A Framework for Developing, Implementing, and Evaluating a Social Determinants of Health Initiative

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EXECUTIVE SUMMARY

The United States (U.S.), despite making progress towards health outcomes, still faces health disparities, increasing rates of chronic diseases, and increasing healthcare costs. Although health systems and organizations understand the positive impact social determinants of health (SDOH) have on population health outcomes and cost-savings, barriers exist when developing a SDOH initiative due to lack of standardization and a clear framework. Broad in scope, this paper proposes a six-step framework intended for various types of healthcare organizations to use for their unique SDOH goals. The framework provides examples from the SDOH literature for identifying and prioritizing health issues, conducting literature scans, calculating a projected return on investment (ROI), and selecting, implementing, and evaluating a SDOH initiative. Using the vast evidence base, along with a clear framework for development, implementation, and evaluation, healthcare organizations are better equipped to implement a SDOH initiative that increases health outcomes while decreasing health care costs.

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INTRODUCTION

Despite progress towards improving health outcomes in the last 80 years, the U.S. still faces health disparities and inequities in areas such as life expectancy, infant mortality, cancer, diabetes, COPD, health care access and utilization, mental health, and obesity (Singh, et al., 2017; U.S. Department of Health and Human Services [HHS], n.d.). The evidence base for the impact that social determinants of health (SDOH) have on health disparities is growing; hospitals, physicians, and health plans recognize that improving areas such as housing, unemployment, transportation, and food insecurity can decrease costs and improve population health outcomes (Woolf, 2019). Hospital systems are making investments in affordable housing, care coordination, and screening for social needs to reduce avoidable hospital admissions and unnecessary emergency department utilization (Urban Institute, 2019). Medicare Advantage (MA) payers are expanding supplemental benefits, like transportation to medical appointments and the gym, screening for food insecurity and loneliness, and partnering with community-based organizations (CBOs) for better beneficiary health outcomes (Humana, 2019; Sokol, 2019; Thomas et al., 2019). More physician practices are screening for SDOH to understand patient needs beyond clinical care (Hughes & Likumahuwa-Ackerman, 2017).

However, barriers often exist for organizations wanting to begin a SDOH initiative due to lack of standardization and a clear framework for selecting and evaluating an appropriate model of care. Given the vested interest from all sectors of the

health care industry in implementing evidence-based SDOH initiatives, using a framework for developing, implementing, and evaluating an initiative can guide meaningful and actionable efforts to improve population health outcomes while reducing costs.

PROPOSED FRAMEWORK

This paper presents a six-step framework for developing, implementing, and evaluating a SDOH initiative. The framework is broad in focus and intended for various types of organizations and community stakeholders to use for their unique SDOH goals.

Step 1: Identify and Prioritize SDOHs

Although many SDOH can affect an organization's costs and population health outcomes, determining which issues are the highest priority is the first step. There are various methods that will help an organization narrow their scope. Some methods for identifying critical health issues include:

- *Community Health Needs Assessments (CHNA):* Since nonprofit hospitals are required to conduct a CHNA every 3 years for strategic prioritization, this may be the most practical method for hospitals to identify critical issues in their community (Pennel, McLeroy, Burdine, & Matarrita-Cascante, 2015).
- *Meeting with Community Health Workers (CHWs):* Hospitals and payers can collaborate with CHWs to identify the pertinent health issues in the community.
- *Member-level data*: Payers can leverage publicly-available geographical data as well as member-level social determinant data to understand the most prevalent health issues for members. Both Aetna and Humana have used a combination of

county health rankings, census, and member-level data to identify needs (Aetna, 2018; Sokol, 2019).

- *Screening tools*: There are various screening tools clinicians have used to screen for SDOH (Andermann, 2018), one being the Protocol for Responding to and Assessing Patients' Risks and Experiences (PRAPARE) tool, a nationally-recognized and standardized measure (National Association of Community Health Centers [NACHC], n.d.).

Next, the organization will prioritize the identified SDOH issues. Some potential methods for prioritization include:

- *The Hanlon Method:* Developed by J.J. Hanlon, this complex yet effective technique results in an objective list of prioritized items. This method works best when baseline data has been collected from the community, such as through a Community Health Assessment (National Association of County & City Health Officials [NACCHO], n.d.).
- *Prioritization Matrix*: If prioritizing against many specific criteria, a prioritization matrix is the optimal technique. Creating the matrix involves listing the health issues on one axis and listing each of the criterion, such as availability of resources to solve the problem or the urgency of the problem, on the opposite axis. A final score is given to each issue to guide prioritization (NACCHO, n.d.).

Additionally, organizations should define their target population. Identifying the highest-risk populations, such as dual-eligible members or patients, can lead to a stronger

impact; these individuals are more likely to have chronic illnesses which lead to higher utilization of health care dollars (Heath, 2019).

Step 2: Conduct an Environmental Scan of Evidence-Based Models (EBMs)

Once the organization identifies and prioritizes the SDOH issues, as well as defines the target population, the next steps are to 1) record the current programs and models that exist that are solving the issue, and 2) conduct an environmental scan of evidence-based models to address the select issue(s). Collecting current programs or models that exist at the organizational and community level can reveals gaps in care. Convene program leaders, stakeholders, community health workers, and others involved in current programs to document existing efforts.

After documenting existing efforts, the project team will scan the literature for evidence-based models (EBMs) that the organization would consider implementing. The frequency and duration of the environmental scan is dependent on the organization's goals and bandwidth. For example, Kaiser Permanente Southern California's Evidence Scanning for Clinical, Operational, and Practice Effectiveness (E-SCOPE) model involves systematic, quarterly evidence searches conducted by a five-member team to identify EBMs that meet pre-determined criteria. Each review cycle lasts about 1 month (Kanter, Schottinger, & Whittaker, 2017).

To record replicable initiatives, the team can use a table-like format resembling the Commonwealth Fund's *Review for Evidence for Health-Related Social Needs Intervention* to organize initiatives based on the target population, goal of the intervention, costs, and potential savings (n.d.). Including program components can be

an added benefit for the review process. For example, if an organization is interested in pursuing an intervention to improve housing and homelessness among their patients, a "components" column with check-boxes indicating the program's incorporation of long-term housing, short-term housing, social support, systems navigation, and care coordination enables an efficient review process.

Potential resources to identify evidence-based models include:

- The Commonwealth Fund's *Review of Evidence for Health-Related Social Needs Interventions* with a collection of evidence-based solutions for housing, nutrition, transportation, home modification, care management, and counseling. The review also provides monetary estimates, if available, to help organizations calculate projected return on investment calculations to estimate impact (The Commonwealth Fund, n.d.).
- *Healthy People 2020,* which provides evidence-based interventions and resources for addressing SDOH (HHS, n.d.).
- A framework, developed by the National Quality Forum, for Medicaid programs who want to address food insecurity and housing instability. Included are common assessment and survey tools, comment and emerging models, and nationally-recognized personnel who hold expertise in food and housing issues (National Quality Forum, 2017).
- Using academic research databases like PubMed, JAMA, SIREN, and Google Scholar for identifying programs, models, and research studies that pertain to the selected SDOH.

Step 3: Projected ROI Estimation

After documenting potential initiatives, determining the impact on the organization's operating costs and revenue can guide the selection process for optimal financial performance. Return on investment (ROI) can be used as both a planning and evaluation tool. While most population health leaders recognize the importance of investing resources into SDOH initiatives, competing priorities and limited funding often exclude these programs from consideration. Demonstrating a believable "payback", or ROI, is often key for any organization's justification for funding an initiative (Gapenski & Reiter, 2016; Ohanian, 2018).

ROI considers the financial return of a dollar investment. The standard formula for ROI is total net profit over total investments, multiplied by 100 to arrive at a percentage of return (Gapenski & Reiter, 2016). To calculate the projected ROI of an intervention or model, the first task is to identify the estimated total costs and benefits. The initial environmental scan of models will provide examples of various measures other organizations have used to assess programs. Common measures include 30-day readmission rate, emergency department (ED) utilization, length of stay, and number of missed primary care appointments (The Agency for Healthcare Research and Quality [AHRQ], 2013). Unlike using ROI for evaluation purposes, organizations can leverage existing data in the literature for projecting an ROI for planning purposes. AHRQ recommends assembling an "ROI team" consisting of organizational staff that can identify indicators that would be affected by the program, as well as statisticians, data analysts, and consultants that can estimate the impact to the identified indicators (n.d.).

There are online ROI calculators available to assist with the calculation process. The Commonwealth Fund created an ROI calculator for partnerships to address social determinants of health, which includes a data checklist of inputs, like baseline utilization rates and estimated unit utilization costs, needed to use the tool (The Commonwealth Fund, n.d.). Ara Ohanian's ROI calculator, available at the American Journal of Managed Care (AJMC), is used for a technology addressing a SDOH. The pre-populated data is based on CMS and American Hospital Association data national averages (2018).

Another approach to calculate projected impact is a "soft" ROI, which captures secondary and tertiary benefits of an initiative that are not readily conveyed in financial terms. An example is the Social Return on Investment (SROI) methodology that incorporates multiple levels of impact (community, organization, individual) to arrive at a total return on social value. SROI can be resource-intensive, so developing a proper monitoring system, a unique theory of change model, and internal or external staff to estimate financial proxies for outcomes is crucial to execution (Gapenski & Reiter, 2016; Yates & Marra, 2017).

Additional resources for calculating SROI include:

- SOPACT's SROI article that provides examples of financial proxies that can be used in the calculation (Pierce, 2018).
- EY's SROI study assessing CommonBonds Communities' eviction prevention activities. The study outlines a methodology that other organizations can replicate for their own SROI calculation (2018).

Step 4: Select the Initiative

Using the environmental scan products from Step 2 and the projected ROI from Step 3, the organization will select the most appropriate initiative to address the prioritized SDOH. This step also requires prioritization. All relevant stakeholders, organizational staff, community health workers, and project leaders should collaborate to select the final initiative.

If the organization has many initiatives collected from Step 2, AHRQ's process for winnowing out public nominations they received for selecting evidence-based patient-centered outcomes research (PCOR) interventions that merit investment is a good process to leverage. After receiving intervention nominations, AHRQ's multi-disciplinary team completed initial exclusions of interventions that were not peer-reviewed and did not achieve the same outcome of interest. After, the team completed an evidence and impact assessment, which excluded low-evidence and low-impact nominations, as well as a feasibility assessment to exclude interventions that were not ready for the organization's implementation efforts (Huppert et al., 2019).

Another method is to use a decision matrix if the organization has only a few potential initiatives. Dr. Jonathan Weiner's Decision Matrix template offers the ability to compare multiple initiatives against one another after scoring against organizationally-selected criteria. A final score is assigned to each initiative, with the highest score indicating the most appropriate initiative to implement (2005).

Since the assumptions used when developing the scores may or may not be accurate, the organization must explicitly state the assumptions made for each. Transparent

assumptions will allow for future modifications to the scores, as well as testing other similar theories related to each initiative.

Step 5: Implementation

Once the final initiative is selected, the project team, organizational leaders, and other stakeholders will create a project plan and determine an implementation strategy for adapting the initiative to their specific goals and environment. Implementation designs can be categorized as within-site or between-sites, depending on if the program is within one or more sites exposed to the same strategy or if there are different exposures between sites. Within-site designs include post designs, which are the most common, and pre-post designs. Post designs are optimal when the outcome of interest is a changing process, utilization, or output, and not a health outcome. Pre-post designs are effective for the adoption of a new guideline, warning, or directive, and when a change in before-and-after is of interest. If the organization decides a between-sites design is needed, the New vs. Implementation as Usual (IAU) method can be used when some sites receive the new intervention and the others receive the usual condition (Brown et. al, 2017).

Besides selecting an appropriate implementation design, promoting buy-in from all stakeholders and levels involved in the initiative and anticipating barriers will contribute to a successful implementation. In hospitals, major barriers to successful implementation include increased staff workload, lack of time and support from management, miscommunication, complexity of integration, lack of information, and lack of training and awareness of the new processes (Geerligs, Rankin, Shepherd, & Butow, 2018).

Regarding Kaiser Permanente's E-SCOPE approach, some elements that contributed to an accelerated and successful implementation included sponsorship from Senior Quality Executives, involvement of 2 full-time implementation project managers (per every 7,500 physicians) that ensured smooth execution, and support from physicians and other staff who championed, socialized, and facilitated implementation efforts (Henry et al., 2019). Having a dedicated project team, project manager, and clear roles and responsibilities help address the lack of time and work-overload that can hinder the implementation phase.

Step 6: Evaluate and Monitor the Initiative

Lastly, the project team and stakeholders will evaluate and monitor the SDOH initiative. Selecting an appropriate metric to monitor is the critical first task. For example, common metrics for evaluating a revamped hospital discharge process for patients who are homeless include hospital admissions or 30-day readmissions rate, length of stay, and emergency department utilization (AHRQ, 2013). Non-emergency medical transportation (NEMT) pilots can measure the number of missed appointments (Chaiyachati, et al., 2018), satisfaction with wait time, adherence to care plan, and the cost of transportation for the client, before and after the pilot (Liu, 2014). These metrics can be linked to monetary values and, as discussed in Step 3, an ROI can be calculated to demonstrate that the projected cost-savings were as expected. Tracking process outcomes, like the number of social service referrals, along with these other outcomes, can be an early indicator of whether the initiative is effective (Mani, 2019).

Along with calculating an ROI, organizations also need to communicate the benefit of the initiative to receive buy-in from stakeholders and justify the initiative's success. Using both patient stories and monetary outcomes when making a business case can be helpful for achieving buy-in from providers and payers (Rosenburg, 2019).

CONCLUSION

Although the healthcare industry increasingly recognizes the importance of SDOH's impact to health costs and outcomes, managed care organizations (MCOs), hospitals, and other organizations may not always have a clear framework developing, implementing, and evaluating their initiatives. This six-step framework can assist health care organizations to more effectively and efficiently utilize the sea of best practices and resources available to implement a SDOH initiative that increases health outcomes while decreasing health care costs.

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