Social Determinants of Health

FQHC Spotlight: Leveraging Data and Technology to Identify and Address Individual Social Needs

March 2023

INTRODUCTION

Population health improvement initiatives benefit by advancing collection, use, and interoperability of non-clinical, social determinants of health data (SDoH).[1] SDoH data can help address longstanding disparities in health and health care.[2, 3] SDoH are the conditions in the environments where people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks; this includes socioeconomic status, education, neighborhood and physical environment, employment, and social support networks, as well as access to health care.[4] When social circumstances are adverse, there is greater risk for poor health.[5] For example, individuals facing housing instability, including those experiencing homelessness[6] and children who move frequently,[7] often lack access to routine care, which impacts underlying chronic conditions.[8]

Federally Qualified Health Centers (FQHCs)[9] are a major source of primary care in underserved communities, serving socioeconomically diverse and vulnerable patient populations. As such, FQHCs serve an important role in national and local SDoH data collection[10] and are regarded as leaders in SDoH screening, with nearly three out of four FQHCs nationally collecting patient social risk data.[11, 12] In June 2022, the Maryland Health Care Commission (MHCC) conducted an environmental scan of FQHCs in collaboration with the Mid-Atlantic Association of Community Health Centers.[13] A health information technology questionnaire was disseminated to 21 FQHC administrative offices[14] with service delivery sites[15] located in Maryland. The questionnaire was completed by 17 administrative offices, representing approximately 95 percent or 117 service delivery sites in Maryland. The questionnaire inquired about FQHCs' use of electronic health records (EHRs) and third-party software solutions to identify and address SDoH.[16, 17] This spotlight highlights notable findings related to FQHCs accomplishments and challenges in operationalizing SDoH interventions.

SUMMARY

SDoH can be attributed to up to 80 percent of health outcomes.[18] Screening tools are used to identify SDoH most often at the point of care. Documenting social risk factors in an EHR dramatically increases the scope and timeliness of data for intervention planning, which may include referrals to social services and community-based organizations. SDoH screening questions are simple, brief, and applicable to most populations; questions are validated based on best practices and written at appropriate reading levels.[19]

Broader visibility into social, economic, and environmental determinants provides insights into factors that influence health and promotes health equity (e.g., how availability of and access to public transportation affects employment, consumption of healthy foods, access to health care services, and other drivers of health).[20] The Health Resources and Services Administration (HRSA) requires FQHCs to annually report the number of homeless patients and patient income to the Universal Data System (UDS), among other patient characteristics, such as, age, race, ethnicity, primary language, sexual orientation, gender identity, and insurance status.[21, 22] HRSA uses these data to inform quality improvement initiatives and assess the performance and overall impact of FQHCs.[23]

PRAPARE Screening Tool

The Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences (PRAPARE) is a standardized patient social risk assessment tool and collection of resources to identify and act on SDoH. Developed by the National Association of Community Health Centers, select measures align with HRSA UDS reporting requirements. The PRAPARE Screening Tool has been translated in over 25 languages to extend accessibility to diverse populations and is used by about 80 percent of Maryland FQHCs.*

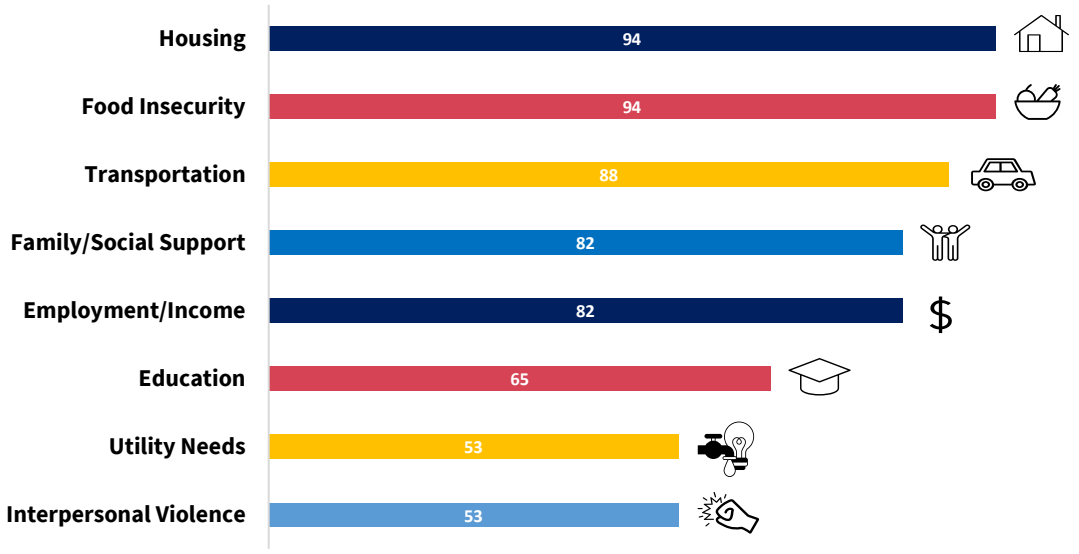
*Data as of 2021; information on other SDoH screening tools used by FQHCs is available at: data.hrsa.gov/tools/data-reporting/program-data/state/MD/table?tableName=EHR.

More information about PRAPARE is available at: prapare.org

Screening Across Multiple SDoH Domains

FQHCs statewide collect data across several SDoH domains (Figure 1).[24] Screening across multiple domains provides more insight about social risks, which tend to cluster and can be more common with certain patient demographics.[25] A growing body of research on the efficacy of SDoH interventions as well as formalized community partnerships help providers to act upon certain social needs;[26] However, some needed interventions may be harder to achieve (e.g., elevator service disruption in an apartment building).[27] While initiatives exist for a wide range of social needs, resources and investments have generally been focused on food insecurity, housing instability and homelessness, transportation access, and loneliness and social isolation.[28] A smaller percent of Maryland FQHCs screen for education, utility needs, and interpersonal violence (Figure 1).

Figure 1: Percentage of Maryland FQHCs Screening for SDoH Domains (N=17)



SDoH Screening Varies Based on Policy and Geography

FQHC administrative offices that oversee operations across their service delivery sites[29] have policies to screen patients for SDoH. More than half (65 percent) have policies for universal screening, including rural areas of the State, which can have higher rates of unemployment, lower education, and less access to health care and social services.[30] The remaining administrative offices (35 percent) have policies for targeted screening based on certain factors (new patient status, visual observations, insurance status, specific health conditions, etc.). When looking at total number of FQHC service delivery sites in Maryland, the practice of universal screening is less prevalent; fewer sites (roughly 39 percent) screen all patients for SDoH. More sites (about 61 percent) target SDoH screening. Approaches that target SDoH screening can be aimed to address the unique needs of certain patient populations[31, 32] and also consider frequency of asking sensitive questions about patients' finances, family support, education, and substance use, among others, some of which are more generally understood based on patient demographics and geography.[33]

Table 1: Maryland FQHC Administrative Offices SDoH Screening by Region [34]

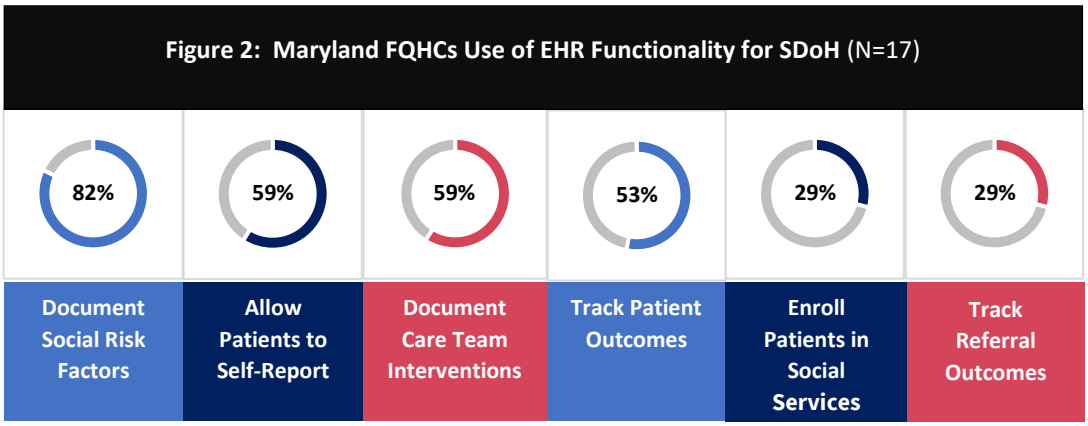
Region	Targeted (select patients)	Universal (all patients)
	%	%
Capital (N=6)	33	67
Central (N=6)	50	50
Eastern Shore (N=3)	33	67
Western (N=2)	0	100
All (N=17)	**35**	**65**

Table 2: Maryland FQHC Administrative Offices SDoH Screening by Region and Service Delivery Sites			
FQHC Name (# of Service Delivery Sites)	**Region**	**Targeted**	**Universal**
CCI Heath Services (7)	Capital	✓	
Family and Medical Counseling Service, Inc. (1)	Capital		✓
Greater Baden Medical (6)	Capital		✓
La Clínica Del Pueblo (2)	Capital	✓	
Mary's Center for Maternal and Child Care, Inc. (2)	Capital		✓
Mobile Medical Care (5)	Capital		✓
Bay Community Health (2)	Central		✓
Baltimore Medical Center, Inc. (17)	Central	✓	
Chase Brexton Health Care (5)	Central	✓	
Health Care for the Homeless (4)	Central		✓
Park West Health System, Inc. (3)	Central		✓
Total Health Care, Inc. (7)	Central	✓	
Choptank Community Health System, Inc. (33)	Eastern	✓	
Three Lower Counties Community Services (13)	Eastern		✓
West Cecil Health Center (2)	Eastern		✓
Walnut Street Community Health Center, Inc. (5)	Western		✓
Western Maryland Health Care Corporation (3)	Western		✓
All (N=117)		**61%**	**39%**

Integrating SDoH into EHRs

Most FQHCs leverage EHR-based SDoH screening tools[35] and document social risk factors in the EHR (82 percent) (Figure 2). Use of an EHR for other SDoH purposes is less common for enrolling patients in social services (29 percent) and tracking referral outcomes (29 percent) (Figure 2), which require greater collaboration and systems integration with non-health care organizations (e.g., to monitor and respond to incoming referrals). Strengthening cross-sector partnerships helps engage the right audiences as well as pool efforts and resources to address SDoH.[36] These efforts rely on fostering buy-in, mapping workflows and technology, and ensuring privacy and security of electronic data exchange.[37] More than half of FQHCs (59 percent) document care team interventions related to SDoH and allow patients to self-report social needs (Figure 2), enabling more informed and targeted decision making.[38, 39] The ability for patients to self-report their social needs can increase disclosures across more sensitive domains (e.g., interpersonal violence and financial).[40, 41] Community referral technology

platforms are emerging to help facilitate more coordination between health and social services.[42] These platforms include resource directories, referral management tools, capabilities to integrate with EHRs and social services systems, and reporting and analytics functionality.[43]



Implementing Measures to Track and Evaluate SDoH Interventions

SDoH measures are used to assess progress in implementing processes that aim to address non-health related factors (e.g., *process measures*, such as counts of the number of patients screened or referred and *outcome measures*, such as fulfilling unmet needs, patient satisfaction, and health care utilization).[44, 45] Measuring patient-level social risks is important and guiding; equally important is considering social risks at contextual levels (e.g., neighborhood conditions) and monitoring SDoH policies and programs.[46] FQHCs have implemented measures to track and evaluate SDoH interventions, with the most common being the incidence of social risk factors and patient referrals (Table 3). FQHCs that target SDoH screening have implemented measures at a higher rate than FQHCs that conduct universal screening (Table 3). FQHCs that participate in regional SDoH partnerships target and report on specific patient populations (e.g., the Accountable Health Communities Model[47] in Baltimore City tracked health care utilization to determine high risk patients eligible for social needs navigation services).[48]

Table 3: Maryland FQHCs Implementation of SDoH Measures by Screening Approach

SDoH Measure	Targeted Screening (select patients) (N=6) %	Universal Screening (all patients) (N=11) %	All FQHCs (N=17) %
Patient Experience	50	45	47
Incidence of SDoH Factors	67	73	71
Patients Referrals	67	73	71
Patient Enrollment	67	55	59
Health Care Utilization	50	45	47
Cost Impact of SDoH Interventions	33	18	24

CONCLUSION

It is widely acknowledged that building a more equitable health system begins at the local level. As an essential health care safety net provider, FQHCs are considered pioneers in finding innovative ways to identify and address patients' social needs. Technology enables systematic screening of patients' social needs and the identification of potential resources in the community; however, there is inherent complexity in coordinating social health information across traditionally disparate organizations and technology systems. With a growing consensus that SDoH impact health outcomes, the Gravity Project (a national, multi-stakeholder public collaborative) was launched (May 2019) to develop, test, and validate standardized SDoH data for use cases in clinical care, public health, value-based payment, and clinical research.[49] This initiative and others that focus efforts on establishing community partnerships are foundational in piecing together patients' daily experiences and their interactions with the health care system.

ENDNOTES

[1] Office of the National Coordinator for Health Information Technology (ONC), *ONC Health IT Framework for Advancing SDOH Data Use and Interoperability*, July 2021. Available at: www.healthit.gov/buzz-blog/interoperability/onc-health-it-framework-for-advancing-sdoh-data-use-and-interoperability.
[2] Mullangi S, Aviki EM, Hershman DL. Reexamining Social Determinants of Health Data Collection in the COVID-19 Era. JAMA Oncol. 2022;8(12):1736–1738. doi:10.1001/jamaoncol.2022.4543.
[3] U.S. Department of Health & Human Services, *HHS Awards Nearly $90 Million to Community Health Centers to Advance Health Equity through Better Data,* August 2022. Available at: www.hhs.gov/about/news/2022/08/08/hhs-awards-nearly-90-million-dollars-to-community-health-centers-to-advance-health-equity-through-better-data.html.
[4] U.S. Department of Health & Human Services, Office of Disease Prevention and Health Promotion, Healthy People 2030, *Social Determinants of Health.* Available at: health.gov/healthypeople/priority-areas/social-determinants-health#:~:text=Social%20determinants%20of%20health%20(SDOH,of%2Dlife%20outcomes%20and%20risks.
[5] World Health Organization, *Social determinants of health*. Available at: www.who.int/health-topics/social-determinants-of-health#tab=tab_1.
[6] Schanzer, B., Dominguez, B., Shrout, P. E., & Caton, C. L. (2007). *Homelessness, Health Status, and Health Care Use*. American Journal of Public Health, 97(3), 464–469. doi: 10.2105/AJPH.2005.076190.
[7] Busacker, A., & Kasehagen, L. (2012). *Association of Residential Mobility with Child Health: An Analysis of the 2007 National Survey of Children's Health*. Maternal and Child Health Journal, 16(1), 78–87. doi: 10.1007/s10995-012-0997-8.
[8] U.S. Department of Health & Human Services, Office of Disease Prevention and Health Promotion, *Housing Instability*. Healthy People 2030. Available at: health.gov/healthypeople/priority-areas/social-determinants-health/literature-summaries/housing-instability#cit25.
[9] FQHCs are community-based health care providers that receive funds from the HRSA Health Center Program to provide comprehensive health services regardless of a patient's ability to pay and operate under a governing board that includes patients. More information is available at: bphc.hrsa.gov/about-health-centers/what-health-center.
[10] Government Computer News, *Why Community Health Centers are Betting on Data Collection to Advance Health Equity*. October 2022. Available at: gcn.com/data-analytics/2022/10/why-community-health-centers-are-betting-data-collection-advance-health-equity/378637/.
[11] Boston University School of Public Health, *Most FQHCs Screen for Social Risks, but Disparities Remain*, February 2022. Available at: www.bu.edu/sph/news/articles/2022/most-fqhcs-screen-for-social-risks-but-disparities-remain/.
[12] Cole MB, Nguyen KH, Byhoff E, Murray GF. *Screening for Social Risk at Federally Qualified Health Centers: A National Study*. Am J Prev Med. 2022 May;62(5):670-678. doi: 10.1016/j.amepre.2021.11.008. Epub 2022 Feb 8. PMID: 35459451; PMCID: PMC9035213. Available at: www.ajpmonline.org/article/S0749-3797(21)00603-6/fulltext.
[13] The Mid-Atlantic Association of Community Health Centers is the designated primary care association for Maryland and Delaware and provides training and technical assistance to FQHCs in those states. More information is available at: www.machc.com/.
[14] FQHC administrative offices establish policies and oversee operations across all the FQHC's service delivery sites.
[15] An FQHC service delivery site is a location where services are delivered by, or on behalf of the FQHC, which means the FQHC's governing board must have control and authority over the services provided at the location. More information is available at: bphc.hrsa.gov/compliance/scope-project.
[16] A response was not collected from four FQHCs, which represent seven service delivery sites in Maryland: Family Health Centers of Baltimore (MD), Elaine Ellis Center for Health (DC), City of Frederick (MD), and Tri-State Community Health Center (MD).

[17] The MHCC conducted an analysis of FQHCs' responses; data was self-reported by FQHC administrative offices and not audited for accuracy.
[18] Robert Wood Johnson Foundation, *Medicaid's Role in Addressing Social Determinants of Health*, February 2019. Available at: www.rwjf.org/en/insights/our-research/2019/02/medicaid-s-role-in-addressing-social-determinants-of-health.html.
[19] North Carolina Department of Health and Human Services, *Screening Questions*. Available at: www.ncdhhs.gov/about/department-initiatives/healthy-opportunities/screening-questions.
[20] Kaiser Family Foundation, *Beyond Health Care: The Role of Social Determinants in Promoting Health and Health Equity*, May 2018. Available at: www.kff.org/racial-equity-and-health-policy/issue-brief/beyond-health-care-the-role-of-social-determinants-in-promoting-health-and-health-equity/.
[21] The Universal Data System (UDS) is a standardized reporting system that collects a core set of information, including: data on patient social risk factors and other characteristics, services provided, clinical processes and health outcomes, patients' use of services, staffing, costs, and revenues. More information is available at: data.hrsa.gov/tools/data-reporting/program-data.
[22] Health Resources & Services Administration, *Uniform Data System (UDS) Training and Technical Assistance: Patient Characteristics*. Available at: bphc.hrsa.gov/data-reporting/uds-training-and-technical-assistance/patient-characteristics.
[23] Health Resources & Services Administration, *Health Center Program Uniform Data System (UDS) Data*. Available at: data.hrsa.gov/tools/data-reporting#:~:text=HRSA%20uses%20UDS%20data%20to,staffing%2C%20costs%2C%20and%20revenues.
[24] One FQHC is in the process of implementing an electronic data capture process with a new EHR vendor and was not assessing for the domains listed in Figure 1 when the questionnaire was distributed in June 2022.
[25] Andermann A. Screening for social determinants of health in clinical care: moving from the margins to the mainstream. Public Health Rev. 2018 Jun 22;39:19. doi: 10.1186/s40985-018-0094-7. PMID: 29977645; PMCID: PMC6014006. Available at: pubmed.ncbi.nlm.nih.gov/29977645/.
[26] *Ibid.*
[27] Patient Engagement Health IT, *Top Effective Social Determinants of Health Interventions*, March 2022. Available at: patientengagementhit.com/features/top-effective-social-determinants-of-health-interventions.
[28]Better Medicare Alliance's Center, *Innovative Approaches to Addressing Social Determinants of Health for Medicare Advantage Beneficiaries*, August 2021. Available at: bettermedicarealliance.org/wp-content/uploads/2021/08/Innovative-Approaches-to-Addressing-SDOH-for-MA-Beneficiaries-FINAL.pdf.
[29] FQHC administrative offices establish policies and oversee operations across all the FQHC's service delivery sites.
[30] Rural Health Information Hub, *Social Determinants of Health for Rural People*. Available at: www.ruralhealthinfo.org/topics/social-determinants-of-health.
[31] NCQA, *Social Determinants of Health Resource Guide*, September 2020. Available at: www.ncqa.org/wp-content/uploads/2020/10/20201009_SDOH-Resource_Guide.pdf.
[32] West Health Institute, *A Practical Guide to Addressing the Social Needs of Older Adults,* September 2019. Available at: www.westhealth.org/resource/addressing-the-social-needs-of-older-adults-a-practical-guide-to-implementing-a-screening-and-referral-program-in-clinical-settings/.
[33] NEJM Catalyst, *Screening for Unmet Social Needs: Patient Engagement or Alienation?* July 2020. Available at: catalyst.nejm.org/doi/full/10.1056/CAT.19.1037.
[34] Regions include **Capital**: Prince George's, Montgomery, Frederick; **Central**: Baltimore City, Baltimore, Anne Arundel, Carroll, Howard, Harford; **Eastern Shore**: Kent, Queen Anne's, Talbot, Cecil, Dorchester, Wicomico, Somerset, Worchester, Caroline; **Western**: Alleghany, Garrett, Washington; **Southern Maryland**: Calvert, Charles, St. Mary's. More information is available at: visitmaryland.org/info/maryland-regions.
[35] Mobile Medical Care uses a paper-based tool to screen patients for SDoH; La Clínica del Pueblo and CCI Health Services are using paper-based screening tools in addition to EHR-based tools.

[36] Rural Health Information Hub, *Developing Cross-Sector Partnerships to Address Social Determinants of Health*, March 2020. Available at: www.ruralhealthinfo.org/toolkits/sdoh/4/cross-sector-partnerships
[37] Cartier Y, Fichtenberg C, Gottlieb LM. *Implementing Community Resource Referral Technology: Facilitators And Barriers Described By Early Adopters*. Health Aff (Millwood). 2020 Apr;39(4):662-669. doi: 10.1377/hlthaff.2019.01588. PMID: 32250665. Available at: www.healthaffairs.org/doi/10.1377/hlthaff.2019.01588
[38] Journal of AHIMA, *Improve Patient Outcomes by Integrating SDOH Data into EHRs,* September 2022. Available at: journal.ahima.org/page/improve-patient-outcomes-by-integrating-sdoh-data-into-ehrs.
[39]Gold R, Cottrell E, Bunce A, Middendorf M, Hollombe C, Cowburn S, Mahr P, Melgar G. *Developing Electronic Health Record (EHR) Strategies Related to Health Center Patients' Social Determinants of Health*. J Am Board Fam Med. 2017 Jul-Aug;30(4):428-447. doi: 10.3122/jabfm.2017.04.170046. PMID: 28720625; PMCID: PMC5618800. Available at: www.jabfm.org/content/30/4/428
[40] Science Daily, *Self-Administered Screening Can Provide Benefits for Patients and Providers,* March 2022. Available at: www.sciencedaily.com/releases/2022/03/220308115647.htm.
[41] Gottlieb, L., Hessler, D., Long, D., Amaya, A., & Adler, N. (2014). A randomized trial on screening for social determinants of health: the iScreen study. Pediatrics, 134(6), e1611-e1618.
[42] See n. 37, *Supra*.
[43] *Ibid.*
[44] Rural Health Information Hub, *Evaluation Measures for SDOH Programs.* Available at: www.ruralhealthinfo.org/toolkits/sdoh/5/evaluation-measures.
[45] See n. 31, *Supra.*
[46] Penman-Aguilar A, Talih M, Huang D, Moonesinghe R, Bouye K, Beckles G. *Measurement of health disparities, health inequities, and social determinants of health to support the advancement of health equity*. J Public Health Manag Pract. 2016 Jan-Feb;22 Suppl 1(Suppl 1):S33-42. doi: 10.1097/PHH.0000000000000373. PMID: 26599027; PMCID: PMC5845853. Available at: www.health.state.mn.us/communities/practice/resources/equitylibrary/penmanaguilar-measurement.html
[47] The Centers for Medicare & Medicaid Services developed the Accountable Health Communities Model to test whether identifying and addressing the health-related social needs of Medicare and Medicaid beneficiaries through screening, referral, and community navigation services would impact health care costs and reduce health care utilization. The Baltimore City Health Department received funding to implement the program in coordination with other clinical partners, which included three Maryland FQHCs: Total Health Care, Health Care for the Homeless, and Chase Brexton Health Care. More information is available at: innovation.cms.gov/innovation-models/ahcm
[48] Rural Health Information Hub, *Grant Funding for Programs that Address Social Determinants of Health*. Available at: https://www.ruralhealthinfo.org/toolkits/sdoh/6/grant-funding.
[49] More information about the Gravity Project is available at: thegravityproject.net/.