

Managing the Social Determinants of Health: Part I

Fundamental Knowledge for Professional Case Management

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ABSTRACT

Objectives: *This article will:*

1. Define the social determinants of health (SDH)
2. Provide industry evidence on the SDH from a population health perspective
3. Discuss current sociopolitical drivers to impact the progression of SDH
4. Discuss career implications for the professional case management workforce

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

Finding/Conclusion: The SDH pose major challenges to the health care workforce in terms of effective resource provision, health and behavioral health treatment planning plus adherence, and overall coordination of care. Obstacles and variances to needed interventions easily lead to less than optimal outcomes for case managers and their health care organizations. Possessing sound knowledge and clear understanding of each SDH, the historical perspectives, main theories, and integral dynamics, as well as creative resource solutions, all support a higher level of intentional and effective professional case management practice.

Implications for Case Management Practice: Those persons and communities impacted most by the SDH comprise every case management practice setting. These clients can be among the most vulnerable and disenfranchised members of society, which can easily engender biases on the part of the interprofessional workforce. They are also among the costliest to care for with 50% of costs for only 5% of the population. Critical attention to knowledge about managing the SDH leverages and informs case management practice, evolves more effective programming, and enhances operational outcomes across practice settings.

Key words: *epidemiology, food insecurity, health disparities, intermediary determinants, oppression, population health management, power, professional case management, public health, social determinants of health, structural determinants*

The current literature has recognized the social determinants of health (SDH) as a major factor to precipitate care disparities, impacting clients across both physical and behavioral health domains. They invoke stress, promote a sense of vulnerability, and make clients feel worried, anxious, and more susceptible to health challenges, if not premature death (Wilkinson & Marmot, 2003). The impact for professional case management is profound, with emphasis on prime areas of practice; population health, medication and treatment adherence, readmission rates, and overall costs of care (Commins, 2016; Davis, 2016; Hu & Nerenz, 2014; Marmot & Wilkinson, 2006; Norton et al., 2016; Rice, 2016). These clients are among the most at-risk members of society and routinely present as the most complex for

case managers to engage and intervene with. Obstacles manifest with respect to care coordination and treatment adherence and ultimately contribute to less than optimal outcomes for health care organizations.

This article is the first of a two-part series on a topic of paramount importance to all members of the interprofessional care team, especially case managers. Part I will provide foundational knowledge specific to the SDH including key terms, definitions, theories,

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and associated constructs. An exhaustive review of the evidence from a population health management perspective will be provided, along with discussion of major sociopolitical drivers. Successful programs and resources to employ in practice will also be presented, with career implications for the professional case management workforce.

FOUNDATIONAL THEORIES AND CONSTRUCTS

Definition

The World Health Organization (2017) defines the SDH as those conditions in which people are born, grow, live, work, and age. These conditions are viewed as responsible for health disparities; the unfair and avoidable differences in health status that exist within and between countries and their populations. They occur across dimensions of functioning (e.g., social, economic, and physical) and various environments and settings (e.g., schools, places of employment, religious centers, and neighborhoods) and affect the health, behavioral health, and general quality of life of populations (HealthyPeople.gov, 2017; World Health Organization, 2017).

The availability of, and access to, any of the following resources results in higher susceptibility to physical and mental illness, including

- affordable housing
- access to education
- public safety
- availability of healthy foods
- local emergency/health services, and
- environments free of contaminated natural resources and/or life-threatening toxins (e.g., lead, waste). (HealthyPeople.gov, 2017)

Although several distinct models to depict the SDH occur across the literature, most pose five or six common domains, as shown in Table 1. A deeper level of presentation of each SDH domain with its respective scope appears in Figure 1.

Historical Perspectives and Theories

The theoretical explanations of SDH and the social inequalities in disease stem from epidemiology, the

branch of medicine dealing with the incidence, distribution, and possible control of diseases and other factors related to health (Krieger, 2005; Marmot & Wilkinson, 2006; Oxford Dictionaries, 2017; Raphael, 2006; Wilkinson & Marmot, 2003). Use of the term “social determinants of health” is attributed to Sir Michael Marmot in the 1970s. A prominent epidemiologist, Marmot did extensive research exploring the impact of the vast inequalities of money, power, and resources on health care (Allen, 2017). He viewed every sector of society as a health sector, ultimately looking to address the social policies as a means to enhance the overall human condition. Data of the late 20th century yielded a firm connection that addressed the pivotal impact of poor social and economic circumstances on health, demonstrating the sensitivity of health to the social environment. In essence, poorer people from populations around the globe lived shorter lives and were more often ill than those who possessed more financial wealth (Wilkinson & Marmot, 2003). Research further concluded that the longer people lived in stressful economic and social circumstances, the greater the psychological wear and tear on them would be, ultimately impacting their mortality. Wilkinson and Marmot (1998) posed a twofold premise in the first edition of their book, *Social Determinants of Health: The Solid Facts*.

1. Life contains a series of critical transitions: emotional and material changes in early childhood, the move from primary to secondary education, starting work, leaving home and starting a family, changing jobs and facing redundancy, and retirement. Each change can affect health by pushing people onto a more or less disadvantaged path.
2. Good health involves (if not relies on) reducing levels of education failure, reducing insecurity and unemployment, and improving housing standards.

Emphasis was placed on the critical need for populations to have strong health policies, programs, and resources to empower persons to achieve the highest levels of functionality in all aspects of their life. “Societies that enable all citizens to play a full and useful role in the social, economic, and cultural life of their society will be healthier than those where

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TABLE 1**Social Determinants of Health Comparisons^a**

Robert Wood Johnson Foundation	Healthy People 2020	Kaiser Family Foundation
Medical Care	Health and Health Care	Health Care System
Environmental and Physical Influences	Neighborhood and Built Environment	Neighborhood and Physical Environment
Social Circumstances	Social and Community Context	Community and Social Context
Behavior	Education	Education
Genetics	Economic Stability	Economic Stability
		Food

^aAdapted from HealthyPeople.gov (2017); Health Affairs/Robert Wood Johnson Foundation (2014); and Heiman and Artiga (2015).

people face insecurity, exclusion, and deprivation” (Wilkinson & Marmot, 2003, p. 12).

Through their seminal work of the same name, Wilkinson and Marmot identified 10 “solid facts” to consider toward understanding the SDH as presented in Figure 2. The authors’ intent was to set a strong tone in recommending why social policies should be addressed in any sector of society and across all levels of operation (e.g., government, public and private institutions, workplaces, and the community). It was recommended that a wider responsibility for addressing the SDH was mandatory to create healthy societies (Wilkinson & Marmot, 2003). Aligning seminal data with each fact area provided a clear depiction of the main problems for society, plus the essential policy implications for attention.

Ongoing work by experts contributed to a robust body of knowledge that encompassed the etiology and scope of the SDH (Cassel, 1976; Krieger, 2005; Raphael, 2006; Solar & Irwin, 2010). It was revealed that diverse social, economic, and political factors contributed individually and collectively to the advancement of the SDH across populations, with three theoretical areas setting the stage for understanding the topic:

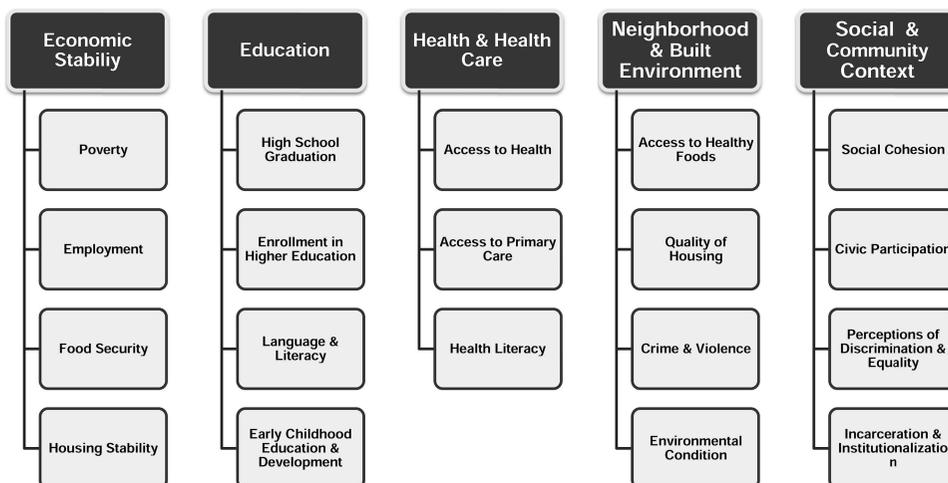
1. Psychosocial approaches
2. Social production of disease/political economy of health
3. Ecosocial theory

Table 2 provides a brief explanation of each theoretical area.

Three additional conceptual frameworks on SDH provide yet another layer of foundational knowledge for case managers to know. Each framework involves a unique perspective in ascertaining how social pathways and the SDH impact health outcomes for populations as shown in Table 3. The three frameworks are:

1. social selection
2. social causation
3. life course perspective. (Solar & Irwin, 2010)

There is no industry consensus on which of the above three frameworks most influences the SDH. However, amid the diverse views is one constant; a person’s socioeconomic position in the social hierarchy ultimately shapes his or her overall determinants of health status (Solar & Irwin, 2010). For example, any illness alone can be exacerbated by a person’s socioeconomic position alone. Communities with

**FIGURE 1**

Social determinants of health expanded. Adapted from HealthyPeople.gov, 2017.



FIGURE 2
The Solid Facts perspective. Adapted from Wilkinson and Marmot (2003).

high levels of unemployment and reduced economic opportunities see decreased access to health insurance with inappropriate physical and behavioral health care. These occurrences lead to the rampant spread of illness across communities and their populations (Davis, 2016; Robert Wood Johnson Foundation, 2016; Solar & Irwin, 2010).

Key Constructs

The effects of SDH on individuals and their communities involve a mutually dependent weave of social, political, and economic forces. The labor market, educational system, political institutions, and other cultural and societal values are included in this listing (Solar & Irwin, 2010). Two particular constructs, structural and intermediary determinants, provide an understanding of the interplay of influences that traditionally influence both incidence and prevalence of SDH.

Structural determinants refer to the sociopolitical contexts that tend to reinforce social stratification in society. These determinants guide an individual's access to multiple resources within a society's distinct hierarchy of power and/or prestige (e.g., income,

education, occupation, social class, gender, and race/ethnicity). Structural determinants include the macro or larger scale factors of each society, such as governance and economics, social and public policies, as well as any unique cultural values and social mores. These factors also encourage the division of society into levels according to social strata.

Intermediary determinants not only shape how individual health choices are made but also explore the impact of key dynamics on those choices and the respective outcomes. Each dynamic included among the intermediary determinants denotes the susceptibility of an individual or population to a potentially health-compromising condition. Included dynamics are

- material circumstances (e.g., quality/quantity of food clothing, shelter)
- behavioral and biological dynamics (e.g., chronic physical health conditions, mental illness),
- psychosocial dynamics (e.g., amount of debt, employment status, health literacy), and
- the health system itself (e.g., access to care, quality of care).

The causal relationship between structural and intermediary determinants is displayed in Figure 3. It has been defined across a variety of disease states, among them women and children's health, mental health, plus infant mortality (Bryant, Hess, and Bowen, 2015; Dolatian et al., 2014; Guinto, 2012; Rajda & George, 2009; Solar & Irwin, 2010).

Power is a primary driver of the structural and intermediary determinants that ultimately influence SDH development. Power is the ability or right to control people or things, if not a population's ability to alter their course (Bryant, Hess & Bowen, 2015; Merriam-Webster, 2017; Solar & Irwin, 2010). Although mentioned as a component of the structural determinants, power is equally intertwined within each of the theoretical approaches used to ground the SDH. It serves as a key factor, especially

TABLE 2
Contemporary Theories to Explain Disease Distribution^a

Theory	Explanation
Psychosocial theory	Living in social settings of inequality forces people to constantly compare their status, possessions, and life circumstances with each other. This comparison engenders both feelings of shame and worthlessness for those who are disadvantaged, plus chronic stress that serves to undermine health.
Social production of disease/ political economy of health	The links between income inequality and health are driven by structural causes of inequalities. Economic processes and political decisions shape the private resources available to persons and the public infrastructure (e.g., education, health services, transportation, environmental controls, food availability, housing quality). Power and resource differentials across society contribute to increased vulnerability to illness and poor health.
Ecosocial theory	A multilevel perspective of disease distribution. Integrates social and biological factors with dynamic, historical, and ecological perspectives to address population distributions of disease and social inequalities in health.

^aAdapted from Cassell (1976); Krieger (2005); Raphael (2006); and Solar and Irwin (2010).

TABLE 3**Foundational Frameworks of the Social Determinants of Health^a**

Social selection	Health determines socioeconomic position
Social causation	Psychosocial factors and/or stressors (e.g., living circumstances, social support, poverty, health literacy) Behavioral factors (e.g., smoking, diet, substance use, adherence to physical and/or behavioral health treatment) The health system itself (e.g., access to care, program, and service options)
Life course	Recognizes how SDH operate at each life transition stage of human development (e.g., infancy, early childhood, childhood, adolescence, adulthood) How SDH provide the basis for health or illness later in life

Note. SDH = social determinants of health.

^aAdapted from Solar and Irwin (2010).

in that theoretical approach that focuses on the social production of disease/political economy of health.

Power aligns with oppression; another concept commonly associated with the vulnerable and disenfranchised populations impacted by the SDH (Luttrell, Quiroz, Scrutton, & Bird, 2007; McGibbon, 2012). Oppression is the use of institutional privilege and power and is reinforced by the biases that often present in a society. It reflects a relationship of dominance, systematic mistreatment, exploitation, and lowering in status of a group (or groups) of people by another group (or groups; Crossman, 2017). Experts have identified that any serious effort to reduce health inequities must involve addressing the distribution of power in society, while also managing the presence of oppression (Luttrell et al., 2007; McGibbon, 2012).

EVIDENCE ACROSS POPULATIONS

The literature offers significant evidence-based validation of the impact of SDH on the overall fabric of population health management. For the purposes of this article, population health management refers to the health outcomes (e.g., mortality, morbidity, quality of life) and their distribution within a population, the health determinants (e.g., medical care,

socioeconomic status [SES], genetics, public health) that influence this distribution and the policies and interventions, both social and individual that impact these determinants (Nash, 2008). Much of the validation is related to data from prevention programs funded through the Affordable Care Act (ACA) and related Medicaid expansion. Although the future of the ACA remains uncertain, it provided the impetus for abundant research demonstrating the strong connections between SDH and health outcomes of distinct populations. These outcomes impact program development, evaluation, and subsequent administrative planning across practice settings, and the industry overall (Garfield & Damico, 2016).

General Evidence

It has long been established that social and behavioral factors directly affect the physical health, both physical and psychosocial development, and overall longevity of human beings. Studies show race-related disparities in the prevalence of provisions and need for diabetes education in African American patients (Hooks-Anderson, Crannage, Salas, & Scherrer, 2015). Obesity has been identified as the second leading cause of preventable death in the United States, with both structural and intermediary determinants impacting mortality and cited across the literature (World Health Organization, 2016).

When reviewing risk factors that contribute to premature death, the numbers are compelling and speak directly to the impact of SDH. Clinical care is responsible for a surprisingly limited percentage of deaths; as little as 10% of the total. The majority percentage (40%) are due to individual behavioral factors (e.g., treatment adherence, acceptance of the need for treatment). Although 30% of the deaths are associated with individual genetics and genetic predisposition to illness, 20% are related to social and environmental factors (Schroeder, 2007). A graphic rendering of these data appears in Figure 4.

Even the latest generation of care providers have collected evidence to affirm the challenges in managing their populations, all impacted by SDH. One recent study of 19 fully integrated Accountable Care

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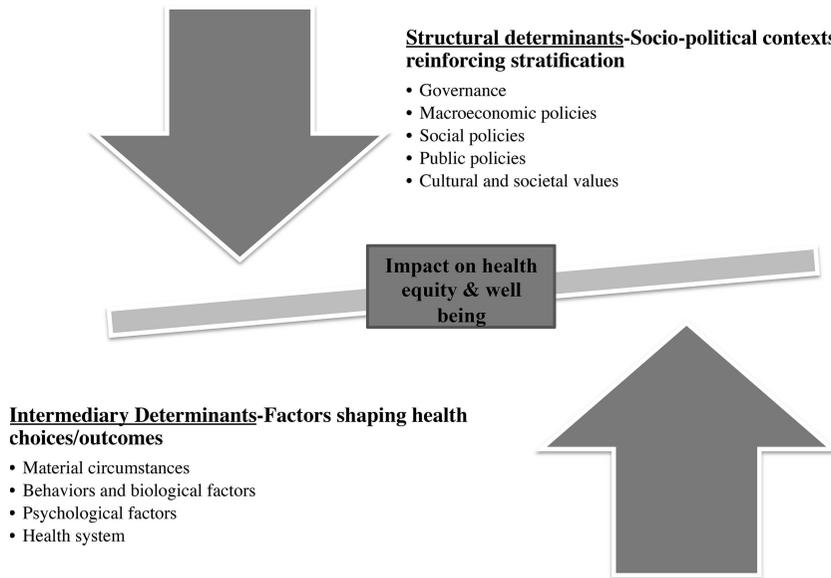


FIGURE 3

Structural and intermediary determinants. Adapted from Bryant, Hess, and Bowen (2015); Guinto (2012); Rajda and George (2009), and Solar and Irwin (2010).

Organizations (ACOs) reported gross challenges in managing the health outcomes for their communities. Sixty-eight percent reported having inadequate resources to improve the health of those who resided within their communities served, including

- inadequate funding for staffing and/or services;
- data interoperability challenges (e.g., technology that was out of date, not as expansive as needed); and

- payer pressures, with subsequent funding and reimbursement issues. (Anctil, 2017)

Persons With Disabilities

Persons living with disabilities are known to experience disparities in behavioral health risk factors, including smoking and obesity. Current data point to a linkage between race, ethnicity, and income and education with respect to disability. Smoking prevalence increases with decreased levels of education and income across most racial and ethnic groups. Health inequities experienced by adults with disabilities are further compounded by differences across race, ethnicity, and socioeconomic factors (Courtney-Long, Romano, Carroll, & Fox, 2016).

Those individuals who become disabled as adults are particularly at risk. Whether the disability at issue results from illness or injury, research points to how these persons have to deal with a multidimensional effect on both quality and quantity of life. Family support can be impacted as interactions become hampered. A loss or distancing of key relationships (e.g., peers, marital partners, parents, children) may occur as those involved struggle with understanding and coping with factors such as changes in a person's personality, aggression, and potentially both destructive and self-destructive behaviors. Isolation occurs for the adult where that individual may be left to his or her own devices to address recommended follow-up care. Communication and cognitive deficits impact receipt of proper treatment, short- and long-term recovery,

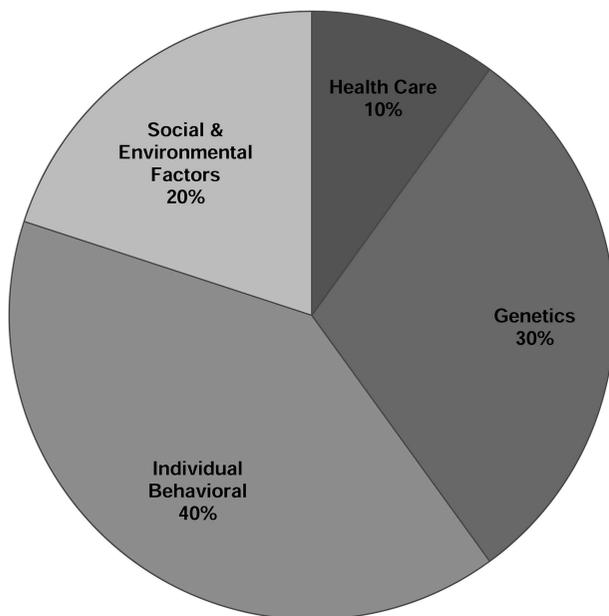


FIGURE 4

Impact of different factors on risk of premature death. Data from Schroeder (2007).

and overall rehabilitation potential (Frier, Barnett, Devine, & Barker, 2016).

Socioeconomic Status

Socioeconomic status is a significant factor recognized to impact both health and behavioral health outcomes. The inverse association between socioeconomic level and the risk of disease is one of the most prevalent observations in public health (Deaton, 2002; Mulali & Oyebo, 2004). Men in the United States with family incomes in the top 5% of the distribution lived roughly 25% longer than those in the bottom 5% (Deaton, 2002). Both structural and intermediary determinants drive socioeconomic attainment, as a result impacting the mortality of those persons who live with assorted chronic illnesses including diabetes, obesity, and renal and heart diseases (Hooks-Anderson et al., 2015; Osorio, Bolance, & Madise, 2014; Patel, Pietta, Resnicow, Kowalski-Dobson, & Heisler, 2016; So, Methven, Hair, Jardine, & MacGregor, 2015).

Socioeconomic status has also been identified as a significant factor in chronic kidney disease prevalence (So et al., 2015). Mortality and morbidity rates are inversely related to many correlates of SES, including income, wealth, education, and/or social class (Deaton, 2002). A meta-analysis of close to 50 studies showed that social factors (e.g., education, racial segregation, social supports, poverty) accounted for more than 30% of the total deaths in the United States in a single year (Bernazzani, 2016). Despite this fact, US health policy has largely ignored these factors in establishing sound policies and a budget to address the SDH adequately, with ultimate consequences to societal functioning (Adler et al., 2016; Wilkinson & Marmot, 2003).

Whether assessed by income, education, or occupation, data have linked SES to a wide range of health problems inclusive of low birth weight, heart disease, hypertension, arthritis, diabetes, and cancer (Adler et al., 2016; Adler & Newman, 2002; Nagasako, Waterman, & Dunagan, 2014; Norton et al., 2016). Community-based intervention programs for communities with a low SES have been found to reduce health-based inequities globally, greatly impacting children's health (Osorio et al., 2014; So et al., 2015). Lower SES is association with higher mortality, with especially large disparities occurring in middle adulthood. Those persons who live in lower SES communities are often more readily exposed to toxic environmental factors. These factors contribute greatly to exacerbated disease onset and progression (Adler & Newman, 2002; HealthyPeople.gov; 2017; Williams, Priest, & Anderson, 2016). Despite the intense industry focus on the value of technology use by

stakeholders toward prevention and wellness, it has been identified that SES plays a far larger role in adequate control of blood pressure than use of electronic health records and patient portals (Hall, 2016).

Education and Health Literacy

Education attainment and health literacy have been shown to impact accessing health care and preventive services, understanding diagnoses and treatment regimens, plus overall mortality for older adults and other distinct populations (Ferguson & Pawlak, 2011; Rajda & George, 2009). Both employment and income influence how knowledge and health literacy skills can be used to mitigate adverse social determinants (Rowlands, Shaw, Jaswal, Smith, & Harpman, 2017). Case managers face situations to reflect these area of focus on a daily basis. Contemplate working with a client who strives to maneuver barriers to care, such as lengthy waiting lists for specialists, clinic visits, and/or follow-up appointments. These barriers become even more challenging when the client lacks the appropriate level of education and/or health literacy to understand, if not also process how to resolve the dilemma. These occurrences are further compounded by a profound sense of urgency, such as insufficient medication to last until the next appointment, if not also a rapidly exacerbating medical condition, whether diabetes, asthma, and congestive heart failure. Families often work to juggle conflicting, and complex appointment schedules (e.g., appointments at the same time in different locations, those with different providers, for different family members). When education level and health literacy impact how a parent understands the directions provided or the importance of each appointment, care is compromised.

Low health literacy has been attributed to increased rates of chronic disease and subsequent hospitalizations. Lack of trust for primary care providers has also been identified for populations more prone to the SDH (Herman, Young, Espita, Fu, & Farshidi, 2009). Health disparity patterns tend to parallel rates of limited health literacy (Heiman & Artiga, 2015;

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Volandes & Paasche-Orlow, 2007). Individuals, as well as their involved caregivers may lack knowledge of basic signs and symptoms of disease and necessary treatment plans, thus experiencing delays in evaluation and treatment (Ferguson & Pawlak, 2011).

Race

Although neither race nor ethnicity means automatic inclusion in SDH populations, both areas are actively cited in the literature when exploring health care inequities and outcomes (Hooks-Anderson et al., 2015; Holdt Somer, Sinkey, & Bryant, 2017; Kilpatrick & Ecker, 2016). Race presents as a significant factor in the prevalence of both provision and need for diabetes education in African American patients (Hooks-Anderson et al., 2015). One study evaluated almost 4,000 patients, 14–89 years of age, finding a significantly higher incidence of the need for more direct coaching and intervention to guide nutrition, lifestyle, and medication management.

By the numbers, maternal mortality has a relatively low occurrence—approximately 23.8 per 100,000 live births. However, racial disparities have been identified in a high percentage of the presenting cases, particularly when comparing non-Hispanic Black women with Whites, both in the United States and internationally (Kilpatrick & Ecker, 2016). Although etiology related to cardiovascular, cerebrovascular, and pulmonary disease was identified, all diagnoses had increased mortality among women who were of African American, Hispanic, American Indian, and/or Asian/Pacific Islander descent (Holdt et al., 2017).

A wide variation in death rates across the racial divide has also been identified for specific diseases including colorectal cancer, cardiovascular disease, diabetes, and obesity (Ayanian, 2015; Rice, 2016). With cardiovascular disease, the leading cause of death of women in the United States, the mortality rate is far higher for non-Hispanic Black women—as high as 46.5 % (Beckie, 2017). Studies have aligned multiple correlates of both race and ethnicity in hypertension management including

- psychosocial and demographic characteristics of individuals;
- clinical characteristics of the treatment regimen (e.g., more or less aggressive treatment, fewer or less effective medications);
- the health care context in which the individuals live (e.g., access to and quality of care);
- characteristics of local environmental factors (e.g., neighborhood poverty, crime rates, availability of healthy food, racial isolation); and
- community characteristics (e.g., racial segregation, community-level education, income and employment

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opportunities, and overall neighborhood safety). (Beckie, 2017; Finkelstein, Khavjou, Mobely, Haney, & Will, 2004; Lopez-Jimenez & Lavie, 2014).

Mental Health

The direct relationship between poverty and the high rate of behavioral health incidence has long been identified in the literature. Minority health and mental health have been aligned through exhaustive research, programs, and initiatives. Those clients who are members of racial and ethnic minority groups in the United States are less likely to have access to mental health services. They are more likely to obtain needed care from community mental health services, if not emergency rooms. They more frequently warrant hospitalizations, plus have been identified to often receive lower quality care. Symptom onset and acuity of each mental health episode have also been identified to be profoundly worse for this population (Alegría et al., 2008; National Institute of Mental Health, 2016; Samnaliev, McGovern, & Clark, 2009; Wang et al., 2005). Mental health practitioners are aware of how mental illnesses are driven by social factors, with zip codes often better indicators of overall physical and mental health than an individual's genetic code (Boachie, 2017).

Psychiatric conditions occur at higher rates in the poorest areas but often cluster together in disintegrating inner city communities (Murali & Oyebode, 2004). More common mental disorders (e.g., depression and anxiety) often appear over a gradient of economic disadvantage across social strata. For youth 10–15 years of age who reside in disadvantaged regions, the manifestation and occurrence of depressed mood or anxiety were 2.5 times higher. Other studies reveal how self-ratings of poor or fair mental health increased in the lowest income level of particular communities but remained relatively stable for those in the highest income level: the incidence in the lowest income level (14.5%) more than five times higher than that in the higher level (2.8%; Boachie, 2017). Epidemiological literature on mental health and poverty in low- and

middle-income countries across the globe shows a similar trend, with a positive association between poverty measures and common mental illness in roughly 70% of 115 studies (Boachie, 2017).

Employment status is another major SDH factor to explain the differences in prevalence rates of psychiatric disorders for adults. Unemployment was found to increase the odds ratio of psychiatric diagnosis when compared with a reference group. Drug and substance use dependence quadrupled for those out of work, as well as doubled the odds of depression, generalized anxiety disorder, and obsessive compulsive disorder (Murali and Oyebode, 2004). An especially high incidence for both suicide and overdoses from cocaine and opiates was equally linked to SES (Crawford and Prince, 1999; Marzuk, Tardiff, & Leon, 1997).

Social Isolation

Social factors, inclusive of education, race, social supports, and poverty, account for more than 30% of total deaths in the United States annually (Galea, Tracy, Hoggatt, DiMaggio, & Karpati, 2011). Care quality and access are suboptimal, particularly for minorities and those of lower socioeconomic groups (National Institute of Mental Health, 2016). The absence of social relationships has been directly linked to mortality, with immune function and cardiovascular status particularly at issue for those individuals who lack support in their lives, whether of a social or resource nature (Cheng, 2012; Eng, Rimm, Fitzmaurice & Kawachi, 2002). As much as a 20-year differential in life expectancy has been reported between the most and least advantaged people in the United States, reflecting vast social inequities and grossly different life experiences across assorted socioeconomic groups (Cheng, 2012).

Concerns around increasing numbers of those with Alzheimer's disease are directly related to social factors. A 2-year study looked at 1,260 at-risk adults who were 69 years of age on average. The study accounted for factors such as access to care, healthy foods, the environment, and the amount of social engagement. Managing risk through interventions that addressed diet, exercise, as well as cognitive performance, and social interaction saw a 25% improvement among the control group (Sullivan, 2017).

Food Insecurity

Food insecurity has been identified as the most significant SDH, with many individuals having to choose between food and other health essentials (e.g., medication, health care supplies; Shrag, 2014). One in eight people in the United States struggles with

food insecurity—a situation of limited or uncertain availability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways (United States Department of Agriculture Economic Research Service, 2017). There is a general lack of access to sufficient food for all members of the household. It is caused by the continued prevalence of poverty, another profound SDH domain. More than 17.5 million households are food insecure, with more than 49 million persons struggling to put adequate food on the table (Coleman-Jensen, Gregory, & Singh, 2014; Feeding America, 2017a). Table 4 explains the levels of food security and insecurity established in the United States.

Eight states have statistically higher food insecurity rates than the US national average of 14.6 %, including

1. Arkansas: 21.2%;
2. Mississippi: 21.1%;
3. Texas: 18.0%;
4. Tennessee: 17.4%;
5. North Carolina: 17.3%;
6. Missouri: 16.9%;
7. Georgia: 16.6%; and
8. Ohio: 16%.

(Coleman-Jensen, Gregory, & Singh, 2014)

The topic of food insecurity extends far beyond the bounds of the United States. Globally, more than 795 million people are chronically undernourished (Food and Agriculture Organization of the United Nations, 2017a). Four indicators of food insecurity are regularly tracked by the Food and Agriculture Organization of the United Nations (2017b):

1. Availability
2. Access
3. Stability
4. Utilization

Food insecurity has also been associated with adverse outcomes for children and adults including higher rates of infection, chronic illness, and development and mental health issues (Seligman, Laraia, & Kushel, 2010; Weinreb et al., 2002; Whitaker, Phillips, & Orzol, 2006). The gross incidence and severity of food insecurity have been linked to higher rates of depression and anxiety in preschool children (Whitaker et al., 2006). More than 7 million adults

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TABLE 4
Ranges of Food Security and Insecurity^a

High food security	No reported indications of food access problems or limitations
Marginal food security	One or two reported indications—typically anxiety over food sufficiency or shortage of food in the house Little or no indication of changes in diets or food intake
Low food security	Reports of reduced quality, variety, or desirability of diet Little or no indication of reduced food intake
Very low food security	Reports of multiple indications of disrupted eating patterns and reduced food intake

^aAdapted from United States Department of Agriculture Economic Research Service (2017).

older than 60 years face the painful choice of rationing their food purchases due to fixed incomes, if not also poverty. This already vulnerable population is even more prone to illness (Feeding America, 2017a).

Those persons who reside in rural communities face significant challenges, such as being disposed to poverty, unemployment, lower education levels, and decreased access to quality health and behavioral health care. Fifty percent of counties with the highest rates of food insecurity are in rural areas, with 64% of those counties having the highest rate of child food insecurity in the United States (Feeding America, 2017b).

SOCIOPOLITICAL DRIVERS

Hospital Readmissions

The impact of hospital readmissions has long been on the radar of case managers employed across the health care industry. In 2009, the Centers for Medicare & Medicaid Services (CMS) began reporting hospital readmission rates on the Hospital Compare website. It was hoped that this action would serve as incentive for hospitals to pay more attention to coordinating care and implementing other strategies to reduce readmits (Health Affairs, 2013). Studies began to propagate the industry focusing on common conditions to warrant readmissions for assorted populations, with research released by the Agency for Healthcare Research and Quality shown in Box 1. Despite exhaustive data to advise practitioners of the rising cost and concern of readmissions, the problem continued.

Section 3025 of the ACA added a section to the Social Security Act, which established the Hospital Readmissions Reduction Program. The program required that for all discharges, beginning October 1, 2012, the CMS would reduce payments to inpatient prospective payment system hospitals that exceeded the readmission cap—up to a 3% decrease (Belliveau,

2016). Yet, penalizing hospitals for excessive readmissions, understanding the true etiology for those readmissions, and then developing long-term fixes were all different. Fines were issued to more than 2,600 hospitals in 2014 for excessive readmissions within the 30-day time period; yet, there were still far more readmissions than expected moving into 2015.

Readmission rates at Safety Net hospitals were found to be especially high. These primarily public and teaching institutions have traditionally served the largest proportion of low-income patients and those primarily impacted by the SDH (Reforming Health, 2014). On average, one in five Medicare patients discharged from a hospital is readmitted within 30 days—one of the largest cost drivers of medical care in the United States alone (Davis, 2016). These hospitals were also included in the Hospital Readmissions Reduction Program. A majority of hospitals in impoverished cities with the greatest income disparities, highest rates of unemployment, and poverty all received readmission penalties in 2014. Seventy-seven percent of the hospitals with the highest share of low-income patients were penalized for excessive readmissions as opposed to 36% of those facilities with the fewest poor patients (Reforming Health, 2014). Despite the presence of clear factors that

BOX 1

Studies of Conditions That Cause the Most Readmissions by Payer^a

Most common readmissions for Medicare patients: 55% of all readmissions and 58.2% of costs

1. Congestive heart failure, nonhypertensive
2. Septicemia, not including labor
3. Pneumonia, not including that caused by sexually transmitted infections or tuberculosis
4. Chronic obstructive pulmonary disease and bronchiectasis
5. Cardiac dysrhythmias

Most common readmissions for Medicaid patients: 20.6% of all readmissions and 18.4% of costs

1. Mood disorders
2. Schizophrenia and other psychotic disorders
3. Diabetes mellitus with complications
4. Complications of pregnancy, not including early or threatened labor
5. Alcohol-related disorders

Most common readmissions for privately insured patients: 18.6% of all readmissions and 19.6% of costs

1. Maintenance of chemotherapy or radiation
2. Mood disorders
3. Complications of surgical procedures
4. Complications of device, implant, or graft
5. Septicemia, except in labor

Most common readmissions for uninsured patients: 4.9% of all readmissions and 3.7% of costs

1. Mood disorders
2. Alcohol-related disorders
3. Diabetes mellitus with complications
4. Pancreatic disorders, not diabetes
5. Skin and subcutaneous tissue infections

^aData from Hines, Barrett, Jiang, and Steiner (2014).

Readmission rates at Safety Net hospitals were found to be especially high. These primarily public and teaching institutions have traditionally served the largest proportion of low income patients and those primarily impacted by the SDH Despite the presence of clear factors that predisposed the Safety Net Hospitals to often higher readmission rates, they were nonetheless responsible for the same value based penalties imposed on hospitals in communities with higher incomes and SES populations.

predisposed the Safety Net hospitals to often higher readmission rates, they were nonetheless responsible for the same value-based penalties imposed on hospitals in communities with higher incomes and SES populations.

Legislation efforts to equalize the playing field across Safety Net hospitals and other health systems were attempted in 2016, with H.R. 5273, the Helping Hospitals Improve Patient Care Act. The Act would have shifted how the value-based penalties for hospitals were determined, allowing for a comparison of facilities with similar Medicare and Medicaid patient populations (Rice, 2014). Although the legislation passed the House of Representatives, it has been stalled in the Senate since June of 2016 and subsequently was referred to the Committee on Finance (Belliveau, 2016). The current status of H.R. 5273 can be viewed at the Congressional Website (Congress.gov [2017]).

Greater efforts by hospitals and health care organizations needed to be placed on developing prevention programming that address the nonmedical, social service-oriented demands of their target populations. Understanding what diagnoses are most prone to admission has been insufficient information alone. Other factors found to impact readmissions:

- Patient diagnosis and severity of illness
- Patients' behavior (e.g., adherence to discharge instructions, treatments)
- Availability and quality of postdischarge care (e.g., access to care, delays in follow-up, out of

(to reduce hospital readmissions)... greater efforts by hospitals and health care organizations needed to be placed on developing prevention programming that address the non-medical, social service oriented demands of their target populations. Understanding what diagnoses are most prone to admission has been insufficient information alone.

network, and/or unanticipated copays/costs). (Health Affairs, 2013)

Studies show that cost-related nonadherence (e.g., financial stress, financial insecurity with health care, medications, food insecurity) has been prevalent among individuals diagnosed with chronic diseases (e.g., diabetes, heart disease, renal failure). As high as 50% of the adults with diabetes have experienced financial stress, with 20% noting financial insecurity specific to health care (Patel et al., 2016).

Intensified attention on SDH has resulted in considerable research on and data showing how socioeconomic factors (e.g., race and unemployment) impact readmission rates. Persons who reside in neighborhoods with a majority of their population at or below the poverty level are more likely to be readmitted to the hospital (Hu, Gonsahn, & Nerenz, 2014). Energies must be directed toward true prevention efforts that make measureable differences in the lives of patients and contribute to the sustainability of both health care systems and the populations they serve. Sending patients home with simply a discharge order is not enough.

High Care Costs

The United States ranks at the top of 34 nations in national spending on health care as a percentage of the gross domestic product, the best way to measure a country's economy as it refers to the total value of everything produced by all people and companies in a country (Amadeo, 2017). The US National Health Expenditure Data for 2016 (2017) shows annual health care spending as high as \$10,348 per person, or 17.9 % of the gross domestic product (Centers for Medicare & Medicare Services, 2017). A majority of other countries across the globe spend less than \$4,000. However, although the United States spends more on health care, it suffers poorer outcomes than other industrialized nations (Bradley & Taylor, 2015).

Any benefits that could be derived from expanded health care spending in the United States are ultimately undermined by the low investment in social services (Health Affairs/Robert Wood Johnson Foundation, 2014). The United States spends far less on social services than it does on health care (Bradley & Taylor, 2015; Heiman & Artiga, 2015).

Social determinants are why \$1.7 trillion is spent on 5% of patients

What ensues is a ripple effect for identified needs across the varied case management assessment dimensions (e.g., medical, functional, social, behavioral health; CMSA, 2016). Dealing with the large number of identified issues across dimensions for client populations becomes overwhelming for all on the front line of care delivery and intervention, especially case managers.

Eighty-six percent of current health care spending is related to chronic conditions, with the SDH having an impact on 60% of outcomes (Sullivan, 2017). One program alone in New Jersey spent more than \$2,800 a member monthly and reported little savings for its clients with diabetes, even with embedded social workers in the higher volume Medicaid practice. One major challenge involved a high percentage of clients who did not show for their appointments. One hospital in Texas reported that less than 50% of its adults are insured, with asthma rates for its region of south Dallas more than double the national average. Equally high illness rates present for those individuals with obesity, diabetes, high cholesterol, and mental illness. The SDH are intergenerational and deeply entrenched in the region (Sullivan, 2017).

Social determinants are why \$1.7 trillion is spent on 5% of patients (Sullivan, 2017). More than \$35 billion in excess health care costs, \$10 billion in illness-related lost productivity, and close to \$200 billion in premature deaths have been associated with the SDH (Davis, 2016; Patel et al., 2016). Hospital readmissions alone have a cost of more than \$26 billion annually and continue to be a major focus of attention across the industry (Davis, 2016). A single hospital spent \$871 million on uncompensated care in 1 year—more than one-half of the budget. Eighty-five percent of that particular facility's patient population is either uninsured or on Medicaid, with a high percentage who are homeless, unemployed, and experiencing some level of food insecurity. Most are high utilizers of services, getting their primary care and other needs (e.g., medication refills) from the emergency department, ambulatory clinics, or upon discharge from an emergent admission (Allen, 2017).

Technology

The rapid emergence and acceptance of technology within the health care industry have not consistently enhanced health care access across all populations.

Studies demonstrate the presence of both structural and intermediary determinants as factors to inhibit use of the latest innovation for many individuals predisposed to SDH. The research spans use of products from personalized health records and health care portals, mobile and desktop devices, and those for remote health (Einenkel, 2017; Gibbons, 2011; Hall, 2016; Manard, Scherrer, Salas, & Schneider, 2016).

As previously noted, race, gender, and SES play a larger role in controlling hypertension than whether or not a person uses a patient portal (Hall, 2016; Manard, Scherrer, Salas, & Schneider, 2016). In one study of more than 1,500 persons, only 18.2% of the lowest socioeconomic group and 19% of the lower-middle socioeconomic group actively used the portals to manage their health. Literature on health information technology use among health care providers identifies characteristics that disproportionately affect minority populations. One study found lower electronic health record adoption among providers of uninsured non-Hispanic Black patients than for the providers of privately insured non-Hispanic White patients (Gibbons, 2011). These findings evoke dramatic concern for the availability of health care documentation across the client's medical record, an issue with gross potential to further compromise care for populations already at risk. Another study completed by a large national managed care organization found significant disparities among enrollees across racial and ethnic groups. A variance existed in the rates of personal health record registration for African American members as opposed to those who were Caucasian (30.1% compared with 41.7%). Those persons with higher educational levels had greater registration for portals than those who had not progressed as far through school (2011).

National Internet use patterns across populations also demonstrate a digital disparity, with African Americans less likely than Whites to go online, have broadband use at home, or own desktop computers (51% vs. 65%). Foreign-born Latinos are also less likely than both US born Latinos and Whites to use the Internet (51% as opposed to 80%). These data points lead to concern by experts that access of the growing generation of consumer health information tools (e.g., electronic media and Internet-based resources used to research diseases and treatments, access general health information/support) by racial and ethnic minorities will reflect a parallel degree of digital disparity (Gibbons, 2011).

A decision in 2017 by the Federal Communications Commission (FCC) contributed to the removal of more than 70% of those persons with the lowest income off of their broadband plans (Einenkel, 2017). The FCC voted to scale back the federal Lifeline program that allows those at the poverty level

to use a \$9.25 monthly household subsidy to buy Internet or phone service. A revised spending cap was proposed that now prevents those who qualify for the subsidies from actually receiving them (Einenkel, 2017). The implications of this action have negative consequences for many. The decision is especially concerning, given society's reliance on technology to use health and behavioral health via personal and electronic health records, portals, and other modes that rely on Internet access.

Immigration

Social determinants of health and immigration are intertwined. Both have become important foci of public health and health practice, with each viewed as a major contest for health and public health professionals. The immigrant population in the United States for 2016 was at 84.3 million people, more than 27% of the US population (Zong & Batalova, 2017). On a global scale, some 244 million international migrants lived in a country other than where they were born—a 41% increase since the year 2000 (United Nations, 2017). Although a majority of immigrants are healthy, others endure tremendous hardship from the circumstances prompting their journey. Some suffer extreme trauma as a result of physical and mental abuse, such

as those forced to exit their homeland due to natural or man-made disasters, and/or victims of human trafficking (World Health Organization, 2010). These intense social and occupational factors impact the emotional reserve of immigrants and ultimately influence their health and health outcomes.

Independent of the cause, immigration poses major challenges for all persons, prompting a complete repositioning of their life. Considerable social, economic, and health issues present for individuals, families, and the communities they reside in, making this population especially vulnerable to both structural and intermediary determinants (Castaneda et al., 2015; Quesada, Arreola, Khoury, Organista, & Worby, 2014; Zong & Batalova, 2017). Immigrants are forced to cope with major life adjustments, triggering considerable stress that can easily put their immune systems at risk. These adjustments include a diverse range of issues to reconcile across the social, occupational, and behavioral health realms. These issues include but are not limited to the listing found in Figure 5. Experts view immigration as an element of SDH, particularly in the context of achieving positive changes in health outcomes (Castaneda et al., 2015; Quesada et al., 2014; United Nations, 2017; World Health Organization, 2010).

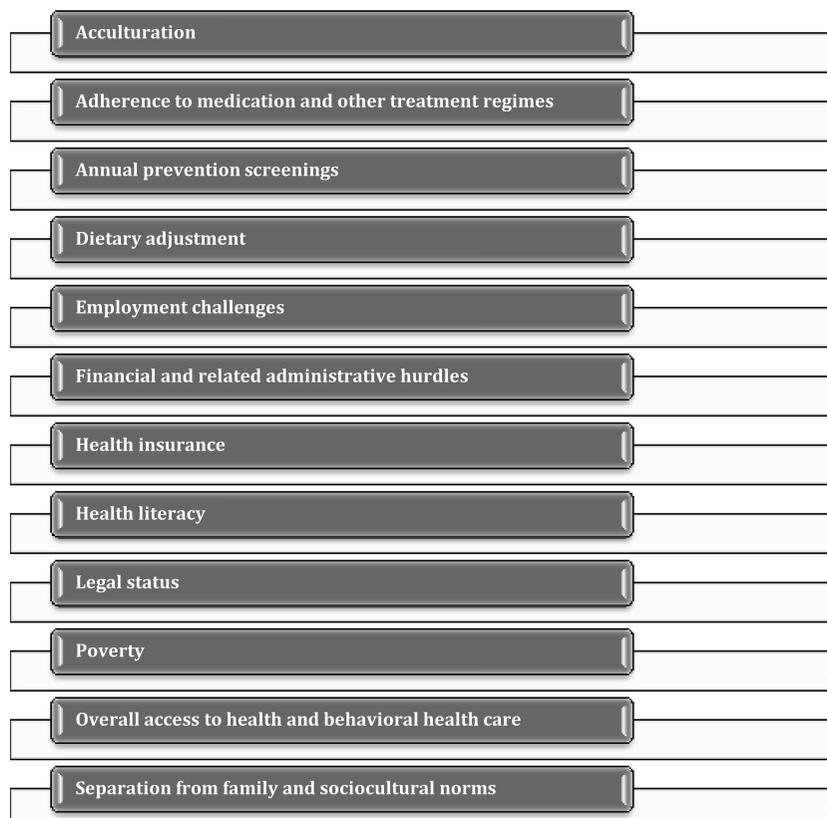


FIGURE 5
Immigration major life adjustments. Adapted from Zong and Batalova (2017).

SUCCESSFUL PROGRAM INITIATIVES AND RESOURCES

A common theme has emerged among the wide bandwidth of evidence-based publications, white papers, and reports completed on the SDH. Programs that provide a direct linkage with clients in their communities allow for the most tangible and sustainable impact to health outcomes. The presentation of several successful programs and valuable resources follows. An additional resource listing appears in Box 2.

Programs

The Camden Coalition

Started in 2002, the Camden Coalition is a consortium of hospitals, primary care providers, and community

representatives that merged to provide better health care to one of the most vulnerable populations in New Jersey. Information about those persons serviced by the coalition is shared through the Camden Health Information Exchange, a technology-based platform that offers participating providers secure, real time access to shared medical information (Camden Coalition, 2017).

The mission, vision, and core values of the Camden Coalition, shown in Box 3, set the tone for a powerful endeavor, which has become a model for other initiatives nationally. Among the programs provided by the Coalition are as follows:

- *Multidisciplinary Care Management Teams Community-Based Care:* Provides hospital and home visits to ensure a smooth care transition and minimize social barriers to wellness.

BOX 2 Resource Listing

Governmental resources

Centers for Disease Control and Prevention: Social Determinants of Health, <http://www.cdc.gov/socialdeterminants/>

Centers for Disease Control and Prevention: Chronic Disease Indicators, <https://www.cdc.gov/cdi/index.html>

Centers for Medicare & Medicaid Services (CMS) Readmissions Reduction Program (HRRP), <https://www.cms.gov/medicare/medicare-fee-for-service-payment/acuteinpatientpps/readmissions-reduction-program.html>

Congress.gov: H.R. 5273-Helping Hospitals Improve Patient Care Act of 2016, <https://www.congress.gov/bill/114th-congress/house-bill/5273>

Healthy People 2020, <https://www.healthypeople.gov>

Medicaid.gov: Affordable Care Act, <https://www.medicaid.gov/affordable-care-act/index.html>

National Institute of Mental Health: Minority Health and Mental Health Disparities Program, <https://www.nimh.nih.gov/about/organization/gmh/minority-health-and-mental-health-disparities-program.shtml#3>

Office of Minority Health, <https://minorityhealth.hhs.gov>

Nongovernmental resources

Camden Coalition of Healthcare Providers, <https://www.camdenhealth.org>

Center for Sustainable Health Outreach, <https://www.usm.edu/health/center-sustainable-health-outreach>

City Health Works, <http://cityhealthworks.com>

Community Commons: Community Health Needs Assessment, <https://www.communitycommons.org/chna/>

County Health Rankings & Roadmaps: University of Wisconsin Population Health Institute and Robert Wood Johnson Foundation, <http://www.countyhealthrankings.org>

Feeding America: The Impact of Hunger and Food Insecurity, <http://www.feedingamerica.org/hunger-in-america/impact-of-hunger/>

Indeed.com, <https://www.indeed.com>

Kaiser Family Foundation: State Action on Medicaid Expansion, <http://kff.org/health-reform/state-indicator/state-activity-around-expanding-medicaid-under-the-affordable-care-act/?currentTimeframe=0>

Public Health Institute: Health in All Policies: A Guide for Local and State Government, <http://www.phi.org/resources/?resource=hiapguide>

Robert Wood Johnson Foundation: Social Determinants of Health, <http://www.rwjf.org/en/our-focus-areas/topics/social-determinants-of-health.html>

The World Health Organization: Social Determinants of Health, World Health Organization, http://www.who.int/social_determinants/sdh_definition/en/

The Commonwealth Fund, <http://www.commonwealthfund.org>

- Reports and current news on funding and related topics specific to promotion of high-performing health systems for society's most vulnerable populations, including addressing the social determinants of health.

The Nation's Health: A Publication of the American Public Health Association

- Social determinants of health page: <http://thenationshealth.aphapublications.org/site/misc/socialdeterminants.xhtml>

- Articles, podcasts, infographics, and industry resources on management of how public health is repositioning itself to address social determinants of health

BOX 3

Camden Coalition: Mission, Vision, Core Values^a

Vision

A transformed health care system that ensures that every individual receives whole-person care rooted in authentic healing relationships.

Mission

Spark a field and movement that unites communities of caregivers in Camden and across the nation to improve the well-being of individuals with complex health and social needs.

Core Values

1. Servant leadership
2. Communication and collaboration
3. Compassion and respect
4. Innovation
5. Data driven
6. Diversity and inclusion

^aData from Camden Coalition (2017).

- **Health Care Hotspotting:** Uses data to reallocate resources to high-need, high-cost super utilizers of the health care system. This interprofessional effort engages students across professional disciplines work in teams.
- **Housing First Pilot Program:** Engages those persons facing long-term housing challenges to reduce homelessness, while also addressing housing insufficiency issues for the chronically mentally ill.
- **Faith in Prevention:** Expands the role of faith-based organizations in the delivery of health prevention services.
- **The Good Care Collaborative:** A coalition of providers and advocates from across New Jersey committed to sensible Medicaid reform and informed by models of good care. The focus is on addressing the challenges posed by
 - integrated behavioral and physical health;
 - housing;
 - integrated data;
 - Medicaid oversight and transportation; and
 - community-based care coordination.

Funding for the Camden Coalition is provided through private donations, plus grants and other financial support through AARP, the Robert Wood Johnson Foundation, and The Atlantic Philanthropies. In addition, there is collaboration with academic credentialing entities to promote interprofessional education of the next generation of health care professionals via the Association of American Medical Colleges, Primary Care Progress, National Academies of Practice, Council on Social Work Education, and American Association of Colleges of Nursing (Camden Coalition, 2017).

City Health Works

Another successful program is the City Health Works Ambassadors of Health Program in New York City.

Home Health Coaches from the surrounding community provide health coaching, clinical integration and coordination, plus coordination with nonclinical services for high-need high-cost populations that struggle with chronic illnesses and complex socioeconomic and cultural barriers (e.g., poverty, social isolation). Further expansion of each service component can be seen in Box 4.

Strategic partnerships have been forged with hospitals, primary care and specialty practitioners, and home care and other social service agencies servicing targeted zip codes. Their primary focus includes intervention for those clients diagnosed with

- diabetes;
- hypertension; and
- asthma

Particular attention engages a collaborative care approach to address the comorbid manifestation of depression with chronic physical illness using established industry assessment tools (e.g., Patient Health Questionnaire-9). Further program expansion is planned to include work with individuals experiencing other diagnoses (e.g., congestive heart failure, chronic obstructive pulmonary disease, chronic kidney disease).

Persuasive outcomes have been identified through the team approach implemented by City Health Works. High numbers of clients had a considerable improvement in their requisite laboratory values (e.g.,

BOX 4

City Health Works Components^a

Personalized health coaching

- One-on-one coaching sessions to implement realistic, culturally appropriate lifestyle and routine changes
- Sessions held in home or community
- Medication and care plan education to decrease barriers to adherence
- Continuous evaluation toward goals via phone check-ins
- Assessment of support system: engaging household members and caregivers in total treatment plan

Clinical integration and coordination

- Regular communication and care planning between City Health Works clinical care manager and primary care clinicians
- Early identification of complications. Escalation of urgent medical, medication, and psychological issues to avert emergency room and hospitalization
- Comparison of medication lists with actual patient usage; informing clinicians to align lists and address barriers to access (e.g., cost)

Coordination with nonclinical services

- Referrals to social service providers and health homes to address legal, employment, housing, and related socioeconomic needs
- Depression care planning under supervision of depressive care specialist social worker and case manager using collaborative care model
- Identification and engagement of individuals who are "lost to follow-up," or not connected to clinical care through community partners.

^aData from CityHealthWorks.com (2017).

78% decrease in A_{1C} for those persons with diabetes). Early illness identification and prevention have been other notable areas of improvement. A medical issue was identified for 50% of the clients that was otherwise unknown to the medical provider before it became a crisis. Funding is provided through assorted supporters spanning the Robert Wood Johnson Foundation (RWJF), Robin Hood Foundation, Patient-Centered Outcomes Research Institute, AstraZeneca Healthcare Foundation, and Draper Richards Kaplan Foundation (CityHealthWorks, 2017).

Health in All Policies

Health in All Policies (HiAP) is a collaborative approach created by the Public Health Institute, the California Department of Public Health, and the American Public Health Association. The goal of the effort is to improve health through incorporating health considerations into decision making across sectors (e.g., governance, health care, schools) and policy areas. The approach identifies the ways in which decisions in multiple sectors impact health and how better health can support the goals of these various sectors.

Cities are challenged to address chronic problems involving their economic base, poverty, housing quality and affordability, violence, and exposure to environmental toxins. Health outcomes are linked to each of these issues, warranting clear attention (Wernham &

Teutsch, 2015). Through diverse community partnerships, stakeholders work together toward promoting health, equity, and sustainability through advancing new programming focused on mutual areas of interest and focus. These include the creation of jobs and economic stability, transportation access, increased agricultural systems, and improved educational attainment. Funding comes from a variety of government and private foundation funding initiatives including the Centers for Disease Control and Prevention, Housing and Urban Development, the Environmental Protection Agency, and the Department of Transportation (Heiman & Artiga, 2015; Public Health Institute, 2016; Wernham & Teutsch, 2015). Program examples of HiAP can be viewed in Box 5.

Resources

The County Health Rankings & Roadmaps

The County Health Rankings & Roadmaps (University of Wisconsin Population Health Institute and Robert Wood Johnson Foundation, 2017) serves as an invaluable resource to address true population health management. Developed as a collaboration between the University of Wisconsin's Population Health Institute and the RWJF, the website provides a snapshot of how health is influenced where people live, learn, work, and play, plus a range of resources, shown in

BOX 5

Health in All Programs Implementation in Large Cities^a

Seattle & King County Health Department, Washington State:

This collaboration has established strong cross-sector partnerships with planning, transportation, and housing officials. The effort helped lay the foundation for the county's adoption of a strategic plan and ordinance aimed to integrate health and equity across the county government's activities.

A 2014 ordinance created a multiagency task force and established 14 determinants of equity and health against which county activities will be gauged. Yearly progress reports document a range of accomplishments, including

- changes to the Natural Resources and Park's budget to provide better opportunities for physical activity in low-income neighborhoods by the building of trails;
- initiatives to improve educational outcomes in low-income and migrant communities and collaboration between the criminal justice and education departments to reduce the number of students expelled from school;
- funding for adult and criminal justice early intervention programs to reduce incarceration rates and improve employment options for at-risk low-income and minority residents; and
- the inclusion of health-based metrics and objectives in city and county land use and transportation plans.

Boston:

Building on growing interest in healthy community design, in 2012, the Boston Public Health Commission convened an HiAP task force comprising city agencies and interested community organizations. The task force has contributed to

- the transportation department's Complete Streets guidelines
- a cross-agency initiative to replace part of the city's taxi cab fleet with hybrid vehicles,
- a pilot health impact assessment to inform neighborhood redevelopment, and
- other community design-oriented activities.

Washington, DC:

A 2013 executive order on HiAP facilitated implementation of the city's Sustainability Plan. The plan contained provisions to

- improve health by improving access to parks,
- addressing food insecurity and access to nutritious foods, and
- increasing access to safe and affordable housing for low-income residents.

The order also created a multiagency HiAP task force charged with studying and reporting on actions that could be taken to "coordinate across agencies to embed practices to improve health."

^aAdapted from Wernham and Teutsch (2015).

BOX 6

County Health Rankings & Roadmaps Scope^a

- An interactive map to explore health outcomes by states and counties
- Information on the measures that affect health across the domains of
 - health behaviors,
 - clinical care,
 - social and economic factors, and
 - physical environment.
- An action center with tools and guides to improve health, including road maps to health coaching
- Timely reports
- Tools and guidelines for assessment
- Webinars
- Additional resources and blogs

^aData from University of Wisconsin Population Health Institute and Robert Wood Johnson Foundation (2017).

Box 6. The extensive data provides information for state maps depicting assorted health care values for 35 different measures. The website is updated regularly with further access information found in the resource listing.

Asset Mapping

Asset mapping is a method used to understand, harness, and provide distinct information about the strengths and resources of a particular community. Although many sectors have used asset mapping over the years, the maps are especially beneficial to the health care industry. On an actual map of a particular region, icons are positioned to detail the exact location (address) of defined resources. These icons can address basic needs, education sites, health care settings, locations to receive mental health treatment and counseling, plus any other organizational and/or community services. A community asset or resource is anything that enhances the quality of community life. Included are

- the capacities and abilities of community members;
- a physical structure or place (e.g., a school, hospital, church, library, recreation center, or social club);
- a business that provides jobs and supports the local economy;
- associations of citizens (e.g., Neighborhood Watch, Parent Teacher Association); and
- local private, public, and nonprofit institutions or organizations. (UCLA Center for Health Policy Research, 2013)

Asset maps serve to inform both case managers and their clients of service solutions, especially valuable for SDH populations whose options can present as far more limited. Once community strengths and resources are inventoried and depicted on a map, stakeholders can more easily consider how to

build on these assets to address community needs and improve health. Asset maps can also be used to make key program decisions, if not also ascertain funding. They may also be used to mobilize and empower the community around key areas of focus (e.g., food banks, emergency clothing, after-school child care; UCLA Center for Health Policy Research, 2013). It is common for health care organizations to assign asset maps to new staff during the onboarding process. This tool can serve as a means to orient new employees to the community at large. Developing and updating asset maps are a powerful assignment for new staff and/or students assigned to an organization. Box 7 provides strategic guidance on asset mapping, with an example.

Use of Successful Messaging: RWJF

One key to successful discussions about SDHs lies in the language used with audiences. The RWJF recognized that there was as much difficulty in discussing the topic of SDH among professionals, as there was among members of the lay community. Everyone had a different interpretation of the term, Social Determinants of Health. It was also found to be interpreted as an intensely personal issue, associated with complex beliefs while engendering biases (Robert Wood Johnson Foundation, 2010).

In 2010, a team at RWJF developed a series of simply stated messages to communicate the importance of health and health outcomes in common language. Testing the phrases across diverse audiences, six generic ways to talk about the SDH were delineated. They used colloquial, values-driven language and relatable lifestyle references to engage viewers. Each statement focused on the solution for SDH as opposed to the problem. The value of personal responsibility appeared as a major theme that resonated with all. The six phrases appear in Box 8.

Career Implications

Addressing the SDH has yielded rapidly increasing employment opportunities for case managers of all educational-degree levels (e.g., associates, baccalaureate, master's, doctoral), disciplines, models of care delivery (e.g., ACOs, Integrated and wholistic care, community based), and practice settings. The topic of new roles has been addressed in other publications across the literature (Allen, 2017; Luther, Martial, & Barra, 2017; Newman, 2017; Tahan & Fink-Samnick, 2017) and will continue to evolve as further programs for the populations at issue are developed, funded, and implemented. A search for positions addressing the SDH on the world's number one employment website, Indeed.com (2018), brought up almost 500 roles across the country for various

BOX 7

Asset Mapping: Key Steps, General Guidelines, Example^a

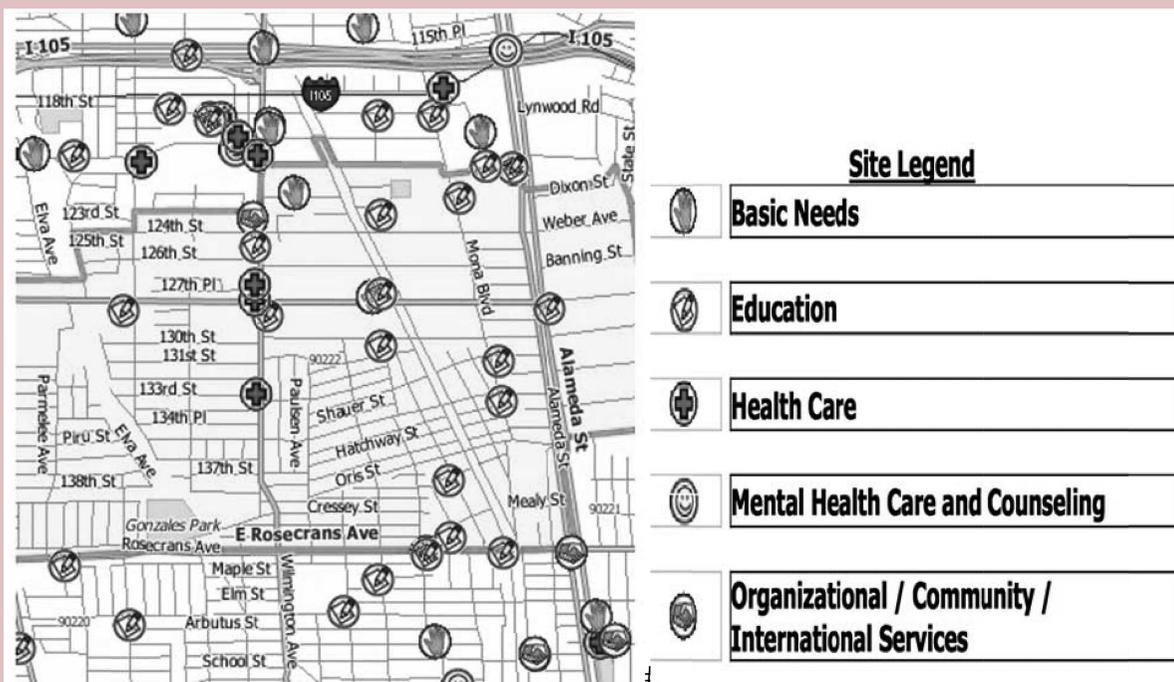
Key steps:

- 1.1. Define community boundaries
- 1.2. Identify and involve partners
- 1.3. Determine what type of assets to include
- 1.4. List the assets of groups
- 1.5. List the assets of individuals
- 1.6. Organize assets on a map

General guidelines:

- The area map should be specific enough to clearly show your defined community boundaries.
- Enlarge the map if needed. Leave a border around the map with enough room to add a map legend and title.
- Purchase color dot stickers. Create icons for each asset that you have identified, by hand or on the computer. In your map you could include health services, parks and recreation facilities, businesses, clinics, schools, and transportation facilities.
- Create a legend that accompanies the color sticker dot.
- Sticker dots representing organizations or services might overlap on the area map. In this case, it is fine to approximate the location.
- The map should not only be visually appealing but also be highlighting something. For example, show gaps in services, areas where services are needed, or where there exists a cluster of services in only one geographic area.

Map:



^aData from UCLA Center for Health Policy Research (2013) and Healthy Children Healthy City Asset Mapping Project (2013).

BOX 8

Six Ways to Talk About Social Determinants of Health^a

1. Health starts—long before illness—in our homes, schools, and jobs.
2. All Americans should have the opportunity to make the choices that allow them to live a long, healthy life, regardless of their income, education, or ethnic background.
3. Your neighborhood or job should not be hazardous to your health.
4. Your opportunity for health starts long before you need medical care.
5. Health begins where we live, learn, work, and play.
6. The opportunity for health begins in our families, neighborhoods, schools, and jobs.

^aData from Robert Wood Johnson Foundation, Carter, and Western (2010).

health care organizations, contractors, and other entities across the industry. The positions spanned every focus: from community health worker, community-based care coordinator, research assistant, professor, project and program manager, population health coordinator, and, of course, case manager.

The need for qualified case managers will continue to increase as it works to meet the escalating population of older adults, plus increased numbers of clients dealing with complex chronic illnesses. This high level of employment growth is being driven by expanding demand for an expert workforce in the health care and social services sectors (Bureau of Labor Statistics, 2017). The strong influence of SDH on this

occupational phenomena cannot be ignored, prompting attention of a socioepidemiological approach to the prevention and management of health and behavioral issues by providers, practitioners, and other involved industry stakeholders (Jackson, 2015).

Community-based programming, particularly those focused on public health initiatives, can play a leading role in addressing the SDH (Jackson, 2015). Engagement with this arena is consistent with health and human service professionals' integral values of advocacy, social justice, dignity, and worth of the person, collaboration, integrity, and environmental health (American Nurses Association, 2010; Case Management Society of America, 2016; Commission for Case Manager Certification, 2015; National Association of Social Workers, 2017). Jobs in SDH programs afford professionals the opportunities to take direct roles in front line advocacy, prevention, and management of comorbid physical and behavioral health dynamics that emerge with chronic illness (e.g., diabetes, human immunodeficiency virus/acquired immunodeficiency syndrome, asthma), substance use, and suicide. The stakes are particularly high for any and all populations at risk, especially when economic inequality contributes on such an imposing scale to food insecurity and health care access and so greatly impacts health outcomes.

CONCLUSION

One irrefutable theme presents amid the detailed content provided in Part I of this article series on Social Determinants of Health; the SDH have prompted the latest fiscal imperative for the health and behavioral health industry, with 50% of health care spending on 5% of the population (City Health Works, 2017). This imperative challenges case managers across disciplines, practice levels, employment settings, roles, and the globe.

Although there have been legislation, programs, initiatives, and resources to address the multidimensional scope of the SDH, far more are required. In addition to a solid foundation of knowledge on this topic, professional case management must have clearly defined frameworks and tools to guide their practice. Join me in Part II for a more detailed conversation on assessment tools, plus the presentation of an innovative template to achieve case management success with this population, the Comprehensive Case Management Path.

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Registration Deadline: March 1, 2019

Continuing Education Information for Certified Professionals in Healthcare Quality (CPHQ):

This continuing education (CE) activity is provided by Lippincott Professional Development and has been approved by the National Association for Healthcare Quality (NAHQ) for 1.5 CE Hours. CPHQ CE Hours are based on a 60-minute hour. This CE is approved for meeting requirements for certification renewal.

This CPHQ CE activity expires on March 1, 2019.

Continuing Education Information for Nurses:

Lippincott Professional Development will award 1.5 contact hours for this continuing nursing education activity.

LPD is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.

This activity is also provider approved by the California Board of Registered Nursing, Provider Number CEP

11749. LPD is also an approved provider by the District of Columbia, Georgia, and Florida CE Broker #50-1223.

The ANCC's accreditation status of Lippincott Professional Development refers only to its continuing nursing educational activities and does not imply Commission on Accreditation approval or endorsement of any commercial product.

Registration Deadline for Nurses: March 1, 2019

Disclosure Statement:

The authors and planners have disclosed that they have no financial relationship related to this article.

Payment and Discounts:

- The registration fee for this test is \$17.95
- CMSA members can save 25% on all CE activities from *Professional Case Management!* Contact your CMSA representative to obtain the discount code to use when payment for the CE is requested.

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