

A DNP led safety-net free clinic in northern VA provides health care to uninsured, medically underserved residents using the Bridge Care Model. Competitive education and clinical research grants support the clinic's operational budget, that require socio-demographic and health outcome data related to this diverse population. Over 7000 unduplicated patient encounters have been completed, where most patients are immigrants and non-English speaking. Six clinic sites offer primary care, behavioral health, community social service navigation, pharmacy counseling and education, and group diabetic education services through direct and interprofessional collaboration.

The nursing faculty coordinate all educational levels of interprofessional students to meet competency objectives aligned with their respective degree essentials. This diverse academic and clinical environment provides truly holistic care in one setting and provides students with experiential clinical and collaborative practices. Many masters and doctorate/DNP projects have been successfully produced and integrated within the clinic's practices and processes to maximize quality, safety, and effectiveness of care. The clinic required a low-cost electronic health record (EHR) system that would meet their clinical and research requirements.

Current EHR systems are not designed to support clinical practice, clinical research, and the clinic's innovative care model. To purchase a system or to have one designed commercially is cost prohibitive. Open source EHR systems were developed to provide the health sector with low-cost, flexible and adaptable, efficient systems that require minimal technical support (Aminpour, Sadoughi, & Ahamdi, 2014). This DNP healthcare delivery innovation project addressed the clinic needs by delivering a customized Open Source (OS) EHR system prototype that aligned with the clinic's workflow. The prototype demonstrated that high quality data is easily entered, strategically controlled, and extractable for clinical practice, reporting, analysis, surveillance and research.

EHR data is being used more frequently for research because available primary care data allows studies of events that are difficult to capture through typical research, it informs practice, and provides surveillance (Muller, 2014; Coleman et al., 2015). The *21<sup>st</sup> Century Cures Act*, passed in December 2016, encourages and funds new research. The act supports research data sharing in hopes of reducing research completion to implementation cycle time (H.R.34, 114<sup>th</sup> Congress (2016)). Customizing an OS EHR provides a system that will meet the existing and growing needs of most clinical and training environments at a low cost. To advance in health technology and clinical research initiatives, health care providers and academic leaders are encouraged to consider this technology.

#### References:

21<sup>st</sup> Century Cures Act of 2016 § 2014

Aminpour, F., Sadoughi, F., and Ahamdi, M. (2014). Utilization of open source electronic health record around the world: A systematic review. *Journal of Research in Medical Sciences*, 19, 57-64. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3963324/>

Coleman, N., Halas, G., Peeler, W., Casclang, T., & Katz, A. (2015). From patient care to research: A validation study examining the factors contributing to data quality in a primary care electronic medical record database. *BMC Family Practice*, 16, 1-8. doi: 10.1186/s12875-015-0223-z

Muller, S. (2014) Electronic medical records: The way forward for primary care research? *Family Practice*, 31, 127-129. doi: 10.1093/fampra/cmu009