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# Managing the Social Determinants of Health: Part II

## *Leveraging Assessment Toward Comprehensive Case Management*

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**ABSTRACT**

**Behavioral Learning Objectives:**
This article will:

1. Explore health care industry considerations for the social determinants of health (SDH).
2. Identify industry initiatives and reimbursement strategies.
3. Discuss SDH-focused assessment tools for professional case managers.
4. Present and apply the Comprehensive Case Management Path.

**Primary Practice Setting(s):** Applicable to health and behavioral health settings where case management is practiced.

**Findings/Conclusions:** When professional case managers use comprehensive assessments to inform their work with populations impacted by the SDH, barriers to care access can be more readily addressed (e.g., poverty, employment, housing insufficiency, health literacy, migration, and medication adherence). Initiatives, programming, and treatment plans can be advanced to provide target populations with individualized and appropriate intervention. Case management involvement can also be leveraged to coordinate and facilitate successful interprofessional team efforts (Casteneda, Holmes, Madrigal, DeTrinidad, Beyeler, & Quesada, 2015; Davis, 2016).

**Implications for Case Management Practice:** Case managers must engage clients from a wholistic lens that reflects their standards of practice and accounts for all domains of assessment: medical, cognitive and behavioral, functional, and social. Comprehensive tools to guide a robust and exhaustive screening of issues and opportunities ensure more successful outcomes.

**Key words:** *assessment, case management, case management process, critical thinking, epidemiology, predictive analytics, public health, social determinants of health, value-based care*

A case manager's interventions and plan are only as sound as their assessment; that effort which explores the full scope of a client's circumstances across medical, cognitive and behavioral, social, and functional domains. A quality assessment sets in motion the quintessential elements that fuel the case management process (Tahan, 2017). However, the complexity of the current generation of client populations has yielded compelling challenges across the health and behavioral health industry, most notably in dealing with the social determinants of health (SDH). Adequately defining key client issues and opportunities for attention is more of a moving target than ever.

Organizations across the industry have become fixated on the best means to address client needs, while ensuring vigilant cost containment strategies. The number of mergers and acquisitions continues to escalate. Many of these have fostered creative partnerships to promote a successful interweave of social services and health care access. In the current value-based care climate, the race is on for all health and behavioral health providers. They must deliver quality care that incorporates diverse programming for all populations, as well as accounts for mitigating risk and maximizing profits.

The foundational underpinnings of the SDH were explored in Part 1 of this article series (Fink-Samnick, 2018). Part 2 will explore the impact of value-based care on the latest generation of assessment tools, programs, and initiatives for those persons, populations, and communities impacted by the SDH. The Comprehensive Case Management Path

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will also be presented: a unique template to guide a case manager's identification, assessment, planning, and intervention with intricate populations.

## Managing Costs of Care and Reimbursement

### Deciphering the Industry's Current Mission

Health care organizations are struggling to meet their ability to improve outcomes for the increasingly complex populations they serve, including those predisposed to the SDH. These individuals continue to be the costliest of clients to take care of, comprising as much as 50% of the costs for 5% of the population. The top 1% make up close to 20% of medical expenditures overall or roughly $3.4 trillion. Eighty-six percent of current health care spending is related to chronic conditions, with the SDH having an impact on 60% of outcomes (Fink-Samnick, 2018; Sullivan, 2017).

Segmented data specific to the correlation between the SDH across diagnoses, race and ethnicity, persons with disabilities, socioeconomic status, education, and those impacted by food insecurity has been discussed in the literature (Beckie, 2017; Feeding America,2017; Fink-Samnick, 2018; Reid, 2017; Rice, 2016; Weissman, 2012). One study identified that poverty and criminal justice involvement are the biggest risk factors for emergency department utilization among youth. In children 5 years of age and younger, poverty was the most likely social complexity risk factor to prompt an emergency department visit. For children from 5 to 17 years of age, the child's involvement in the juvenile or criminal justice system was the most prominent risk factor. Other notable factors across both age groups included:

- a parent's substance use, or
- mental illness,
- a parent's domestic violence involvement,
- a parent's death,
- a child's personal substance abuse, or
- mental illness
- limited English proficiency,
- a parent's criminal justice involvement,
- child abuse or neglect, and
- homelessness. (Arthur, Lucenko, Sharkova, Xing, & Mangione-Smith, 2018)

Another recent study explored the death rates, life expectancy, and years lived with a disability across the United States and the District of Columbia (DC) from 1990 to 2016. Mortality rates declined by roughly 32%, with the probability of death for those individuals aged 20 to 55 years declining across 31 states plus DC. Yet, despite the positive numbers, concerning outcomes emerged in pockets of the country. The probability of death reversed in 21 states, increasing more than 10% in the following five states:

- West Virginia,
- New Mexico,
- Wyoming,
- Kentucky, and
- Oklahoma.

This rate reversal was strongly linked to diagnoses often associated with the SDH, most notably substance use (alcohol and drug addiction) and cirrhosis. Self-harm was also identified as an area of increased incidence (Minemyer, 2018a).

Although there is industry consensus on the current priority to improve the health of populations, organizations are struggling with the implementation of cost-attentive tactics to meet this goal. Studies affirm that the overall costs of care, inclusive of pharmaceuticals plus goods and services, are the key factors to tame in the United States health care price battle. This perspective is opposed to the view of oversupply as the major driver of costs (e.g., excessive tests, medications, and physician consults; Harlow, 2018). An array of industry happenings has ensued to manage the cost challenge. They span the development of value-based contracts to an explosion of new types of mergers and acquisitions. All have the ultimate goal to reaffirm the original industry mission by the Triple Aim (Institute for Healthcare Improvement, 2018): improve the patient experience of care, improve the health of populations, and hopefully reduce the per capita cost of health care.

### Horizontal and Vertical Mergers

Horizontal mergers, or those that appear in the same sector, are well known to the industry. This includes mergers among health care systems and/or providers of care; the combination viewed as a key strategy to provide more affordable care. In a time when high costs of care are being directly attributed to the complex needs of those with the SDH, these mergers also promote the sustainability of the overall health care system. However, many health insurance company "mega-mergers" have been blocked at the federal level. As a result, an alternative merger approach has appeared that joins entities with a vested interest in health and behavioral health care, together with related services. This new generation of *vertical mergers* is a type of merger between two firms that have a buyer–seller relationship; one produces a product that is readily sold to the other (US Legal, 2018). Example mergers of CVS-Aetna, Cigna-Express Scripts, Walmart-Humana, and Humana-Kindred have been recent fodder for the media, with the development of a new term on the scene": "payvider." Advocates of vertical mergers claim that they create strong partnerships

across subsectors of the health care economy. However, although in theory vertical mergers are perceived to best benefit stakeholders (e.g., patients, providers, and practitioners), legal and antitrust enforcement and opposition have been fierce (Harlow, 2018).

## Understanding Value-Based Care

The health care industry has historically spent more money to treat clients though clinical outcomes were not improving (Beaton, 2018a; Revenue Cycle Intelligence, n. d.). The imbalance of these costs and the outcomes associated with the SDH were explored in Part 1 (Fink-Samnick, 2018). For any professional rendering care to these impacted populations, the development of new types of reimbursement is a vital dimension for industry attention, especially case managers.

To better address the care costs and outcomes imbalance, plus emphasize provider accountability, the federal government has designed new reimbursement programs where rewards are provided retrospectively for both efficiency and effectiveness of care. Valued-based care (VBC) is a form of reimbursement that directly ties payments for care delivery to the quality of care provided. Under traditional fee-for-service models, costs for procedures and tests increased. The most common VBC models include:

- risk sharing: 15.4%;
- pay-for-performance: 14.8%;
- full capitation models: 12.04%; and
- bundled payments: 11.34%.

Explanations of each model appear in Table 1.

The Centers for Medicare & Medicaid Services (CMS) introduced a wide range of VBC models over the past decade. Examples include the Medicare-Shared Savings Program, bundled payments, patient-centered medical homes, and the Pioneer Accountable Care Organization Model. As typically occurs in the industry, private insurers have followed CMS's lead by phasing in their own unique VBC models of care (Revenue Cycle Intelligence, n. d.).

*The central premise of VBC is that when patients and populations receive more coordinated, appropriate, and effective care the providers see financial gains. This includes a strong return on investment (ROI). This concept is one that case managers across practice settings deal with as a primary job function. ROI is often written into case management performance metrics and annual appraisal goals.*

Under the new VBC models, providers are incentivized to engage in a number of activities that allow them to get paid for their services. These include:

- using evidence-based medicine,
- engaging patients,
- upgrading health information technology, and
- using data analytics.

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Despite the popularity of VBC programs, recent data shows that there is limited buy-in of the concept. A series of barriers to implement these programs have been identified involving:

- changing physician behavior: 38.5%;
- resistance to change: 37.8%; and
- confusion surrounding payment models and risk management: 35.6%.

**TABLE 1**
Common Value-Based Care (VBC) Reimbursement Models Defined

| Model | Definition |
|---|---|
| Risk Sharing | Distributing the costs of health care services across large numbers of participants including people of various ages and health condition. |
| Pay-for-Performance | A financial reward system where some or all of the monetary compensation is related to how the performance of the organization is assessed relative to stated criteria; a system is which pay, if not reimbursement, is based on how well someone does his or her job (BusinessDictionary.com, 2018; Cambridge Dictionary, 2018). |
| Full Capitation | A fixed amount of money per patient per unit of time paid in advance to the provider for the delivery of health care services; the amount is determined by the ranges of services provided, the number of patients involved, and the period of time during which the services are rendered (American College of Physicians, 2018). |
| Bundled Payments | The reimbursement of health care providers (as hospitals and physicians on the basis of expected costs for clinically defined episodes of care. Providers are paid a lump sum per patient, regardless of how many services the patient receives [Rand Corporation, n.d.]). |

*Powerful assessment tools have been integrated in the latest electronic health records (EHR) platforms. These efforts are spearheading exciting ways for case managers to identify populations most at risk. The workforce can more efficiently triage, screen, and assess client needs, plus connect them with critical resources to promote wholistic wellness across health, behavioral health, plus the SDH.*

Sixty percent of organizations recognize that fee-for-service models will not last, with 51% looking to have a more significant advantage over their competitors. Yet, those who have successfully moved forward with these models reflect a different reality, often falling short of defined goals. Commercial markets have ebbed forward, albeit cautiously. Although 80% of health care organizations have engaged in risk-based contracts, only 70% have put between 1% and 20% of their revenue at risk. A limited 8% have placed between 60% and 80% of their revenue under full risk-based arrangement (Beaton, 2018a; Bresnick, 2018).

Providers must be purposeful in their development of care teams and community partnerships that directly address the diverse needs of their populations. Data-driven analytics should be incorporated into organizational processes to leverage their ability to measure and improve the quality of patient care. Courtesy of its professional knowledge and expertise, case management is positioned to play a vital role in each one of these efforts.

### *ICD-10* Codes and Reimbursement

In the current value-based climate, providers of health and behavioral care seek any and all opportunities to obtain reimbursement. The ability to directly align physical and mental illness with the SDH is a powerful coding development for the industry. The American Hospital Association announced in March that documentation from nonphysicians (e.g., social workers and registered nurses) will be considered as justification in coding the SDH. Codes Z55-65, identified as the "stress codes," reflect stress at the individual, family, and community levels. These unique codes encompass stress in the form of relationships, the environment, the community, difficulty learning, difficulty at work, economic stress, or caregiver burden. Expanding the focus of the codes provides a needed level in terms of viewing the factors that drive health and behavioral health, especially in the context of evolving reimbursement initiatives (Iverson, 2018).

The success of all providers moving forward, whether for health and/or behavioral health, will be driven by their ability to master the crucial interweave of sociopolitical influences on communities, populations, and individuals. The rise and fall of industry organizations will be determined by their ability to make use of every opportunity to effectively obtain reimbursement for all clients, particularly the costliest; most often those predisposed to the SDH. Box 1 provides a listing of the primary ICD 10 'Z' codes 55-65.

## The New Generation of Assessment

Knowledge is power and this concept is a major factor in working with any SDH populations and communities. The more knowledge a team has at its disposal, the more effective its efforts to act on treatment recommendations, inform clinical care decisions, and identify persons in need of referrals to community resources (LaForge et al., 2018). Yet, the means to best capture this knowledge have been an industry challenge. In striving to achieve successful outcomes, as lower readmissions and less costly care, teams strive to understand a wide lens of factors that impact a client's health. As discussed in Part 1 (Fink-Samnick, 2018), both structural and intermediary determinants comprise this perspective.

Powerful assessment tools have been integrated in the latest electronic health records (EHRs) platforms. These efforts are spearheading exciting ways for case managers to identify populations most at risk. The workforce can more efficiently triage, screen, and assess client needs, plus connect them with critical resources to promote wholistic wellness across health, behavioral health, plus the SDH. The emergence of technologies to gather and analyze the data collected also serves powerful leadership functions that span program planning and development, as well as performance metrics and outcomes. The history and advancement of SDH assessment programming follow in this section.

**BOX 1**
**ICD-10 Z 'Stress' Codes (data from ICD 10 Data.com, 2018)**

Persons with Potential Health Hazards Related to Socioeconomic and Psychosocial Circumstances
- Z55 Problems related to education and literacy
- Z56 Problems related to employment and unemployment
- Z57 Occupational exposure to risk factors
- Z59 Problems related to housing and economic circumstances
- Z60 Problems related to social environment
- Z62 Problems related to upbringing
- Z63 Other problems related to primary support group, including family circumstances
- Z64 Problems related to certain psychosocial circumstances
- Z65 Problems related to other psychosocial circumstances

**BOX 2**
**Community Health Center Requirements (Centers for Disease Control and Prevention, 2018a)**

- Locate in or serve a high-need community (designated medically underserved area or population).
- Governed by a community board composed of a majority (51% or more) of health center patients who represent the population served.
- Provide comprehensive primary health care services as well as supportive services (education, translation and transportation, etc.) that promote access to health care.
- Provide services available to all with fees adjusted on the basis of ability to pay.
- Meet other performance and accountability requirements regarding administrative, clinical, and financial operations.[a]

*Note.* From Centers for Disease Control and Prevention (2018a).

## Community Health Centers Lead the Charge

Health care organizations and safety net community health centers (CHC) long sought effective means to accurately capture data about the SDH. These private, nonprofit community-based, and patient-directed organizations serve populations with limited access to health care (Centers for Disease Control and Prevention, 2018a). Their populations at these sites have been exposed to a range of psychosocial stressors (e.g., family violence, abuse, neglect, and exploitation) in addition to the SDH. The five requirements for CHCs are listed in Box 2.

Primarily using manual tools and other ad hoc reports, the CHCs worked to evolve their screening efforts, ultimately building a national coalition. Named PREPARE, the Protocol for Responding to and Assessing Patient's Assets, Risks, and Experiences, the group implemented a preliminary SDH collection tool informed by the Phase 2 work of the Institute of Medicine's (IOM's) Committee on Recommended Social and Behavioral Domains and Measures for Electronic Health Records (2014). Among the early adopters of these social complexity risk factors were The University of New Mexico Office of Community Health in Albuquerque, National Association of Community Health Centers, the Care Management Institute at Kaiser Permanente, and Mosaic Medical's Population Health Program.

The work was coordinated through OCHIN (Oregon Community Health Information Network), a nonprofit community-based organization that centrally hosts and manages the nation's largest CHC network on a single EHR system. EPIC EHR is contracted with more than 440 primary care CHCs in 19 states. Twenty-seven sites participated in the initial work to optimize SDH data collection, present it in EHR systems, and then integrate it into physician workflows. The preliminary population breakdown yielded concerning socioeconomic risks:

- 23% uninsured
- 58% publicly insured
- 25% nonwhite
- 33% of Hispanic ethnicity
- 28% primarily non-English speakers
- 91% from households living 200% below the federal poverty level (among those patients with available data)

Five steps occurred over a 10-month period:

1. Collect the SDH data.
2. Review the patients' SDH needs.
3. Identify referral options to address those needs.
4. Order referrals to appropriate services.
5. Track outcomes of past referrals. (LaForge et al., 2018)

The SDH information was documented directly into the patients' EHR. Over time, further SDH screening domains were added, some newer tools having as many as 43 items across 14 domains (Gold et al., 2017); LaForge et al., 2018; Monica, 2018). Methodist Healthcare Ministries of South Texas and the Texas Health Information Exchange recently integrated SDH to include clinical, social, and behavioral risks (Monica, 2018). The initial 11 social determinants identified by the then IOM, plus added risk factors appear in Table 2.

## The Data Evolution

The opportunity to use data to better inform health care delivery and outcomes for populations is advancing. A rapidly evolving number of EHR products now include the ability to track the SDH. This number has risen from 1.7% of products in 2012 to 25.2% in 2016 (Monica, 2018). The vast scope of domains considered for the SDH has made it difficult to develop a single inclusive tool, though efforts continue to achieve this goal.

Predictive analytics is seen to hold vast promise for organizations to win the battle on care costs. Imagine that as the case manager for a population health program you receive data reports on any new clients admitted to the hospital, because the reports automatically go to the current point of care. Members of the care team know in real time those clients dealing with the SDH, with their screening efforts prioritized. The benefits identified for predictive analytics in the literature look toward:

- Improvements in risk modeling and management, with care teams kept informed of nonclinical factors affecting cost, outcomes, and patient satisfaction.
- More efficient allocation of resources to the most impactable patients as the care management needs of all patients become more transparent and predictable.

**TABLE 2**
Combined List of Patient-Reported Social Determinants

| Institute of Medicine | Added Risk Factors |
|---|---|
| Alcohol use | Activities of daily living |
| Depression | Childcare |
| Education | Civic engagement |
| Financial resource and strain | Clothing |
| Intimate partner violence | Dental |
| Physical activity | Dietary pattern |
| Race or ethnic group | Disability status |
| Residential address | Drug use |
| Social connection and isolation | Employment |
| Stress | Food insecurity |
| Tobacco use | Health literacy |
| | Hearing |
| | Housing |
| | Incarceration history |
| | Income |
| | Language preference |
| | Legal/public benefit needs |
| | Literacy/learning style |
| | Marital status |
| | Medical needs (including health insurance) |
| | Safety |
| | Seasonal labor status |
| | Transportation |
| | Utilities |
| | Veteran status |
| | Vision |

*Note.* From LaForge et al. (2018).

- Richer accounts of clinical decision making in medical records, particularly when it comes to complex cases, with SDH risk analysis built directly into care plans.
- Lower administrative costs and other efficiency improvements stemming from the greater automation of the care-planning process.
- Automated capture of data that health systems can use to research the broader influence of SDH at the population level and to develop new risk-mitigation strategies; given the continuous aggregation of data, predictive models will improve over time and be responsive to changes in social factors. (Rangaswamy, 2016)

However, despite the commitment toward predictive analytics being a full-time effort, the results are not all significant or favorable in the context of integration of SDH. A recent study demonstrated that adding SDH data to more traditional clinical analytics did little to improve the accuracy of predictive population health analysis (Kent, 2018).

A decision model was used for a population of 84,317 adults, all with at least one outpatient visit between 2011 and 2016 at Eskenazi Health: the public safety-net health system in Marion County in Indianapolis, Indiana. Using clinical data from the EHRs, plus socioeconomic indicator data from the U.S. Census Bureau and public health indicators, the researchers predicted the need for mental health and dietician referrals with accuracy measures ranging between 60% and 75%. Specificity and accuracy scores for identifying the need for social work and other SDH services were between 67% and 77%. In the end, a total of 48 socioeconomic and public health indicators were selected on the basis of the Kaiser Family Foundation Framework for the SDH. It was felt that the need for more intense social service referrals was able to be predicted with accuracy by the readily available clinical and community data that measured socioeconomic and public health conditions alone such as a comprehensive in-person assessment. (Kasthuriranthne, Vest, Menachemi, Halverson, & Grannis, 2018).

This large volume of SDH identifiers yields a double-edged sword of opportunity and challenge. However, it is still believed that the availability and expanded adoption of innovation yield grand potential for those organizations that care for those clients impacted by the SDH. Providers of care are actively working to empower sound organizational planning, intervention allocation, risk adjustment, research, and health policy. Each of these areas benefits patients, populations, and providers in ways that continue to evolve.

## Centers for Medicare & Medicaid Services

With solid evidence to support the impact of the SDH on health outcomes, the CMS developed the Accountable Health Communities Model. Through screening of community beneficiaries of Medicare & Medicaid Services, the model seeks to identify those in need of unmet health-related social needs (e.g., food insecurity, inadequate or unstable housing). These needs have been determined to increase the risk of developing chronic health conditions, reduce an individual's ability to manage the conditions, increase health care costs, plus lead to avoidable health care utilization (Centers for Medicare & Medicaid Services, 2018).

The scope of the model includes the promotion of clinical community collaboration through:

- screening of community-dwelling beneficiaries to identify certain unmet health-related social needs;
- referral of community-dwelling beneficiaries to increase awareness of community services;

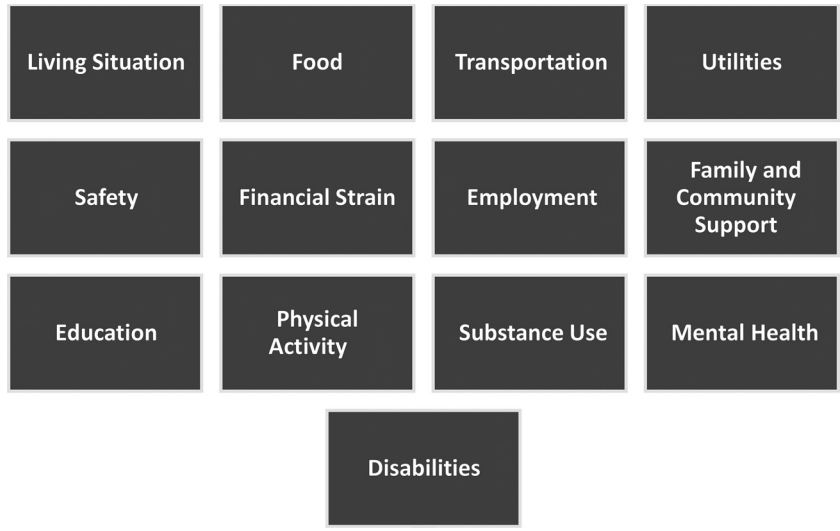


**FIGURE 1**
Accountable Health Communities Health-Related Social Needs (AHC HRSN) Screening Tool core questions. Data from Centers for Medicare & Medicaid Services (2018).

- provision of navigation services to assist high-risk community-dwelling beneficiaries with accessing community services; and
- encouragement of alignment between clinical and community services to ensure that community services are available and responsive to the needs of community-dwelling beneficiaries.

The CMS screening tool is robust, with 26 unique questions to address key needs across the SDH. The domains appear in Figure 1. More than 30 organizations around the United States are participating in the model, with all able to be viewed on the CMS.gov website (Centers for Medicare & Medicaid Services, 2018).

### Adverse Childhood Experiences Questionnaire

Society's complex populations, plus their associated costs have been a powerful motivator to mandate more comprehensive approaches to assessment. Case managers across practice settings struggle to address short- and long-range treatment plans for the SDH, all multifaceted in scope and effort. Those working in behavioral health have defined ways to implement versions of the adverse childhood experiences (ACEs) questionnaire to assess the impact of trauma on their clients. Studies reflect a strong correlation between those who have endured traumatic life events and the SDH (Arthur et al., 2018).

The original ACE study was completed by the Centers for Disease Control and Prevention and Kaiser from 1995 to 1997. It was understood through prior studies on human behavior that exposure of children to traumatic circumstances impacted their health and well-being throughout the course of human development. The ACE study explored the extent of this correlation, in terms of the emergence of risk factors for disease over the life course. More than 17,000 Kaiser members from Southern California completed confidential surveys regarding their childhood experiences and current health status and behaviors, while receiving their annual physical. This original effort was one of the largest investigations of childhood abuse and neglect and later-life health and well-being. (Centers for Disease Prevention and Control, 2018b).

The ACE Pyramid visually presented how traumatic and stressful life events impact a child throughout the developmental life span. A rendering of this conceptual framework for the original study is shown in Figure 2. The survey responses were scored, with the total sum used to assess cumulative childhood stress and trauma. Major findings revealed that 75% of participants reported at least one ACE, and more than one in five reported three or more areas. As the number of ACEs increases, the risk for a number of health and behavioral health manifestations does as well. This list of ACE experiences is shown in Box 3.

Since that initial study, a number of versions of the ACE Questionnaire have been developed for males, females, individuals, and families. They can be accessed free of charge from the Centers of Disease Control and Prevention–Kaiser ACE Study website (Centers for Disease Prevention and Control, 2018b).

## Insurance-Driven Partnerships and Initiatives

Insurance-sponsored programs to address the SDH are yielding positive effects on a variety of health

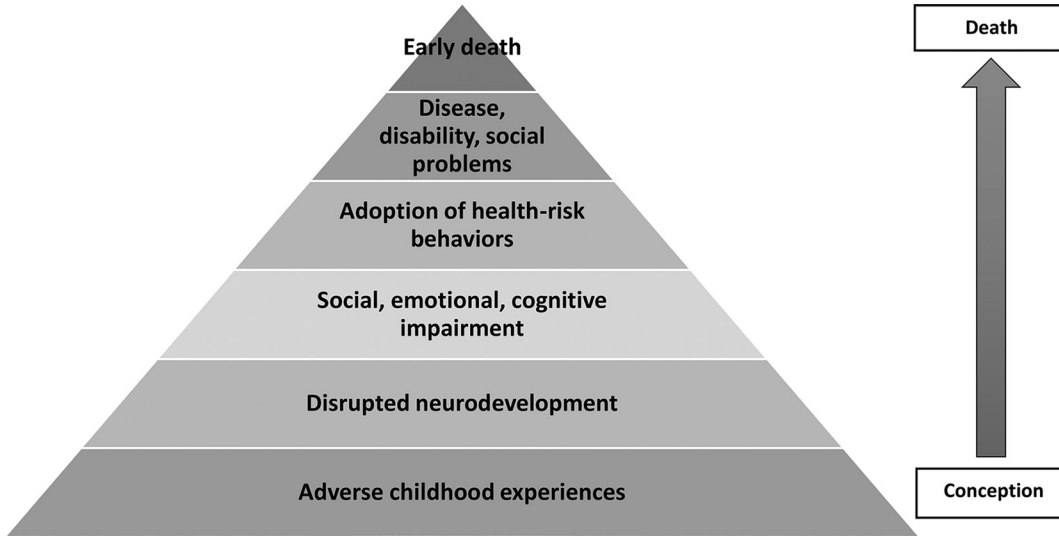


**FIGURE 2**
ACE Pyramid impact of adverse childhood experiences on health and well-being through the life span. From Centers for Disease Control and Prevention (2018b).

conditions and behavioral manifestation. Solid evidence demonstrates the value of attending to SDH. Recent surveys across the industry show that as high as 80% of payers believe that addressing the SDH for their members will improve their population health programs (Beaton, 2018a). From health and behavioral health organizations to insurers, there has been recognition of the need to expand resources that link populations with identified nonclinical resources that promote wellness (e.g., medications, food, and transportation).

**BOX 3**
**Adverse Childhood Experiences' Risk Factors**

- Alcoholism and alcohol abuse
- Chronic obstructive pulmonary disease
- Depression
- Fetal death
- Health-related quality of life
- Illicit drug use
- Ischemic heart disease
- Liver disease
- Poor work performance
- Financial stress
- Risk for intimate partner violence
- Multiple sexual partners
- Sexually transmitted diseases
- Smoking
- Suicide attempts
- Unintended pregnancies
- Early initiation of smoking
- Early initiation of sexual activity
- Adolescent pregnancy
- Risk for sexual violence
- Poor academic achievement

*Note.* Data from Centers for Disease Control and Prevention (2018b).

The past months have seen tremendous traction with the development and implementation of new programming partnerships between community programs and payers, close to half at 42%. Another 34% are integrating census and socioeconomic data with clinical data. Figure 3 shows the many ways organizations are integrating the SDH into their population health programs. This section details examples of innovative partnerships between insurance companies and other providers to address the SDH.

## Health Partners Plans

Health Partners Plans (HPP), one of the nation's leading managed care organizations, has been leading the way in developing strategic partnerships with agencies and programs serving their members. Focusing on key SDH in certain geographic regions of the country, HPP is improving access to health care for individuals struggling with a range of downstream intermediary determinants (e.g., material circumstances, behaviors and biological factors, psychosocial factors, and health system quality/access) and chronic health conditions.

### *Food as Medicine*

Health Partners Plans out of Philadelphia set up a strategic collaboration with Pennsylvania's Metropolitan Area Neighborhood Nutrition Alliance. Together, the two entities instituted a healthy meal program to address food-related SDH. The Food as Medicine Program served chronically ill Medicaid

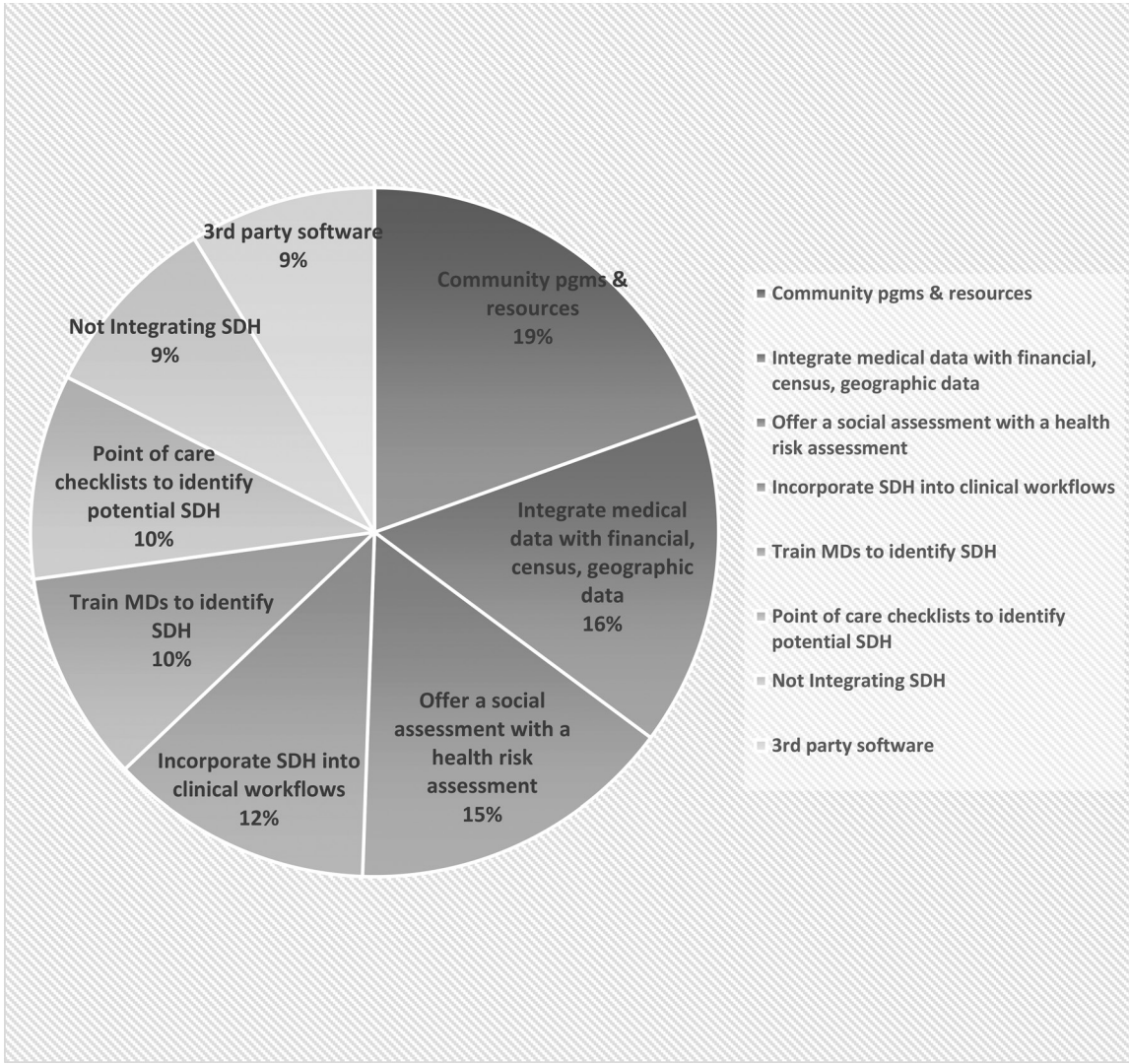


**FIGURE 3**
How organizations are integrating social determinants of health into population health programs. SDH = social determinants of health. Data from Beaton (2018a).

and Medicare beneficiaries of targeted regions. Those 200 initial persons who initially engaged with the program in 2015 received 21 meals a week, over 6 months. The outcomes reflected reduced:

- hospital admissions: 27%;
- emergency department visits: 6.9%;
- provider visits: 15%; and
- specialist visits: 7.9%.

In addition, hemoglobin levels stabilized for 59% of beneficiaries over the first 6 months of engagement in the program and lowered for 26% of individual. Ninety-five percent of those involved reported that their program helped them understand the importance of a healthy diet in the context of their chronic health conditions. In the end, 75% of participants continued to make healthier eating choices following the conclusion of the program.

This model demonstrates a strong opportunity for the full scope of case management's workforce through engagement of case managers who intervene at a primary level (e.g., client visits, resource linkage, and advocacy with other providers of care and support) to those at the independent level of professional case management practice (e.g., clinical assessment, collaboration and facilitation of care and treatment processes, completion of outcomes). Moving into 2017, the program expanded to 1,900 beneficiaries (Minemyer, 2018b).

### *Collaboration With Philadelphia FIGHT and Broad Street Ministry*

Another successful and rapidly growing partnership with HPP is their collaboration with Philadelphia FIGHT Community Health Centers and the Broad Street Ministry. The goal is to support and expand the services of a satellite clinic that provides social

and health wraparound services for individuals dealing with housing insufficiency and chronic health and mental conditions. The program embeds a full-time social worker hired by HPP at the FIGHT CHC. Mail-based communications are initiated with the Broad Street Ministry to ensure that more than 500 clients receive updates about available programs and services.

The program draws on the success of similar payer-initiated partnerships in California with housing programs. Among the most successful of these efforts is the Health Plan of San Mateo that provides care to more than 150,000 residents in California through five programs:

- Medi-Cal
- Care Advantage Cal MediConnect
- Healthy Kids
- San Mateo County Access
- Care for Everyone (ACE) Health Worx. (Beaton, 2017; 2018b).

### Blue Cross Blue Shield Association

#### *Zip Code Effect*

The Blue Cross Blue Shield (BCBS) Institute is one of several insurers working with a series of partners to address the barriers to care access that are occurring for their members. Early experts identified that what often dictates health is not genetics but geographic region, if not also zip code (Marmot & Wilkinson, 2006; Schroeder, 2007). Working from this perspective and by integrating data and predictive analytics, BCBS will begin to target specific zip codes where members tend to be more predisposed to the SDH. They plan to partner with organizations that can address the fitness, transportation, and pharmacy deserts that exist in these predefined regions. At the time of this writing, Independence Blue Cross, Highmark Health, and Blue Cross Blue Shield of Louisiana were early adopters, with other BCBS entities engaging. Strategic partners comprise the following:

- Lyft: To reduce the health care transportation gap by 50% over the next 2 years.
- CVS and Walgreens: To increase access to pharmacy services.
- The project is expected to integrate fitness and nutrition deserts in 2019. (Minemyer, 2018b)

## Community Business Efforts

### Uber Health

Uber Health was launched in Spring of 2018, with the goal of partnering with health care organizations to provide consistent and reliable transportation for their clients. This resource has quickly emerged as a way to address patient treatment adherence, plus attend to the issue of reducing "no shows" for appointment, a long-standing problem for many outpatient and ambulatory providers of care. Well over 100 health and behavioral health providers have signed up. Dashboards are organized for each health care provider, allowing the provider to order rides for those persons in need. Among the program features are the following:

- Flexible ride scheduling for patients, caregivers, and involved staff rides can be scheduled within a few hours or up to 30 days in advance. This also allows for transportation to be scheduled for follow-up appointments while the patient is still at the program.
- Access for patients without a smartphone—Ride communication is accomplished through text message.
- Billing, reporting, and management functions—Involved providers are able to view monthly billing statements, appointments, and scheduling reports. (Uber, 2018)

### Veterans and Kiosks

Research shows Veterans to be more prone to homelessness: 39,500 per the latest numbers from the National Coalition for Homeless Veterans. Housing insufficiency increases the incidence of health and behavioral health challenges. These persons may not visit their care provider regularly and delay obtaining treatments. When the SDH are added to the equation, veterans face considerable challenges in the scope of their overall health, wellness, and mortality.

In the effort to better coordinate care and services for veterans, kiosks have been installed by NC Serves, a North Carolina consortium of nonprofits addressing veterans social service and health care needs. The kiosks, positioned in libraries and other community spaces, collect data about the SDH and social service needs of the veterans' population. Social workers at NC Serves are alerted with needs that a veteran or a veteran's family has, connecting the veteran or family with specific resources (e.g., housing, employment, substance abuse, and/or mental health treatment; Heath, 2018).

## The Comprehensive Case Management Path

### The Foundation

Assessment is far from a new competency for any health or behavioral health professional. However, the many moving parts associated with the SDH easily make a client's situation present as overwhelming. A

high level of vision is required by case managers to clearly and accurately view the needs of their complex client populations. The successful addressing of the SDH mandates intervention across each sector of society, encompassing individuals and their family systems, and communities. Resource access is often mandated across federal and local government offices (e.g., social services, entitlement programs), schools, hospitals and ambulatory care settings, treatment providers, and community-based programs. Case managers are actively involved in this mix, engaged in situations and roles in which they must proactively assess, advocate for, and coordinate services for vulnerable and disenfranchised clients. When individual(s) reach the optimum level of wellness and functional capability, everyone benefits: the individual(s) served, their support systems, the health care delivery systems, and the various reimbursement systems (Commission for Case Manager Certification, 2015).

Effective case management assessment requires keen critical thinking to promote viewing the multiple dimensions of need from the most objective lens. This effort is even more important when dealing with the SDH. This hallmark of practice for professional case managers is self-disciplined and self-guided reflection that weaves in objective consideration to the evidence (Elder & Paul, 2013; Facione & Gittens, 2013). A series of cognitive processes guide is involved:

1. Suspend judgment.
2. Deconstruct.
3. Reflect.
4. Synthesize. (Treiger & Fink-Samnick, 2016)

Careful implementation of each step promotes a case manager's ability to approach the inherent complexity that accompanies most client situations. Further elaboration of the steps involved in critical thinking for professional case managers can be found in Figure 4.

Critical thinking has long been considered the switch to trigger the mental calisthenics required to engage the case management process (Treiger & Fink-Samnick, 2016, p. 106). The seven steps of this process serve as the touchstone of a case manager's intervention, particularly with complex client populations:

1. Client identification/selection.
2. Assessment and problem identification.
3. Development of a case management plan.
4. Implementation and coordination of care.
5. Evaluation of the case management plan and follow-up.
6. Termination of the case management relationship.
7. Follow-up postdischarge/transition from the health care encounter. (Tahan, 2017)

## The Model

The Comprehensive Case Management Path (CCMP) is a template for case managers to guide and inform their work with clients at risk for the SDH. The Path merges the steps of two foundational processing models developed for professional case managers, Critical Thinking for Professional Case Management, and the Case Management Process. The united product provides case managers an objective and client-centric approach to care. Figure 5 shows a graphic rendering of the Case Management Process, with the CCMP presented in Figure 6.

Adherence to the established resources of accountability guides case management success, especially in work with the complex populations impacted by the SDH. There is intricate attention to planning, monitoring, advocacy, and completion of outcomes amid practice that is legal and ethical and reflects cultural competence (Case Management Society of America, 2016). Aligning practice standards with case management–specific tools and processes provides the most intentional means for case managers to deal with the distinct dimensions of the SDH. The strategic vision for professional case managers reinforces the value of case management expertise; recognized

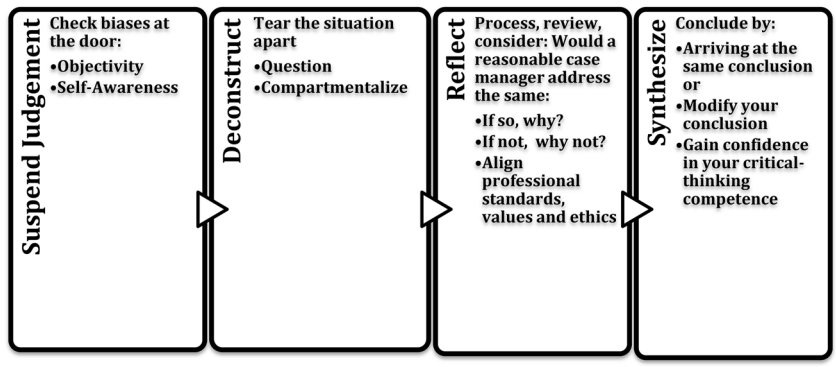


**FIGURE 4**
Critical thinking for professional case management. From Treiger and Fink-Samnick (2016).

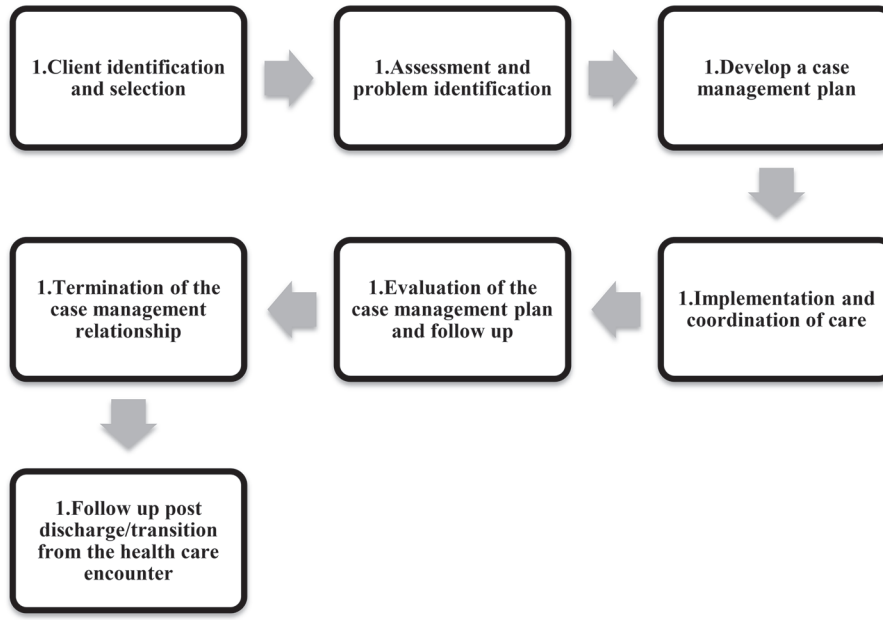


**FIGURE 5**
The Case Management Process. From Tahan (2017).

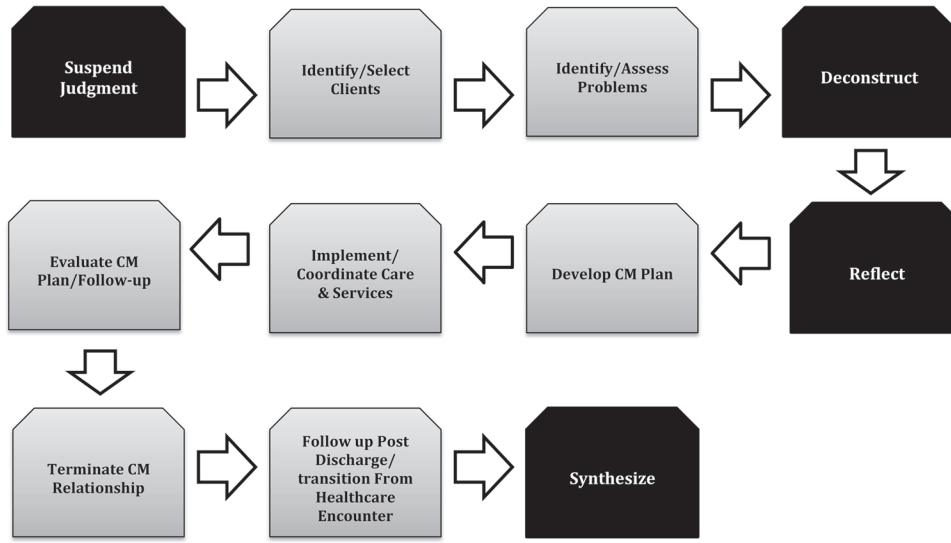


**FIGURE 6**
The Comprehensive Case Management Path.

experts and vital participants in the care coordination team who empower people to understand and access quality, safe, and efficient health care services. (Case Management Society of America, 2016, p. 5).

A case scenario is provided for consideration in Box 4, with application in Table 3.

## Moving Forward

A case manager's populations and practice are fluid. In the scope of the SDH, more change is on the horizon as the evolution of assessment, program development, and reimbursement methods all continue. I have joked for years about the needed parts for my crystal

*A case manager's populations and practice are fluid. In the scope of the SDH, more change is on the horizon as the evolution of assessment, program development, and reimbursement methods all continue.*

## BOX 4
### Comprehensive Case Management Path Case Scenario

Dana is the new case manager for the Population Health initiative at Mason Ambulatory Care Clinic. As the outpatient community satellite program for a safety-net hospital, Dana's caseload includes clients who have a medical diagnosis, potentially co-occurring behavioral health concerns, and psychosocial stressors. All clients served by the program reside in one of four specific zip codes; high SDH regions.

Chris is a 19-year-old man with a history of asthma. Recently discharged from the hospital on inhalers, Chris had a part-time job selling computers and lived in a room with friends near Northern Florida Community College. He was attending night classes for his associate's degree in computer science.

Chris explains to Dana, "The owner of the store said he'd keep me, but there was a fire in the building. He didn't have insurance and had to close the store; he laid everyone off. Now I have no job, no health insurance, can't afford school, plus don't know where I'll live. It's too much to handle. My dad was gonna take me in, but that plan went south. I'd rather live on the street than go to the shelter."

Jackson is Chris's father. He originally planned to let Chris stay in his apartment until he was on his feet but changed his mind. "I've got my own issues; My heart isn't so good, plus I don't eat great. Chris's mother died last year, and I went back to the bottle. Chris doesn't need to be see me drown my sorrows, if ya know what I mean." Dana's head is spinning.

Chris shared with Dana he is depressed. "Oh, I thought of killing myself, but won't do anything like that. Besides, I'd have done it already if I really meant to. We must have a family curse; I want to break my family mold, and get my degree. My dad was a mechanic but his drinking messed him up. I'm good at fixing computers and need to get back to school.… I don't want to end up like my dad. I know he's sick too. If he dies then I'll really have nobody." Chris says.

By the time Dana finishes with Chris, she is overwhelmed. She is concerned not only for him but knows Jackson needs support, "Why do these clients all have such sob stories; how do I untangle this mess? Why did I take this job again????"

## TABLE 3
### Comprehensive Case Management Application

| Step | Application |
|---|---|
| Suspend judgment | Dana stops to consider her bias. She recognizes that she must get in an objective place to assess Chris individually, then develop a solid assessment and plan. |
| Identify/select clients | Dana identifies that Jackson should be referred for his own case management intervention. His health and wellness are directly connected to Chris's recovery. |
| Identify/assess problems | Dana reviews her CMSA Standards of Practice (2016) and finds guidance in Standard B: Assessment. She works through a client assessment including the components of:<br>a. Medical<br>b. Cognitive and behavioral<br>c. Social<br>d. Functional |
| Deconstruct | Dana reviews her assessment and areas for focus: safety and risk, medical, behavioral health, housing, and finances. She is concerned about Chris's depression and starts to complete a PHQ-9 Depression Screen. She begins to explore potential community resources (e.g., housing, Medicaid) but becomes overwhelmed. |
| Reflect | Dana reaches out to Mel, a colleague at the Mason Clinic, who manages clients with cardiac disease. With a high incidence of substance use for his population, Mel identifies that Jackson would benefit from linkage with the clinic. He also has a lead on a new housing/rent support initiative through a local church partnership. Chris could be eligible if he re-enrolls in classes at NFCC. |
| | Mel validates Dana's plan, plus provides further resources for her to discuss with Chris including the housing assistance initiative, a reduced tuition program for NFCC, and a pharmacy collaboration. They also discuss how to enroll Jackson in the cardiac clinic. |
| Develop CM plan | Dana is more confident to move forward with her plan. |
| Implement, coordinate care, and services | Dana ensures that the appropriate referrals are in place for Chris's medical follow-up and behavioral health counseling. She finds out that there is a counseling department at NFCC that Chris can access. She also has the information to share with Jackson, ultimately referring him directly to Mel. |
| Evaluate CM plan and follow-up | After 6 months, Chris and Jackson are doing better. Chris is engaged in therapy, enrolled in two classes at NFCC, and renting a room in a house nearby. He is viewed as the "big brother" for the other residents. |
| | Jackson actively follows up at the clinic. His congestive heart failure is under control, and he is being case managed by Mel. He attends a weekly support group at the clinic for clients with a comorbid substance use and health issues. He also volunteers at a nearby library, reading to children after school. |
| | Jackson has invited Chris to move back home. |
| Terminate CM relationship | Dana terminates her CM relationship with Chris. |
| Follow-up postdischarge/transition from health care encounter | Dana follows up with Chris 1 month later and all continues to go well. He had one hospitalization for asthma exacerbation in the past 3 months, which he claims was related to final examinations. "I forgot to pick up the renewal, won't do that again." He was trialed on a new medication and that is working well. Chris has gotten As in his three classes and registered for two more the following semester. He is back on track with his computer science degree. |
| | Jackson now works at the library. Chris has dinner with his father twice a week, though decided to stay in his own apartment. |
| Synthesize | Dana reflects on her interaction with Chris and Jackson. The overwhelming situation became manageable through strategic case management action. |

*Note.* CM = case management; NFCC = Northern Florida Community College; PHQ-9 = Patient Health Questionnaire-9.

ball and magic wand being on back order, yet those tools have never been more crucial than they are right now. The populations that require professional case management are among the most complex to date. At the end of the day, case managers are accountable for their practice. Use of strategic templates specifically designed for the workforce can ease the frustration that comes from managing the moving pieces of the SDH, enhancing the outcomes for all.

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