

**Sigma Theta Tau International, the Honor Society of Nursing**

**Creating Healthy Work Environments 2022**

**Poster**

**(VR RS) Virtual Rising Stars of Research and Scholarship Invited Student Posters**

**Presentation Title**

Adapting a Vaccine Administration Process for COVID-19 in a Federally Qualified Health Center

**Presenters**

Kaitlin E. Johnson, BSN, RN

Marianne L. Durham, DNP, RN, CPPS

Monica Joan Gingell, DNP, FNP-BC

**Author Details:**

Kaitlin E. Johnson, BSN, RN

Monica Joan Gingell, DNP, FNP-BC

Marianne L. Durham, DNP, RN, CPPS

College of Nursing, University of Illinois at Chicago, Chicago, IL, USA

**Abstract Pertains To:** Clinical

**Abstract Topic Category:** Public/community health

**Target Group:** Clinical, Students

**Is Body System / Disease Process:** No

**Completed:** Ongoing Work/Project

**Summary**

As COVID-19 vaccines were being developed, the project team used quality improvement tools such as FMEA and process mapping to create a new COVID-19 Standard Operating Procedure at a Federally Qualified Health Center. Session will discuss successes and barriers to implementation in the ambulatory setting.

**Abstract**

Due to the novelty of COVID-19 vaccines, there was an urgent need to adapt the vaccine administration process at a Federally Qualified Health Center. Adapting the current process to safely administer vaccine required attention to workflow, scheduling, storage, dose preparation, monitoring, and staff training. The aim of the project was to create a sustainable, scalable process for COVID-19 vaccination and scheduling in a clinic setting. Vaccine administration error is mitigated through the use of a standardized workflow, best practices, adequate staff training, targeted scheduling, and safe storage. The current vaccine administration process at the health center was adapted using a Failure Effects and Mode Analysis and process mapping. A Standard

Operating Procedure and new process maps were created for each COVID-19 vaccine including storage, preparation, and administration. These processes were further improved through Plan-Do-Study-Act-Cycles and supported by checklists, just-in-time training, and were further evaluated through a mock site survey using a mock tracer worksheet created by the project team. In early 2021, 129 patients were contacted by telephone in accordance with the city's guidelines for vaccination. Of the 129 patients, 39.5% were over age 65, 34.9% had comorbid conditions, 13.2% were essential workers, and 12.4% had other conditions (high-risk living situations, transitional housing, etc.). During the small test of change, 98 doses of COVID-19 vaccine were administered and 49 people were vaccinated, 68% of patients self-identified as Hispanic/Latino and 10% identified as Black/African American. The efficient and safe small test prepared the health center to partner with the local health department and increase vaccine distribution. During the partnership in April and May 2021, 4,366 doses of the COVID-19 vaccine were administered to the surrounding community. The health center's COVID-19 vaccination processes were surveyed by the state health department COVID-19 Vaccination Program and based on the survey results no recommendations were needed. The team faced barriers such as incorporating barcode scanning for novel vaccines, communication challenges with information technologists, comprehensive vaccine safety education, and adequate staffing. Due to the present reality of further COVID-19 virus variants and the possibility of new emerging diseases and pandemics, health centers should prepare for novel vaccines and testing strategies. A standard operating procedure should be created for all novel vaccines and include processes for storage, preparation, administration, and emergency management. Health centers should strive to have a framework for quality improvement where analysis of current operations can lead to improvements in the safety and quality of vaccine allocation and administration.

## References

[ "Antonacci, G., Reed, J. E., Lennox, L., & Barlow, J. (2018). The use of process mapping in healthcare quality improvement projects. *Health services management research*, 31(2), 74–84. <https://doi-org/10.1177/0951484818770411>", "Centers for Disease Control and Prevention. (2021a). ACIP general best practice guidelines for immunization. <https://www.cdc.gov/vaccines/hcp/acip-recs/general-recs/index.html>", "Centers for Disease Control and Prevention. (2021b). COVID-19 Vaccination Training Programs and Reference Materials for Healthcare Professionals. <https://www.cdc.gov/vaccines/covid-19/downloads/COVID-19-Clinical-Training-and-Resources-for-HCPs.pdf>", "Food and Drug Administration. (2021a). Moderna COVID-19 vaccine emergency use authorization. U.S. Department of Health and Human Services. <https://www.fda.gov/media/144637/download>", "Food and Drug Administration. (2021b). Pfizer-BioNTech COVID-19 vaccine emergency use authorization. U.S. Department of Health and Human Services. <https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/pfizer-biontech-covid-19-vaccineexternalicon>", "Institute for Healthcare Improvement (IHI). (2017). QI Essentials Toolkit: Failure Modes and Effects Analysis (FMEA) Tool. Retrieved from <http://www.ihl.org/resources/Pages/Tools/FailureModesandEffectsAnalysisTool.aspx>", "Institute for Safe Medication Practices (ISMP). (2020). ISMP provides recommendation for organizations preparing for COVID-19 vaccine administration. Retrieved from <https://www.ismp.org/news/ismmprovides-recommendation-organizations-preparing-covid-19-vaccine-administration>", "Stein, J., Fasold, M., Daguerre, K. J., Richardson, J., Cheek, S., Charlott, M., & Basch, E. (2021). Use of an analytics and electronic health Record–Based approach for targeted COVID-19 vaccine outreach to marginalized populations. *JAMA Oncology*, doi:10.1001/jamaoncol.2021.3833" ]