)
How many different clinic settings or places did you attend for the purpose of providing or assisting with COVID-19 vaccinations? (1, 2, 3, or more)	How many different clinic settings or places did you attend for the purpose of providing supervision, vaccinations, or other vaccination-related assistance? (1, 2, 3, or more)
What were your roles at these clinics or events? (Check all that apply: Provide vaccination; assistance with site set-up, workflow, close down; draw-up vaccines for site distribution; answer clinical questions from vaccine recipients; provide education; post-vaccine observer; other)	What were your roles at these clinics or events? (Check all that apply: Oversight/supervision of students; assistance with site set-up, workflow, close down; draw-up vaccines for site distribution; answer clinical questions from vaccine recipients; provide vaccination; provide education; post-vaccination observer; other)
What were your other roles at these clinics or events? (open text)	What other roles did you have at these clinics or events? (open text)
Did you have any challenges with participating in the COVID-19 clinics or education events? (yes or no)	Did you experience any challenges with participating in the COVID-19 Vaccine Education and Delivery project? (yes or not)
What challenges did you experience with participating in COVID-19 clinics? (open text)	What challenges did you experience with participating in the COVID-19 Vaccine Education and Delivery project? (open text)
Did participating in the COVID-19 vaccination response influence your perspective about your career in nursing? (yes or no)	Did participating in the COVID-19 vaccination response influence your perspective on nursing education? (yes or no)
Please describe how the experience influenced your perspective about nursing (open text)	How did participating in the COVID-19 vaccination response influence your perspective on nursing education? (open text)
During your experience with the COVID-19 vaccination response, did you feel like you were a member of an interprofessional public health team? (yes, no, I don't know)	Were you compensated for your time spent in COVID-19 vaccination efforts in addition to your usual salary? (yes or no)
What was it like to be a part of an interprofessional public health team? (open text)	
Please share any interesting interactions with community members that were surprising or meaningful to you. (open text)	Please share an interesting or surprising response or perspective shared by a community member, student, or site personnel. (open text)
How important was it to you to contribute to this effort? (Very important, Important, Neither important or unimportant, Slightly important, Not at all important)	How important was it to you to contribute to this effort? (Very important, Important, Neither important or unimportant, Slightly important, Not at all important)
What did you value most from the experience of providing or assisting with COVID-19 vaccination efforts? (open text)	What did you value most from the experience of working with the COVID-19 Vaccine Education and Delivery project? (open text)
What else would you like to share about your experience with the COVID-19 Vaccine Education and Delivery project that we have not asked? (open text)	What else would you like to share about your experience with the COVID-19 Vaccine Education and Delivery project that we have not asked? (open text)

2.2 | Measures and analytic strategies

Data were collected across schools on the number and level of students engaged, number of hours spent in vaccination clinics or education events, number of faculty and number of hours engaged in student supervision, and number of organizations supported. Data were stored and organized using Microsoft Excel.

The surveys included quantitative and qualitative/open-ended questions. Quantitative data were analyzed using the “default report” feature in Qualtrics. Inductive content analysis was utilized to analyze the qualitative survey questions. Content analysis is a research method that is used to describe and quantify phenomena systematically and objectively (Elo & Kyngas, 2008). Inductive content analysis is utilized when there is not enough former knowledge about the phenomenon, and categories must be newly derived. A team of six research staff, clinical faculty, and graduate students, including the first author, coded the open text responses with two team members coding each survey. The data analysis followed the recommended phases outlined by Elo and Kyngas (2008), including memoing (i.e., reading through the text, making margin notes, forming initial codes), describing (i.e., describing open codes in a codebook), classifying (i.e., developing higher-order categories), and representing (i.e., presenting categories in discussion). Inductive content analysis was conducted using Microsoft Excel.

3 | RESULTS

Overall, 586 unduplicated undergraduate students devoted 7428 h of time to the BNCoVED initiative between January and the end of June 2021. In addition, 62 post-licensure RN students contributed 1196 h of time as vaccinators. Across the five schools, 68 faculty members contributed 1572 h of time in oversight of student activities related to the initiative. At least 63 organizations were assisted by students and faculty members. While most activities were associated with providing vaccination, 23 students assisted 10 organizations in education events. A total of 115 students and 58 faculty members who participated in the initiative responded to the survey with response rates of 18% (students) and 85% (faculty).

The following describes survey results for student and faculty experiences with the processes of preparing for and implementing vaccination clinics or education events.

3.1 | Student experiences with COVID-19 clinic preparation

The majority of students who responded ($n = 102$, 89%) reported no challenges participating in the BNCoVED project processes. Thirteen students shared challenges they experienced. Of these, a few students experienced administrative challenges with registering to staff clinics and clinic cancellations, which also made it difficult to obtain the hours required to receive the tuition incentive.

TABLE 2 Student roles at clinics or events ($n = 115$)

Roles	Count (%)
Provide vaccination	106 (92%)
Assistance with site set up, workflow, close down	50 (43%)
Draw-up vaccines for site distribution	43 (37%)
Answer clinical questions from vaccine recipients	75 (65%)
Provide education	75 (65%)
Post-vaccine observer	34 (30%)
Other: check-in, greeter, triage/screening, Spanish interpreter, paperwork assistance, runner	11 (10%)

3.2 | Faculty experiences with COVID-19 clinic preparation

The majority of faculty members ($n = 46$, 79%) reported no challenges participating in the BNCoVED project processes. Ten faculty members shared challenges with preparing for participation in the clinics. Some identified a significant knowledge gap and required clinical skills training to help them prepare for participation. For example, one faculty member noted, “I am not sure how to define challenge. It took time and effort to prepare. I had not given an injection for a long time. That was a bit intimidating. The experience led me to look at the literature about IM injections and I found a fascinating recent study that was very helpful in regard to IMs in the deltoid.” Logistical challenges with clinic scheduling, late clinic cancellations, and faculty time constraints were also notable challenges. One faculty member shared that while they appreciated being compensated, “...it didn’t make any of my other responsibilities any lesser. I felt an obligation to participate knowing that students needed instructors in order to get their hours to get a discount on tuition, which caused some stress in an already stressful time.” One faculty member also shared that preparation was a challenge for some post-licensure students as well, as “...many had to do an extensive review to re-educate themselves on how to work with the general public in a community setting.” Faculty members noted that the student approval process for documentation in electronic records in some organizations was lengthy and some sites requested a greater time commitment in exchange for preparing students for the experience.

3.3 | Student experiences with COVID-19 clinic implementation

The majority of student ($n = 73$, 64%) respondents participated in three or more clinics or events, and the majority ($n = 96$, 84%) attended one or two different clinic sites or places for the purpose of providing or assisting with COVID-19 vaccinations. Table 2 describes student roles at these clinics or events.

Students shared concerns about the lack of access to interpreters at some clinics or events. For example, one student noted, “For some patients I vaccinated, a translator could’ve been used but it wasn’t easy to access an online translator or made clear how to do so. It would’ve

been nice for there to be more instruction on what to do in these scenarios, what parameters to use a translator in, and what guidelines are at vaccine sites for using family as a translator.” Another student shared a community member’s concern about race/ethnicity questions on the intake form, however, further details were not provided in the student’s survey response. Another concern was related to student clinical skill limitations, especially for first-year nursing students who were unable to give vaccines.

Nearly all students ($n = 107$, 96%; 112 total respondents) agreed that they felt like they were a member of an interprofessional public health team during their experience with the COVID-19 vaccination response. When sharing what it was like to be part of the team, many cited positive professional experiences (e.g., educational, experiential, fueled passion, teamwork, and collaboration) and positive personal impacts (e.g., finding meaning, having edifying or break-through experiences). As one student shared, “It was well structured and felt as though we were collectively working to help the public. I enjoyed that everyone was treated the same despite some people having licenses and others not yet. It was very collaborative.”

Students valued the interactions they had with community members, especially working with diverse populations. Students noted interactions with community members that were surprising or meaningful to them, including expressions of excitement, gratitude, hopefulness, and relief. One student noted, “Throughout the clinics I volunteered at, I was always amazed at the number of people coming in to get vaccinated. It wasn’t even that there were so many, but it was that nearly all of them were super excited to get vaccinated! I remember hearing the health department personnel comment on this, saying something along the lines of ‘you don’t see this every day; it’s truly amazing to see this much excitement and cooperation.’ It was super cool to see and be a part of.” Students also valued the opportunities to practice public health nursing skills and build community health in the context of a pandemic, as well as the exposure to professional mentorship. One student shared, “Overall, I would obviously say I value the clinical experience. I have been able to practice my education skills, therapeutic communication skills, as well as professionalism and flexibility through participating in these clinics.”

3.4 | Faculty experiences with COVID-19 clinic implementation

The majority of faculty members ($n = 40$, 68%) participated in three or more clinics or events and the majority ($n = 43$, 74%) attended one or two clinic sites or places for the purpose of providing or assisting with COVID-19 vaccinations. Table 3 describes faculty roles at these clinics and events. Faculty members were evenly split in how they were compensated for their participation with 50% ($n = 29$) reporting being compensated as a part of their expected teaching or administrative responsibilities, while 48% ($n = 28$) were compensated in addition to their usual salary for additional time spent in vaccination clinics.

Faculty members noted positive community responses to the clinics or events. These included the high participation of young people in vac-

TABLE 3 Faculty member roles at clinics or events ($n = 58$)

Roles	Count (%)
Oversight/supervision of students	45 (78%)
Assistance with site setup, workflow, closedown	25 (43%)
Draw up vaccines for site distribution	17 (29%)
Answer clinical questions from vaccine recipients	31 (53%)
Provide education	32 (55%)
Provide vaccination	29 (50%)
Other: serve as project manager, attend planning meetings, distribute information to students and faculty, support second dose sign-up processes	4 (7%)

ination clinics, community members sharing personal and emotional stories related to COVID-19 vaccination, and positive compliments for faculty and students. For example, one faculty member noted that “We received many beautiful responses, such as seeing friends again, hugging grandchildren for the first time in the year, and being able to safely see parents again.” Faculty members also shared that their students reported needing to dispel a great amount of community member misconceptions and misinformation about the vaccines.

3.5 | Outcome evaluation

The following section describes student and faculty member outcomes related to changes in knowledge or perspectives, behaviors, and personal impacts related to their experiences with the project. Students and faculty members also shared general feedback related to their experiences.

3.5.1 | Student knowledge or perspective outcomes

Seventy-eight of the students who responded (68%) agreed that participating in the COVID-19 vaccination response influenced their perspectives about a career in nursing. Similar to faculty members, students noted that their experience inspired and informed their future careers. They also noted an increase in public health knowledge acquisition through exposure to public health clinics. One student shared that the experience “Showed me the value of free health care and fueled my passion for advocating for accessible and free health care for all people.” Another student noted that they “...loved being able to work alongside public health nurses and get to know more about what they do.” Students also shared that they gained increased knowledge about diverse populations (e.g., increased cultural awareness) through the clinical experience.

3.5.2 | Student behavior outcomes

Students highlighted growth in their nursing skills as a result of their experience with the project, including providing public health



education, clinical skills, and working on an interprofessional team. One student shared, "...it was beneficial to see how healthcare professionals work together to achieve one common goal. It was helpful in that I was able to observe and work on my teamwork skills, which are very important in any field. I also became more comfortable in the administration of vaccines and educating clients! Overall a super positive experience!" Students also highlighted their increased utilization of therapeutic communication strategies, such as providing emotional support, health education, and dispelling misinformation.

3.5.3 | Student personal impacts

The large majority of students ($n = 96$, 96%; 100 total respondents) agreed that it was very important or important to them to contribute to the effort. Students felt that they personally benefited from the experience of providing community care. Students mentioned the personal connections they shared with community members (e.g., community members' personal stories and openness). Others highlighted the professional and interprofessional mentorship they gained from the experience. Many stories of positive personal impacts were shared by students, who expressed their gratitude for the opportunity to participate in BNCovED. As one student stated, "It's been an honor to participate in the COVID-19 vaccine rollout, which I view as a once-in-a-lifetime public health undertaking."

3.5.4 | Student general feedback

Students expressed appreciation for leadership citing the campus coordination and organization of the clinics. Students also highlighted the need for more community-based public health experiences and suggested making it a future requirement for all nursing students.

3.5.5 | Faculty knowledge or perspective outcomes

Thirty-three of the faculty member respondents (57%) agreed that participating in the COVID-19 vaccination response influenced their perspectives on nursing education. Faculty members shared that the experience allowed them to gain new public health knowledge and created excitement for nursing. In particular, they found meaning through deeper connections with students and were inspired by the high quality of their students' education. For example, one faculty member shared, "The students enjoyed the individual connections with me as a faculty member during this time. We had deeper conversations about careers and plans for the future. I think we need to have more opportunities to really talk with our students." Faculty members also stated that they valued the amount of public health clinical training they personally received.

3.5.6 | Faculty behavior outcomes

Faculty members noted that participating in the clinics improved their teaching strategies related to patient, family, and/or community-centered care, the application of public health knowledge, and how to collaborate as a team. For example, one faculty member noted, "The full experience allowed me to better know the community we serve, including the diversity of the population, which can be incorporated in future educational strategies." Another shared that their participation in BNCovED "...provided a wonderful opportunity to apply theories of public health and emphasized the importance of emergency preparedness on a community level." Another faculty member noted how teaching in the community clinical setting allowed students to "see the array of knowledge, knowledge deficits, and misunderstandings in ways a lecture could never capture. The fact that they interacted with so many people in a short time frame was invaluable." Faculty members valued the opportunity to support students through providing nursing education and public health experience and mentoring. Faculty members also valued the ability to grow and apply their own public health clinical skills, especially in providing community health education, working with diverse populations, and demonstrating the practice of public health nursing to the broader community.

3.5.7 | Faculty member personal impacts

The majority of faculty member respondents ($n = 49$, 94%; 52 total respondents) reported that it was very important or important to them to contribute to the effort. Faculty members shared numerous positive personal impacts from their experiences. These included a personal sense of satisfaction that they made a difference during the global pandemic through witnessing the positive effects on the community and their students. For example, one faculty member noted, "It was a great feeling being a part of helping the community return to normal life. As a supervisor, I enjoyed observing the students enjoying similar satisfaction." Another faculty member shared how the experience impacted them personally, "I felt like I was at the tip of the spear slashing through this invisible, but present enemy. Having lost family to this virus I felt I was finally able to make efforts that counted." Many noted "once-in-a-lifetime" opportunities presented by the initiative, such as being a part of the solution, fighting COVID-19, giving back to the community, saving lives, and being a part of the response to a "historic event."

3.5.8 | Faculty member general feedback

When considering the amount of time invested by faculty members with the initiative, one faculty respondent suggested that the administration provide official recognition of their time. Another suggested that the flexible, experiential curriculum was very effective and should be continued in response to other phenomena: "I would love if we could be more flexible in nursing school curriculum to travel to address

TABLE 4 Organizations assisted by student and faculty staffing

Type	Number
Public health departments	20
Tribal health centers	3
University health services	5
Health care organizations	25
State corrections facilities	2
K-12 schools	3
State mobile vaccination teams	2
FEMA clinics	1
Businesses	2
Total	63

natural disasters or calls for help relevant to the practice of nursing for 'real-life' learning."

4 | DISCUSSION

Student nurses and faculty members from five schools substantially enhanced the capacity of local public health departments, campus health services, state and federal agencies, and other community organizations across the state (see Table 4). The faculty members and students who responded to the surveys reported their participation in the COVID-19 vaccination and education response to be a positive experience in many ways. The results also identified the importance of preparation and training for faculty and students because COVID-19 vaccines were new and mass campaigns of this type are relatively infrequent. The results highlighted the desire of many students and faculty for more "real-world" experiences and partnerships in nursing education as well as the importance of experiences that make clear the valuable work of public health nurses.

The collaboration between the five schools was an important component of the BN-CoVED project. From a funding perspective, the willingness of the schools to collaborate resulted in increased resources being made available from the funder. The collaboration also created media interest in individual programs and the vaccination initiative. The schools have had successful prior experiences collaborating on ongoing programs (UW—Madison School of Nursing, *n.d.*) and on special grant-funded projects (Reilly, et al., 2011; Young, et al., 2014; Zahner & Henriques, 2013), which facilitated initiating a collaboration to help with the COVID-19 vaccination challenge. Collaboration between these five schools was also supported by the familiarity of being part of the same state university system with similar programs and infrastructure (e.g., course management systems). For example, all five schools approached faculty supervision of students in vaccination sites in similar ways. A review of the coordinating committee's meeting minutes found a benefit in having a regular opportunity to share their current activities, identify their unique and common challenges, and discuss strategies for overcoming barriers. While all the programs pro-

vided education to their students and faculty, having access to shared resources for education created during the project was also viewed as helpful. The collaboration facilitated the schools in sharing their approaches to how they were managing the new university system program that provided tuition credits for student nurses who provided vaccination services over the course of the semester. The coordinating committee was able to collectively influence the State's Mobile Vaccination Teams program to revise their vaccinator approval process, which resulted in more students being able to participate in those clinic sites.

There were some challenges during the project that may have limited its potential effectiveness. The project was planned and implemented very quickly under the challenging circumstances of the pandemic. The early weeks of the project were spent on establishing systems, agreements, and communication mechanisms among the schools, in hiring staff to support the project, and getting training systems in place. These activities delayed the actual start-up of the schools' involvement in the vaccination clinics resulting in some missed opportunities for staffing clinics early on. The national vaccine roll-out also resulted in cancellations of clinic opportunities by community partners due to the lack of vaccines. In larger communities, the local public health departments had more robust staffing and thus did not require the additional staffing offered by student nurses. This resulted in some students staffing more rural and smaller sites, which in turn was challenging since student travel was not reimbursed through the grant project. The schools identified variable risk management requirements of their institutions around engaging volunteers in the vaccination effort. This resulted in using paid faculty and staff despite many alumni volunteers offering support. The academic calendar posed a challenge in that most students and many faculty were no longer available for staffing clinics by early May, and by early June, the demand for vaccinations had also dropped considerably.

One limitation of the evaluation was the low response rates to the surveys, particularly among students. This may have been due to the timing of the survey administration, which was administered at the end of the semester (in May 2021) at a time when many students and faculty are attending to other activities and responsibilities. The invitations to participate in the surveys went out via emails sent to their students by the participating schools with two reminders to complete the survey. It is possible that more reminders or some other administration method more immediately tied to the timing of their actual participation might have yielded a higher response rate. A related limitation was that while the schools were asked to make the survey invitation available to students and faculty who participated, for convenience, some used email lists that may have included individuals who did not actually participate. Thus, our response rate calculations may have underestimated the response. The evaluation metrics focused on process measures of events and hours contributed. Although counting vaccinations administered might have been a more direct measure of the contribution of students and faculty to the vaccination roll-out, it was deemed too challenging to achieve accuracy by the coordinating committee. Finally, the metrics on project-related activities collected



from each school may have undercounted the actual events and hours, particularly for vaccination education events.

Each of the five nursing schools would have contributed to community vaccination response without the benefit of additional funding by the Wisconsin Partnership Program. However, the funding allowed for a more robust response by the five nursing programs than would have been possible without it and stimulated beneficial collaboration across the schools. Overall, the project demonstrated the challenges and the value of including students and faculty as part of the public health surge capacity required for pandemic and other emergency preparedness. Findings from this evaluation align with a similar project in the United Kingdom, where undergraduate nursing students were placed in COVID-19 mass vaccination centers and subsequently expressed a strong sense of purpose and demonstrated improvement in knowledge and clinical performance (Thornton et al., 2022). Participating in mass vaccination clinics provides unique public health experiences for students and faculty members.

Recent findings in the literature suggest that when nursing faculty and students possess low levels of knowledge about COVID-19 vaccine safety, they are also hesitant to receive the vaccine (Manning et al., 2021). Strong predictors of undergraduate nursing students' willingness to receive the COVID-19 vaccine include having positive attitudes towards vaccination and lower concerns about vaccine safety (Fontenot et al., 2021). Having higher levels of knowledge and fear about COVID-19 are also key reasons for nursing students to get vaccinated (Patelarou et al., 2021). The results from our project evaluation found that faculty members also benefit from additional instruction about COVID-19 and vaccine administration. Nurses play a major role in providing education about COVID-19 vaccine safety and efficacy to individuals, families, and communities. Nursing educational programs play critical roles in reducing concerns about vaccine safety among nursing students and faculty members.

Ongoing placements for student nurses with public health organizations could benefit future public health responses to pandemics and enhance additional emergency preparedness efforts. In addition, having field experiences in local health departments has been associated with a stronger interest in a public health career among student nurses (Zahner & Henriques, 2013). Thus, providing such experiences for students could help address public health workforce shortages. Future evaluation of these projects could include the perspectives and experiences of the public health staff and community-based organization representatives who partner with academic nursing institutions in support of building a robust response to pandemics and other public health emergencies.

5 | CONCLUSION

The BN-COVED Initiative, supported by the Wisconsin Partnership Program, resulted in meaningful student and faculty learning opportunities and contributions to the pandemic response, supportive staffing for a statewide public health emergency response, and strengthened partnerships among University of Wisconsin System schools and col-

leges of nursing, and between academia and public health community partners. This COVID-19 vaccination project demonstrated the substantial contributions of academic nursing programs to community health and wellness initiatives and to the public health emergency response. Project evaluation results highlighted the desire of many students and faculty members for more public health experiences and partnerships in nursing education. Future research could explore the association between increased nursing faculty and student participation in the pandemic response and personal vaccine uptake. Ongoing funding for projects such as this would allow students and faculty members to play important supportive roles during public health emergencies and better prepare the future workforce.

ACKNOWLEDGMENTS

This project was funded through a COVID-19 Response grant from the Wisconsin Partnership Program at the UW School of Medicine and Public Health. The first author is a Jonas Scholar (2021–2023 cohort). The authors would like to acknowledge the contributions of Barbara Pinekenstein as project Co-PI, Paula Bizot, Jennifer Drake, Mariel Schneider, Tony Schiefelbein, and Amy Van Aartsen for their assistance with survey analysis, the collaborating team members from UW-Madison, UW-Eau Claire, UW-Stevens Point and UW-Oshkosh for their contributions to the project, and the student nurses and faculty across Wisconsin who participated.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

ORCID

Jessica LeClair PhD, MPH, RN  <https://orcid.org/0000-0003-2420-8482>

Susan J. Zahner DrPH, RN, FNAP, FAAN  <https://orcid.org/0000-0002-9448-8988>

REFERENCES

- Elo, S., & Kyngas, H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing*, 62(1), 107–115. <https://doi.org/10.1111/j.1365-2648.2007.04569.x>
- Fontenot, H. B., Mattheus, D. B., Lim, E., Michel, A., Ryan, N., Knopf, A., Abuelezam, N. N., Stamp, K., Hekel, B., Branson, S., & Zimet, G. (2021). Undergraduate nursing students' COVID-19 vaccine intentions: A national survey. *Plos One*, 16(12), e0261669. <https://doi.org/10.1371/journal.pone.0261669>
- Hodges, B. C., & Videto, D. M. (2011). *Assessment and planning in health programs* (2nd edn.). Jones & Bartlett Learning. ISBN-13: 978-0763790097.
- Manning, M. L., Gerolamo, A. M., Marino, M. A., Hanson-Zalot, M. E., & Pogorzelska-Maziarz, M. (2021). COVID-19 vaccination readiness among nurse faculty and student nurses. *Nursing Outlook*, 69(4), 565–573. <https://doi.org/10.1016/j.outlook.2021.01.019>
- Patelarou, E., Galanis, P., Mechili, E. A., Argyriadi, A., Argyriadis, A., Asimakopoulou, E., Brokaj, S., Bucaj, J., Carmona-Torres, J. M., Cobo-Cuenca, A. I., Doležel, J., Finotto, S., Jarošová, D., Kalokairinou, A., Mecugni, D., Pulomenaj, V., Saliáj, A., Sopjani, I., Zahaj, M., & Patelarou, A. (2021). Factors influencing nursing students' intention to accept

- COVID-19 vaccination: A pooled analysis of seven European countries. *Nurse Education Today*, 104, 105010. <https://doi.org/10.1016/j.nedt.2021.105010>
- Reilly, J. R., Collier, J., Edelstein, J., Vandenhouten, C., Hovarter, R., Hansen, J. M., Stewart, S., & Turner, M. J. (2011). Collaborative design and use of an agency feedback form for student clinical practicum experience in community/public health nursing. *Public Health Nursing*, 29(2), 160–167. <https://doi-org.ezproxy.library.wisc.edu/10.1111/j.1525-1446.2011.00969.x>
- Thornton, M., Jones, L., Jones, R., & Lusardi, G. (2022). If the public can vaccinate, why not students? Review of a student nurse placement in a mass vaccination centre. *British Journal of Nursing*, 31(7), 386–392. <https://doi.org/10.12968/bjon.2022.31.7.386>
- University of Wisconsin—Madison School of Nursing. (n.d.). BSN@Home. Retrieved June 27, 2022, from <https://pdc.wisc.edu/degrees/nursing-bsn-at-home/>
- Young, S., Acord, L., Schuler, S., & Hansen, J. M. (2014). Addressing the community/public health nursing shortage through a multifaceted regional approach. *Public Health Nursing*, 31(6), 566–573. <https://doi.org/10.1111/phn.12110>
- Zahner, S. J., & Henriques, J. (2013). Interest in public health careers among undergraduate student nurses. *Journal of Public Health Management and Practice*, 19(1), 62–69. <https://doi.org/10.1097/PHH.0b013e31824c60b7>

How to cite this article: LeClair, J., & Zahner, S. J. (2022). Evaluation of a multischool collaborative COVID-19 vaccination project. *Public Health Nursing*, 1–9. <https://doi.org/10.1111/phn.13126>