


Expanding Data Reporting Capacity of Free and Charitable Clinics: A Quality Improvement Project

Rachel S. Sposito, DNP, FNP-C 
L.E.A.P. Integrated Health, Ashburn, Virginia

Cynthia Selleck, PhD, RN, FAAN 
University of Alabama at Birmingham, Birmingham, Alabama

Background: In 2018, member clinics of the Virginia Association of Free and Charitable Clinics (VAFCC) provided over 235,500 visits to un/underinsured patients. A survey of VAFCC members found that only 67% report on clinical outcome measures and 56% do not collect social determinant of health (SDOH) data. **Objective:** The purpose of this project was to determine if the provision of web-based technical assistance toolkits and peer mentoring improve quality and data reporting capacity of VAFCC member clinics. **Methods:** Clinics that self-selected were provided with 16 weeks of customized interventions including SDOH Data Reporting Toolkit, CMS Quality Data Reporting Toolkit, Electronic Health Record Implementation Toolkit, and peer mentoring. **Results:** Post-implementation, 100% of participating clinics reported that the resources provided benefited their organizations and increased their capacity to report. **Conclusions:** The provision of technical assistance, tangible resources, and customized peer mentoring can better equip Free and Charitable Clinics (FCCs) to tell the story of their patients' social barriers and clinical outcomes. **Implications for Nursing:** DNP prepared nurses working with vulnerable populations are positioned to assist FCCs in documenting their relevance in the safety net system. Enhancing the ability of FCCs to collect and report data will allow them to demonstrate the provision of high-quality care, despite limited resources.

Keywords: free and charitable clinics; quality improvement; social determinants of health; peer mentoring

Free and Charitable Clinic Organizations (FCCs) are unique from one another in many aspects as they respond to both the needs and resources in their individual communities to provide healthcare to low-income, uninsured patients. The National Association of Free and Charitable Clinics (NAFCC) reports that 1.8 million unduplicated patients were cared for through six million medical visits in free clinics across the country in 2016 (NAFCC, 2019a). The Virginia Association of Free and Charitable Clinics (VAFCC) is a

non-profit organization that supports the work of member clinics through training, technical assistance, resource development, and advocacy (VAFCC, 2019). Virginia's 49 FCCs reported conducting over 235,500 medical visits in 2018. Based on 2017 Annual Membership Survey data collected by the VAFCC, member clinics are in operation from 2 to 85 hours per week, have annual operating expenses ranging from \$10,500 to \$2,927,987, and are operationalized by a wide variety of paid staff and volunteers. Currently, the data reported

to state and national stakeholders by VAFCC as aggregated from member clinics are largely volume statistics rather than quality data.

For most FCCs, third party billing and, therefore, quality data reporting requirements have not been directly applicable. However, Virginia's General Assembly passed a budget to expand Medicaid coverage to Virginians beginning in 2019 which, in theory would decrease the volume of patients seeking care in a free clinic setting. Some FCCs have responded by becoming Medicaid providers and billing for patients that gain coverage. The majority, however, are choosing not to do so and, therefore, anticipate patient volume losses. One source of funding for VAFCC member clinics is derived from General Assembly appropriations. As volume decreases, FCCs will need to be able to re-establish their relevancy case in new ways that include quality and social determinant metrics in order to remain viable healthcare options for the poor and underserved. The opinion by some that with Medicaid expansion all will have insurance and access to care is inaccurate. The need for FCCs will continue as it is estimated that approximately 323,000 Virginians will remain uninsured after full expansion. At the time of expansion, Virginia's FCCs served 60,000 patients per year. Thus, FCCs will have an opportunity to conduct outreach efforts to patients who have not previously gained access (NAFCC, 2019b).

Regardless of their participation in Medicaid expansion, FCCs must enhance their capacity to collect and report on clinical outcome and social determinant data to obtain ongoing funding. Nurse practitioners (NPs) working in FCCs have a unique understanding of the complex social needs of their patients, their disease burden, and the importance of tracking outcomes. Doctorally prepared nurses are especially equipped to assist FCCs as they have a multifaceted perspective that incorporates the individual patient, population health, and the system of care in which they work.

Available Knowledge

Very little research has been conducted on the FCC system of care. Literature review revealed only one rigorous national systematic review of the FCCs in the last 40 years (Darnell, 2010). This review noted a wide variance among FCCs across the country related to service delivery: 81.4% provided physical examinations, 86.5% provided access to medications, 77.4% provided health education, 73.2% provided chronic disease management, and 62.3% provided urgent care (Darnell, 2010). Only 25% of clinics offered comprehensive services at the time of survey (Darnell, 2010). However, all care provided occurred at nominal (<\$20) to no cost for

patients (Darnell, 2010). A follow-up national survey was conducted by the same author in 2016. To date, these data have not been published.

Nearly all clinics responding to Darnell's (2010) national survey reported the use of volunteers (97.7%); the type of volunteers used to deliver care varied greatly. Volunteer healthcare providers most frequently cited were physicians (82.1%) followed by nurses (72.6%) and advanced practice providers (54.9%). Only 20.9% of clinics reported having a full-time provider (physician, physician assistant, NP) and 18.1% reported having a full-time nurse (Darnell, 2010). The use of either a completely volunteer model or a mix of paid staff and volunteers has the potential to create unique challenges to developing a systematic approach to care due to the lack in continuity of human resources. Training can be time consuming, turnover is variable, and long-term commitment is based on the volunteer's positive experience, dedication to the mission, and availability.

As private, not-for-profit healthcare organizations without federal funding, FCCs must rely on varying sources of income for support. The majority (56%) of FCCs surveyed nationally reported being independent organizations (Darnell, 2010). Of those reporting an affiliation with another organization, hospitals were cited most often (31.6%; Darnell, 2010). Additional affiliations included churches, universities, homeless shelters, and social service agencies. Funding sources that support FCCs are diverse with those most commonly reported including individuals (90.6%), civic groups (66.8%), churches (66.3%), foundations (65.1%), corporations (55.1%), and hospitals (42.4%; Darnell, 2010). Diverse funding streams can add to the financial stability of the organization; however, they can also create a culture of conflicting deliverables, foci, outcomes, and program objectives. While individual donors may give funds for generalized operations, funding through grants, corporations, and foundations is often program or outcome specific and earmarked only for those objectives. FCCs may have inconsistent resources for their patients based on varied funding objectives and grant renewal or lack thereof.

Rationale

The adoption of electronic health record (EHR) systems has been a major push by the government since 2004 when policy makers set a goal of most patients having an EHR by 2014 (Hsiao et al., 2009). Goals of utilizing EHRs include enhanced legibility of records, electronic submission of prescriptions and order entry, time savings associated with a real time updated record, and improved care coordination, all contributing to the larger aim of improved quality and safety of patient

care. A national survey of physician practices in 2011 noted that of the physicians who had adopted an EHR system, the majority reported the system saved them time, allowed them to receive diagnostic results faster, improved patient confidentiality, and improved transmission of records across providers (Jamoom, Patel, King, & Furukawa, 2013). In 2015, this survey was updated and reported an 86.9% EHR adoption rate across the country, and 86.9% in Virginia specifically (National Center for Health Statistics, 2015). Many EHR systems now have the capability to capture and track both social determinant and quality outcome statistics.

The Centers for Disease Control and Prevention (CDC) define social determinants of health (SDOH) as economic and social conditions that influence the health of people and communities. They include factors such as early childhood development, education, job security, access to clean water and healthy food, income, environmental hazards, healthcare access, housing status, and social support (CDC, 2018). A high prevalence of social determinants can impact the ability to achieve and maintain health goals. FCCs serve patient populations that face high levels of social determinants as evidenced by their low-income levels and lack of health insurance.

Quality metrics in healthcare have been defined in various ways. The Agency for Healthcare Research and Quality (AHRQ) establishes and tracks benchmark measures at the provider, community, state and national levels as well as provides free resources to the healthcare industry (AHRQ, 2019). The Centers for Medicare and Medicaid Services (CMS) has designated certain “meaningful measures” that represent priority areas for quality improvement in outpatient care (CMS, 2019). Examples include cancer screening rates, effective chronic disease management, and substance abuse screening.

Peer mentoring has been documented in the literature as an effective means of promoting professional growth, development, and enhanced satisfaction in both healthcare and academia. Increased access to resources, new ideas, shared knowledge of successes, and failures across multiple practice settings can be achieved. Shared experiences can form authentic relational bonds that inspire collaboration and relieve stress (Li, Wang, Lin, & Lee, 2011; Rohatinsky & Ferguson, 2013; Shook & Keup, 2012).

Specific Aim

The purpose of this quality improvement project was to answer the following question: For organizations who are members of the VAFCC, does the provision of

web-based technical assistance toolkits and peer mentoring, compared to pre-provision, improve quality and social determinant data reporting capacity following 16 weeks of implementation?

Methods

During the month of May 2018, member clinics of the VAFCC were surveyed via a web-based questionnaire regarding their current capacity to report on quality and social determinant data. The survey included seven multiple choice questions that assessed whether the clinics reported on quality metrics such as diabetic outcomes or cancer screening rates and whether they reported this information to funders. The survey also assessed whether social determinant data were collected. Respondents were asked to identify barriers to reporting as well as their level of willingness to improve their capacity in these areas. Interested clinics provided contact information. These FCCs were later contacted for follow-up telephone interviews to further assess their goals. Based on these interviews and the technical support that was requested, interventions were customized for the organizations and fell under four categories: SDOH Data Reporting Toolkit, CMS Quality Data Reporting Toolkit, EHR Readiness/Implementation Toolkit, and Peer Mentoring resources. Due to the wide variance of needs expressed by participating organizations, a multi-dimensional and customizable approach was developed to achieve collective impact. Toolkits were disseminated in electronic format by e-mail to clinic leadership at the beginning of the implementation period, as requested. They were also placed on the VAFCC Member Center Website with notification to the VAFCC member Listserv through an association-wide newsletter. In addition, the principal investigator (PI) gave presentations at the VAFCC annual conference on the topics of “Social Determinants of Health—Capturing the Data” and “Data, Demographics, and Diseases: Telling Our Patient and Clinic Story.”

Description of Toolkits

(a) *Athena Toolkit*: AthenaHealth is a comprehensive EHR platform that offers full-service practice management and EHR service to member FCCs at no charge if they do not bill third parties for services. The system is quite robust and allows for customization. The reporting functionality within the system is vast. There are multiple ways an organization may choose to track data based on their workflows and preferences. However, proper data entry and report building is not part of implementation training. As part of this project, modules were created that focused on step-by-step workflow

guides in areas that clinic staff/volunteers found confusing. Data analysis and reporting modules were created for leadership staff. (b) *SDOH Toolkit*: This toolkit included a comparison chart and 13 validated tools that can be used to assess a patient's SDOH, the use of Z-codes from the International Classification of Diseases, Tenth Revision (ICD-10) nomenclature to capture SDOH, and suggestions on how to incorporate this into clinic workflow. The VAFCC Annual Conference presentation focused on the importance of capturing this information, how it tells the patient story and impacts a clinic's relevance and, finally, ways in which a clinic might incorporate the collection of SDOH into their models of care. (c) *CMS and Quality Data Toolkit*: This toolkit focused on highlighting various measures collected from National Committee for Quality Assurance (NCQA), AHRQ, and CMS online databases that were applicable to the populations served in the FCCs. Methods for collecting these data depending on a clinic's use of an EHR were included. The VAFCC Annual Conference presentation focused on the implications of being able to tell a more comprehensive collective story through clinical/quality data and how this could impact statewide funding. (d) *EHR Readiness Toolkit*: This toolkit was developed for clinics who had not yet transitioned to electronic record systems. It included resources from the Health Information Management Society (HIMS), comparison charts of commonly used EHR systems, guides for interviewing vendors, and cost considerations.

Peer mentoring occurred through telephone and web-based video meetings and site visits as requested by organizational leadership. For example, as related to EHR use, peer mentoring was conducted in areas of workflow development, hybrid system modification, and staff training/support based on the PI's personal use of Athena in her own FCC. In other instances, mentoring occurred following conference presentations where the PI encouraged critical evaluation of a clinic's current workflow to enhance social determinant and quality data collection.

A post-implementation survey was sent to all participating clinics after a 16-week period of intervention. This three-question, anonymous, web-based questionnaire asked respondents to identify which of the resources they utilized, whether they found them beneficial and, most importantly, whether these resources had increased the clinic's data reporting capacity.

Institutional review board approval for this project was obtained from the University of Alabama at Birmingham via a Not-Human Subjects Research Designation. The project was considered quality improvement and individual patient data were not accessed.

Results

The pre-implementation survey found that only 67% ($n = 21$) of the 31 respondents reported on clinical outcome measures. For reporting clinics, the most common quality measures used were for diabetic and hypertension control (86%), followed by tobacco screening (48%), cancer and depression screening (43%), and obesity screening/follow-up (33%). The measures least often collected included appropriate drug therapy for certain conditions (i.e., asthma, coronary artery disease, ischemic vascular disease). Additionally, only 43% ($n = 19$) of responding FCCs collected any social determinant data. Those that did most often cited employment, housing, exposure to violence. Food insecurity, utility needs, transportation, and education level were less often assessed. Barriers to data collection, analysis, and reporting included lack of human resources/-time (83%), limitations of data platforms being used (41%), limited understanding of platform capabilities (28%), limited comfort with measure definitions or data analysis methods (17%), and the utilization of a manual auditing process because of paper charting (10%).

Encouragingly, 75% of respondents ($n = 23$) expressed an interest in growing in their capacity to report on clinical outcome and social determinant data. Of these respondents, 22 FCCs elected to participate in the project. Two organizations were excluded because they did not provide direct patient care. Characteristics of the remaining 20 clinics were as follows: they employed a range of 1–35 staff members and utilized an average of 234 volunteers with annual operating expenses ranging from just under \$74,000 to over \$2.2 million. Collectively, they served 19,551 unique patients in 2017 through almost 84,000 medical visits, an average utilization rate of 4.2 visits per patient for the year. Additional clinic data can be found in Table 1.

A post-implementation survey was disseminated 16 weeks after implementation to determine impact of the resources delivered; 17 (85%) of the initial 20 clinics responded to the post-survey. Respondents reported utilization rates of the various interventions as follows: SDOH Toolkit (71%), EHR Readiness Toolkit (36%), CMS Measures Toolkit (36%), Athena Toolkit (86%), Peer Mentoring (43%), and Annual Conference Presentations (86%). All 17 respondents reported that the resources provided were beneficial to their organizations. Most importantly, 100% of respondents reported that the project interventions had increased their capacity to report on both social determinant and quality measures. Qualitative feedback from the post-implementation survey also supported the usefulness of the resources and the peer mentoring.

TABLE 1. Characteristics of Participating FCCs (Based on 2017 VAFCC Annual Survey Results)

Participating Clinic #	Cash Operating Expenses	Operating Hours per Week for Medical Visits	# of Paid Staff	# of Volunteers	# of Patients Served	# of Medical Visits
1	\$276,603.00	13	8	34	170	763
2	\$252,602.00	32	8	137	509	1,219
3	\$1,634,580.00	36	23	221	1,411	10,661
4	\$386,244.83	45	21	352	282	1,063
5	\$164,536.60	26	6	35	882	1,752
6	\$704,681.00	40	18	509	1,108	5,429
7	\$1,258,973.00	48.25	20	271	973	6,922
8	\$2,250,855.00	50	33	588	1,826	8,497
9	\$1,197,854.00	37	19	201	839	5,182
10	\$1,290,713.00	12	20	756	971	4,401
11	\$480,433.00	22	7	51	529	2,450
12	\$73,811.58	4	1	107	251	652
13	\$586,108.00	37.5	11	38	637	3,747
14	\$387,557.20	32	7	52	626	1,855
15	\$2,754,918.00	34	35	465	1,658	6,725
16	\$1,118,729.00	29	19	246	1,869	4,247
17	\$808,000.00	20	17	246	328	2,191
18	\$432,820.69	28.5	17	34	868	3,211
19	\$398,793.00	36	7	67	738	4,123
20	\$2,219,000.00	36	33	280	3,076	8,856

Note. FCCs = Free and Charitable Clinics; VAFCCs = Virginia Association of Free and Charitable Clinics.

Discussion

The results of this study indicate that while FCCs in Virginia face unique barriers to implementing more comprehensive data collection and analysis processes into their workflow, most are willing to overcome them. Annual conference presentations proved a highly utilized platform for information dissemination followed by the Athena and SDOH Toolkits. Most FCCs in Virginia have implemented at least one EHR product to date which could explain the lower utilization rate of the EHR Readiness Toolkit. Because AthenaHealth offers their platform at no charge to FCCs who do not bill for services, many FCCs are choosing to convert to it to reduce expenditures. The use of a peer mentor to augment the training received by FCCs during and after implementation helped clinics customize workflows and enhance reporting capability comprehension and utilization. Providing a customized approach based on clinic goals proved to be an effective method given the unanimous benefit that was reported.

Limitations

This quality improvement project was limited by the short intervention time. While the pre-survey was conducted in May 2018, the development of the toolkits, presentations at the VAFCC conference, and peer mentoring took place over a 6-month time frame, leaving only 16 weeks for the clinics to utilize the resources before the post-implementation survey was conducted. Changing the culture and workflows of organizations to incorporate sustainable increased data capacity might have been more impactful with a longer implementation period. However, the toolkits remain available to VAFCC member clinics on the association's website and it is anticipated that additional clinics will benefit from using these resources over time. In addition, actual evaluation of future data reporting by the FCCs, documenting whether, in fact, more clinics reported on clinical quality and SDOH data was beyond the scope of this project, further limiting the generalizability of results. Further study of the long-term impact of this project, including the effect of patient outcomes would be beneficial. In fact, the PI is an invited speaker at the

upcoming VAFCC annual conference, presenting on ways to integrate SDOH data into the plan of care. This opportunity will allow for both formal and informal discussion with clinic leadership to assess for longer term outcomes associated with this QI project.

Conclusions

FCCs in Virginia recognize the need to expand their data reporting capacity to include the quality of care being delivered and the social determinants their patients face. Despite a wide variance of clinic resources, the majority expressed a willingness to grow in these areas. Through a customized approach that included peer mentoring, technical support, and tangible resources to improve their knowledge base in these areas, all participating clinics expressed improvement in their reporting capabilities post-implementation. As FCCs in Virginia begin to fully understand the effects of Medicaid expansion on their organizations in terms of volume, they are better equipped to tell the story of value. Collaboration across the system of FCCs will be key in strengthening infrastructure, optimizing resources, and maintaining long-term viability.

Implications for Nursing Practice

Continued and enhanced use of EHR systems to collect meaningful patient care data such as social determinant and quality measures is important to the FCC system of care. Comprehensive platforms that allow for integrated data tracking and reporting help to inform providers, patients, funders, and stakeholders of the quality and safety of care that is delivered by FCCs. In this way, clinics can be poised to assure patients, donors, and partners that the care provided is high quality and evidence-based, despite limited resources. In an ever-changing healthcare and political climate, FCCs and their supporters must be able to “speak” to the same quality assurance measures as hospital and payer systems in order to maintain relevancy and prove they are meeting a need in their communities.

This project also supports the notion that DNP prepared nurses are well-positioned to assist FCCs in gaining the skills necessary to document their ongoing relevance. The role of the DNP is perfectly suited to guide organizational and systems leadership for quality, improve systems thinking, integrate technology for the transformation of care, and advocate for at-risk populations through healthcare policy based on lessons learned in the FCC system. Through the essential underpinnings of DNP education, the perspective that comes from caring for individual patients and populations, and a working knowledge of healthcare systems, there exists

a prime opportunity for the DNP prepared nurse to partner with FCCs to greatly impact the health of the nations’ most vulnerable patients.

References

- Agency for Healthcare Research and Quality. (2019). *About*. Retrieved from <https://www.ahrq.gov/cpi/about/profile/index.html>
- Centers for Disease Control and Prevention. (2018). *NCHHSTP social determinants of health*. Retrieved from <https://www.cdc.gov/nchhstp/socialdeterminants/faq.html>
- Centers for Medicare and Medicaid Services. (2019). *Meaningful measures framework*. Retrieved from <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/QualityInitiativesGenInfo/CMS-Quality-Strategy.html>
- Darnell, J. S. (2010). Free clinics in the United States. *Archives of Internal Medicine*, 170(11), 946–953. doi:10.1001/archinternmed.2010.107
- Darnell, J., & O'Brien, L. (2016, September 16). *Results from a national survey of free & charitable clinics*. Paper presented at the NAFC 2016 Charitable Health Care Symposium. Orlando, FL.
- Hsiao, C., Beatty, P. C., Hing, E. S., Woodwell, D., Rechtsteiner, E. A., & Sisk, J. E. (2009). *Electronic medical record/electronic health record use by office-based physicians: United States, 2008 and preliminary 2009*. Division of Health Care Statistics. National Center for Health Statistics. Retrieved from https://www.cdc.gov/nchs/data/hestat/emr_chr/emr_chr.pdf
- Jamoom, E., Patel, V., King, J., & Furukawa, M.F. (2013). *Physician experience with electronic health record systems that meet meaningful use criteria: NAMCS physician workflow survey, 2011*. NCHS Data Brief. 129. Hyattsville, MD: National Center for Health Statistics.
- Li, H.C., Wang, L.S., Lin, Y.H., & Lee, I. (2011). The effect of a peer-mentoring strategy on student nurse stress reduction in clinical practice. *International Nursing Review*, 58(2), 203–208. doi:10.1111/j.1466-7657.2010.00839.x
- National Association of Free and Charitable Clinics. (2019a). *About us: Clinics*. Retrieved from <https://www.nafcclinics.org/content/clinics>
- National Association of Free and Charitable Clinics. (2019b). *About 323,000 will remain uninsured after Medicaid expansion. Will Virginia's free clinics still be able to meet the need?* Retrieved from <https://www.nafcclinics.org/content/about-323000-will-remain-uninsured-after-medicaid-expansion-will-virginia%E2%80%99s-free-clinics>
- National Center for Health Statistics. (2015). *National electronic health records survey: 2015 state and national electronic health record adoption summary tables*. Retrieved from https://www.cdc.gov/nchs/data/ahcd/nehrs/2015_nehrs_web_table.pdf
- Rohatinsky, N., & Ferguson, L. (2013). Mentorship in rural healthcare organizations: Challenges and opportunities. *Online Journal of Rural Nursing & Health Care*, 13(2), 149–172. doi:10.14574/ojrnhc.v13i2.273
- Shook, J. L., & Keup, J. R. (2012). The benefits of peer leader programs: An overview from the literature. *New Directions for Higher Education*, 2012(157), 5–16. doi:10.1002/he.20002

Virginia Association of Free and Charitable Clinics. (2019). *About us*. Retrieved from <http://www.vafreeclinics.org/about-us/>

Disclosure. The authors have no relevant financial interest or affiliations with any commercial interests related to the subjects discussed within this article.

Acknowledgments. The authors wish to thank the staff and interns of the Virginia Association of Free and Charitable Clinics for their support of this project. Without their engagement and advocacy, this would not have been possible.

Funding. The author(s) received no specific grant or financial support for the research, authorship, and/or publication of this article.

Correspondence regarding this article should be directed to Rachel S. Sposito, DNP, FNP-C, L.E.A.P. Integrated Health, 43146 Thoroughfare Gap Terrace, Ashburn, VA 20148, USA. E-mail: rachelspositonp@gmail.com