THE SOCIAL DETERMINANTS OF HEALTH META-ANALYSIS

Evidence clearly demonstrates that an individual's overall health and life expectancy is determined by a variety of factors beyond biological measures and genetic code. These factors are collectively known as the social determinants of health (SDoH).

The SDoH and their impact on an individual and population health contribute to widening health disparities, poor health outcomes, and rising health care costs in the United States. As noted by Bradley et. al., "[t]he roots of the US spending paradox—in which we spend more on health care but have poorer health outcomes than any other country—are deeply embedded in our political, economic, and social history."[1] To achieve better overall health and health outcomes, as well as achieve cost efficiencies, we need to understand, assess, and address the SDoH at both an individual and population level.

Social Determinants of Health & Health Disparities

Social Determinants of Health

The SDoH are defined by the World Health Organization (WHO) as "the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life."[2] Social determinants affect health outcomes in ways including mortality, morbidity, life expectancy, health care expenditures, health status, and functional limitations.[3] The U.S. Department of Health and Human Services (HHS) identifies five key areas of social determinants: (1) neighborhood and physical environment, (2) health and healthcare, (3) social and community context, (4) education, and (5) economic stability.[4] Understanding and addressing the complex interplay of these biological, social, economic, and environmental factors in determining one's health and life expectancy is crucial to improving population health, as well as and reducing or eliminating health disparities.

[1] Elizabeth Bradley and Lauren Taylor, "With the ACA Secure, It's Time to Focus On Social Determinants", *Health Affairs Blog*, July 21, 2015, http://healthaffairs.org/blog/2015/07/21/with-the-aca-secure-its-time-to-focus-on-social-determinants/

[2] "Social Determinants of Health." World Health Organization (WHO). http://www.who.int/social_determinants/en/

[3] Henry J. Heiman and Samantha Ariga, "Beyond Health Care: The Role of Social Determinants in Promoting Health and Health Equity" *Kaiser Family Foundation*. November 4, 2015. http://www.kff.org/disparities-policy/issue-brief/beyond-health-care-the-role-of-social-determinants-in-promoting-health-and-health-equity/

[4] For the purposes of this paper, we use five categories, though SDH is often categorized differently by different groups, such as the Kaiser Family Foundation, which includes food (hunger, access to healthy options) as a sixth separate category; and the U.S. Task Force on Community Preventive Services, which also identifies six categories: 1) neighborhood living conditions; 2) opportunities for learning and capacity for development; 3) employment opportunities and community development; 4) prevailing norms, customs and processes; 5) social cohesion, civic engagement and collective efficacy; and 6) health promotion, disease prevention and healthcare opportunities. (Anderson et al., "Task Force on Community Preventive S. The Community Guide's model for linking the social environment to health", *American Journal of Preventive Medicine* 24 (2003):12–20; the Task Force on Community Preventive Services, https://www.thecommunityguide.org/)

Figure 1: The Five Key Areas of Social Determinants of Health

Source: Healthy People 2020, https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health

Health Disparities

Health disparities are often thought of as racial or ethnic differences, but the term is much broader - if "a health outcome is seen to a greater or lesser extent between populations, there is disparity."[5] The HHS defines health disparity as:

> "a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage. Health disparities adversely affect groups of people who have systematically experienced greater obstacles to health based on their racial or ethnic group; religion; socioeconomic status; gender; age; mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion."[6]

Disparities can exist across genders, gender identity and orientation, age, disability status, education level, socioeconomic status, employment, and, importantly, geographic location. In fact, a person's zip code is a better predictor of their overall health than their genetic code.[7]

The Colorado Department of Public Health and Environment (CDPHE) contracted with Health Management Associates, Inc. (HMA) to explore promising strategies at the national, state, and

[5] "Disparities", Healthy People 2020, 2017, https://www.healthypeople.gov/2020/about/foundation-health-measures/Disparities

[6] "The Secretary's Advisory Committee on National Health Promotion and Disease Prevention Objectives for 2020. Phase I report: Recommendations for the framework and format of Healthy People 2020. Section IV: Advisory Committee findings and recommendations [cited 2010 January 6*]. ", U.S. Department of Health and Human Services*, http://www.healthypeople.gov/sites/default/files/PhaseI_0.pdf.

[7] Garth Graham, MaryLynn Ostrowski, and Alyse Sabina, "Defeating The ZIP Code Health Paradigm: Data, Technology, And Collaboration Are Key", *Health Affairs Blog*, August 6, 2015, http://healthaffairs.org/blog/2015/08/06/defeating-the-zip-code-health-paradigm-data-technology-and-collaboration-are-key/

particularly, the community level that address SDoH and health disparities. The focus areas of research included: Economic Opportunity, Family Friendly Business Practices, Paid Leave, Criminal Justice - the Cradle to Prison Pipeline, Affordable Housing, Quality Housing, Homelessness, Childcare, Early Childhood Education, K-12 Education, and Neighborhood Fabric and Social Connectedness. Table 1 presents the subject area by HHS-defined categories of SDoH; notably, there can be overlap among categories that topics fall under, underlining the complex way in which SDoHs interact.

Table 1: SDoH Key Focus Areas for CDPHE

Key Area	Elements	CDPHE HMA Focus Topics
Neighborhood and Physical Environment	Access to healthy food, quality housing; exposure to environmental conditions, crime, violence	• Quality Housing
Health and health care	Access to health care and primary care; health literacy	• Family Friendly Business Practices
Social and community context	Social cohesion, civic participation, discrimination, incarceration	• Neighborhood Fabric and Social Connectedness • Criminal Justice: Cradle to Prison Pipeline
Education	Early childhood education and development, high school graduation, enrollment in higher education, language and literacy	• Childcare • Early Childhood Education • K-12 Education
Economic stability	Poverty, employment, food insecurity, housing instability	• Economic Opportunity • Homelessness • Affordable Housing • Paid Leave

Source: https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health

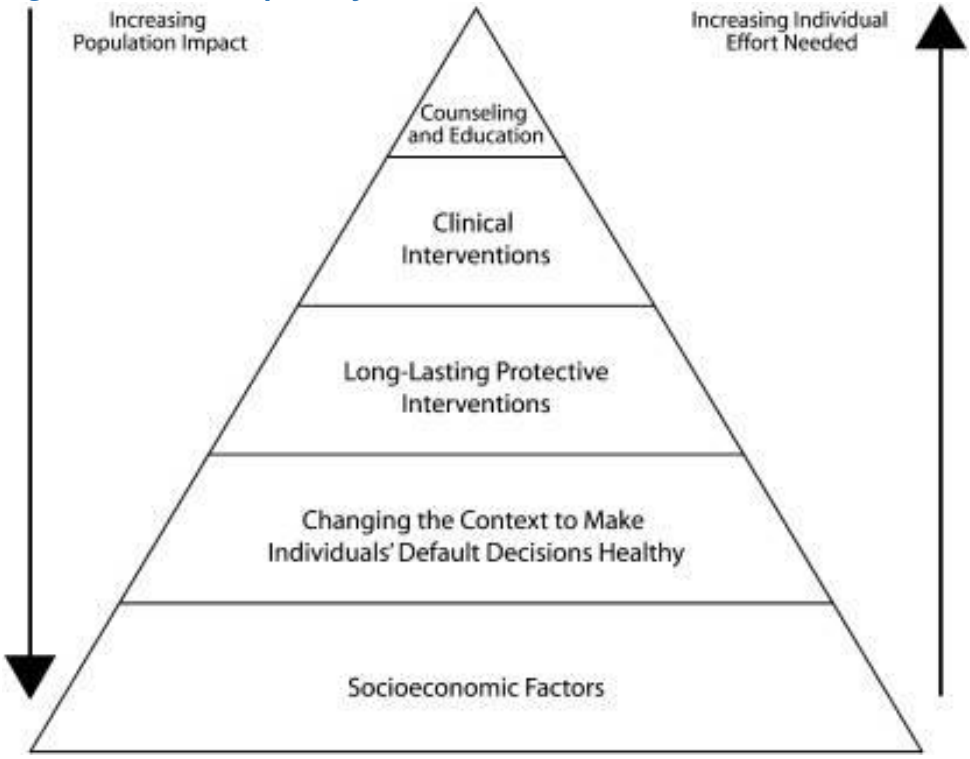
Understanding the Health Impact of Social Determinants

Williams et.al., note that "most health problems occur long before people get to their healthcare provider or hospital."[8] Williams continues, "given the nature of disparities, interventions are needed both within and outside the healthcare system. Social disparities in health exist for the onset of illness, as well as for the severity and progression of disease. *They are generally larger for the latter and the interventions necessary to delay the progression of disease are those that occur within the healthcare system. In contrast, interventions outside the healthcare system are likely to have a larger effect on reducing the incidence of illness* [emphasis added]. Accordingly, effective efforts to improve health and reduce gaps in health need to pay greater attention to addressing the non-medical determinants of health."

Frieden uses a health impact pyramid to visualize the effect of public health interventions on health. The base of the pyramid – socioeconomic factors - represents areas which, if addressed, are the most effective approaches (defined by Frieden as those that "reach broader segments of society and require less individual effort") to achieving better health and health outcomes, though intervening at all levels is necessary to "achieve the maximum possible sustained public health benefit."[9]

[8] David R. Williams et al., "Moving Upstream: How Interventions that Address the Social Determinants of Health can Improve Health and Reduce Disparities", *J Public Health Management Practice* 14 (2008): S8-16.
[9] Thomas R. Friedman, "A Framework for Public Health Action: The Health Impact Pyramid," *Am J Public Health*. 100 (2010):590-595, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2836340/

Figure 2: Health Impact Pyramid



Source: Thomas R. Friedman, A Framework for Public Health Action: The Health Impact Pyramid, Am J Public Health. 2010 April; 100(4): 590=595,

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2836340/

Given all the evidence available in the face of skyrocketing medical costs and subpar health outcomes, a variety of initiatives are being pursued on the national, state, and community level to screen individuals for SDoH needs, and connect them with the appropriate resources and services to meet those needs.

Screening SDoH need, accessing databases of SDoH resources, and connecting people to services

Population health "seeks to reveal patterns and connections within and among multiple systems and to develop approaches that respond to the needs of populations."[10] Approaches to addressing SdoH, as noted by the Kaiser Family foundation,[11] include:

1. Mapping and place-based approaches, which use community assessments and geospatial analyses to assess and address health needs (e.g., Colorado Health Foundations' Healthy Places: Designing and Active Colorado Initiative).
2. Health in all policies approaches, which assess policy in non-health sectors for the impact of those policies on health, health disparities, and sustainability (e.g., the National Prevention Council).
3. Approaches that integrate SDoH into the healthcare system (e.g., the Colorado Accountable Care Collaborative --ACC; the Colorado State Innovation Model --SIM).

On an individual level, devising effective and consistent methods to assess a person's SDoH needs and then connecting her/him to the appropriate community services and resources to meet those needs can be difficult in the current siloed environment. A variety of resource repositories

[10] Fabius et al., "The population health promise. In Nash, D.B. et al. (Eds).", *Population Health: Creating a Culture of Wellness*, 2015, Boston, MA: Jones & Bartlett Learning, p. 1.
[11] Heiman and Ariga, "Beyond Health Care", 2015

and programs that address the different SDoH are housed and administered by different federal, state, and local agencies. Creating and maintaining centralized repositories of knowledge and connecting multiple entities to repositories requires time and resource commitment to meet the needs of a variety of entities, populations, and geographical regions. –

In Colorado, there are distinct differences across regions of the state and the resources available to support the health and healthcare needs of their diverse populations.[12] Programs such as 211 can play an important role in helping to centralize such information; however, 211 in many states does not have a statewide reach, nor is it consistently funded and supported. In Colorado, a collaborative of eight organizations - primarily United Way offices – have come together to create "border to border" coverage through six call centers that offer information and referral assistance for: food, rent and utility assistance; aging services, child care, emergency shelter, housing, medical and dental clinics, disaster recover, and more. Yet in spite of this tremendous resource, there is still both duplication of effort through a variety of agencies and organizations that create and maintain their own resource databases, as well as gaps in information about all the possible resources and services available to Coloradans. The Colorado Medicaid program's Accountable Care Collaborative structure uses a regional approach to centralizing information, but the program is only for Medicaid populations and does not reach the non-Medicaid population of the state.

Challenges to connecting individuals across entities and sectors, as well as connecting data face additional hurdles, such as governance issues (e.g,. accountability, ownership, how the system is shared), financial and human resources commitment, navigating complex funding streams (e.g., different systems are funded through different funding streams and a mix of public monies and private grants), and cross-sector collaboration (e.g., agreement on shared goals, design elements, etc.) among all vested partners. Finally, considerations of sustainability are critical. Funding is often subject to political and economic forces, which creates challenges in adequately assessing the impact of programs on particular individuals, subsets of individuals, populations, and communities.

Despite these challenges, a range of local, state, and national efforts exist to assess the SDoH needs of individuals, including screening and assessing individuals and populations, referring them to community services and resource, and helping them navigate across systems and service providers.

National Programs

Healthy People 2020

Healthy People was established to provide and promote "science-based, 10-year national objectives for improving the health of all Americans."[13] Healthy People 2020 launched its third decade on December 2, 2010, and calls for increasing public awareness around the SDoH and developing objectives that address the relationship between health status and biology, individual behavior, health services, social factors, and policies. Healthy People uses an ecological approach (focuses on both population and individual level SDoH and interventions) to meet the overarching goals of:

- "Attain high-quality, longer lives free of preventable disease, disability, injury, and premature death.
- Achieve health equity, eliminate disparities, and improve the health of all groups.

[12] "Colorado Health Gaps Report," The Colorado Health Institute, 2015, http://www.coloradohealthinstitute.org/uploads/downloads/2015ColoradoHealthGapsReport_(1).pdf pdf
[13] "About Healthy People", Healthy People, https://www.healthypeople.gov/2020/About-Healthy-People

- Create social and physical environments that promote good health for all.
- Promote quality of life, healthy development, and healthy behaviors across all life stages."[14]

Centers for Disease Control and Prevention

CDC's website, https://www.cdc.gov/socialdeterminants/, presents resources for SDoH data, tools for action, programs, and policy for use by public health professionals, community organizations, and health care systems to assess SDoHs and act on them. CDC programs that address the SDoH are listed in Table 2.

Table 2: CDC Initiatives Addressing the Social Determinants of Health

Program	Description
Built Environment and Health Initiative: Designing and Building Healthy Places www.cdc.gov/healthyplaces	Informational and resource website related to healthy community design. Provides a variety of tools, best practices, and educational materials to support health-oriented community design, such as HIAs, information on the health impact of community design, building community partnership, and researching the links between health and community design. • In 2006, Derby Redevelopment (Commerce City) received an HIA award through a Cooperative Agreements with the National Association of County and City Health Officials (NACCHO)
Childhood Lead Poisoning Prevention Program www.cdc.gov/nceh/lead/about/program.htm	Housing rehabilitation, enforcement of housing and health codes, and partnering with health care experts to prevent childhood lead poisoning and other housing-related health hazards.
National Leadership Academy for the Public's Health (NLAPH): www.cdc.gov/stltpublichealth/NLAPH	A one year leadership training program that brings together leaders from multiple-sectors to help resolve public health problems within communities. • Current Colorado teams include the Denver Regional Ebola and Other Special Pathogen Treatment Centers; past teams include the Let's Build Leaders (Aurora) and Colorado Community Center Collaborative (Colorado Springs)
The National Program to Eliminate Diabetes-Related Disparities in Vulnerable Populations (Vulnerable Populations) https://www.cdc.gov/diabetes/programs/vulnerable.html	Five-year cooperative agreement with selected communities to "plan, develop, implement, and evaluate multi-sector community-based interventions to work on social, cultural, economic, and environmental issues that influence health disparities associated with diabetes." • No Colorado National Awardees
Partnerships to Improve Community Health (PICH) www.cdc.gov\nccdphp\dch\programs\partnershipstoimprovecommunityhealth	Three-year initiative so support the use of evidence-based strategies to improve community health and reduce chronic disease. Awarded $49.3 million to 39 awardees in 2014. • No CO Awardees
Racial and Ethnic Approaches to Community Health (REACH) www.cdc.gov/nccdphp/dnpao/state-local-programs/reach/index.htm	Administered by CDC with a goal to reduce racial and ethnic disparities in health. REACH awardees partner with the community to build community-based programs and culturally tailored interventions to address health issues among African Americans, American Indians, Hispanics/Latinos, Asian Americans, Alaska natives, and Pacific Islanders.

[14] Ibid.

	• CO Awardees: City of Denver's Stapleton Foundation for Sustainable Urban Communities & Colorado Black Health Cooperative
State Level Implementation of the Essentials for Childhood Framework www.cdc.gov/violenceprevention/pdf/essentials_for_childhood_framework.pdf	Framework & tools for considering environment and relationships that help children grow up healthy. Funds 5 state health departments to implement the Framework's 5 strategies. CO Framework: https://colorado.gov/pacific/cdphe/EssentialsForChildhood
STRYVE: Striving to Reduce Youth Violence Everywhere vetoviolence.cdc.gov/apps/stryve	Initiative to prevent youth violence. Provides resources and tools for communities.

The Patient Protection and Affordable Care Act & Health Care and Education Reconciliation Act

The Patient Protection and Affordable Care Act and the Health Care and Education Reconciliation Act of 2010 (ACA) was enacted to promote overall population health in the U.S. Although the ACA falls short of offering an integrated approach to addressing SDoH, it stressed the importance of partnerships and integration across sectors in achieving population health objectives. The ACA acknowledges and addresses health disparities that arise from social inequalities, and offers a variety of opportunities to address SDoH, focused on providing localized funding to enable individuals, communities, and the country to address disparities. Short timeframes, funding issues, issues with data collection, and political issues surrounding the ACA limited the understanding of the impact of some programs.[15] Many of the programs suffered funding challenges; in some instances, state leaders opposed to the ACA rejected funds, and in others, there were no appropriations funded.

Table 3 – Affordable Care Act SDoH-Related Initiatives

ACA Category & Section	Program	Description
Public Health Initiatives for Children & Adolescents		
§2951	Maternal, infant, and early childhood home visiting programs	HRSA grants to states to provide maternal, infant, and early childhood home visiting programs (MIECHV). Funding awarded FY 2010-FY2013. The CO DHS received a formula award & Innovation Award.
§2953	Personal Responsibility Education	$75 million in funding for an adolescent Personal Responsibility Education Program (PREP) which supports. Funding FY 2010-2013 in 46 states including Colorado. Grantees noted goals for reducing teen pregnancy, HIV, STIs for at-risk groups.
§4306	Funding for Childhood Obesity Demonstration Project	Provides $75 million in funding for an adolescent Personal Responsibility Education Program (PREP) which supports abstinence and contraception learning initiatives. CDC funded 3 grantees (TX, MA, CA) FY 2010 to FY 2013.
Community Health and Prevention		

[15] Dennis P. Andrulis et al., "Report No. 4: Public Health and Prevention Programs for Advancing Health Equity," *Texas Health Institute*, November 2013.http://www.texashealthinstitute.org/uploads/1/3/5/3/13535548/thi_aca_public_health_report_final.pdf

§4001	National Prevention, Health Promotion and Public Health Council	Created a federal interagency workgroup headed by the U.S. Surgeon General. Developed and published the *National Prevention Strategy*, including an Action Plan (6/2012) based on 5 recommendations to eliminate health disparities. The program has been challenged by sustainability & collaboration among federal agenices.
§4002	Prevention and Public Health Fund	Directs transfer of internal HHS funds to programs focused on prevention, wellness, and public health activities to improve health and control costs. In 2013, funding was reduced by $51 million over nine years & $453.8 million in funding was used to supplement Exchanges.
§4003	Clinical and Community Preventive Services	Clarifies the role of AHRQ's Preventive Services Task Force and the Community Preventive Services Task Force to address health disparities.
§4201	Community Transformation Grants	Provides grants to state and local government agencies, and CBOs to reduce chronic disease rates and "address health disparities via community-level prevention programs." CDC awarded $103 million FY 2011 for 35 implementation grants & $6 million for 6 CBO networks. 2012: $70 million to 40 small communities. In 2013, funding reduced to $80 million. In 2012, the Small Communities Program was added which awarded over $70 million to 40 neighborhoods, school districts, villages, towns, cities, and counties with fewer than 500,000 people. Denver Health and Hospital Authority received a CTG in FY 2011 and 2012.
Chronic Disease Programs Targeting Diverse Populations		
§4102	Oral healthcare prevention activities	Grants for oral health initiatives as part of a five-year national oral healthcare education campaign. Grants were awarded to all states for sealants &data collection were authorized but not funded. Implemented in only 19 states * there was no appropriation for the five-year national oral healthcare education campaign.
§10221	Indian health care improvement	Reauthorizes and makes permanent the Indian Healthcare Improvement Act. All authorized programs did not receive appropriations.
§10413	Young women's breast health awareness and support of young women diagnosed with breast cancer	The Education and Awareness Requires Learning Young (EARLY) Act, part of the ACA, provides funding via the CDC for a nationwide breast cancer awareness education campaign, targeting women under age 40. Concerns of efficacy of campaign & targeting group with low incidence of breast cancer (women < 40)
§10501	National Diabetes Prevention Program	Provides grants via the CDC to model sites for community-based diabetes prevention programs for high-risk adults. CDC funded $6.75 million to six organizations.

Source: Dennis P. Andrulis et al., "Report No. 4: Public Health and Prevention Programs for Advancing Health Equity," Texas Health Institute, November 2013, http://www.texashealthinstitute.org/uploads/1/3/5/3/13535548/thi_aca_public_health_report_final.pdf

Spotlight: National Prevention Strategy (ACA)

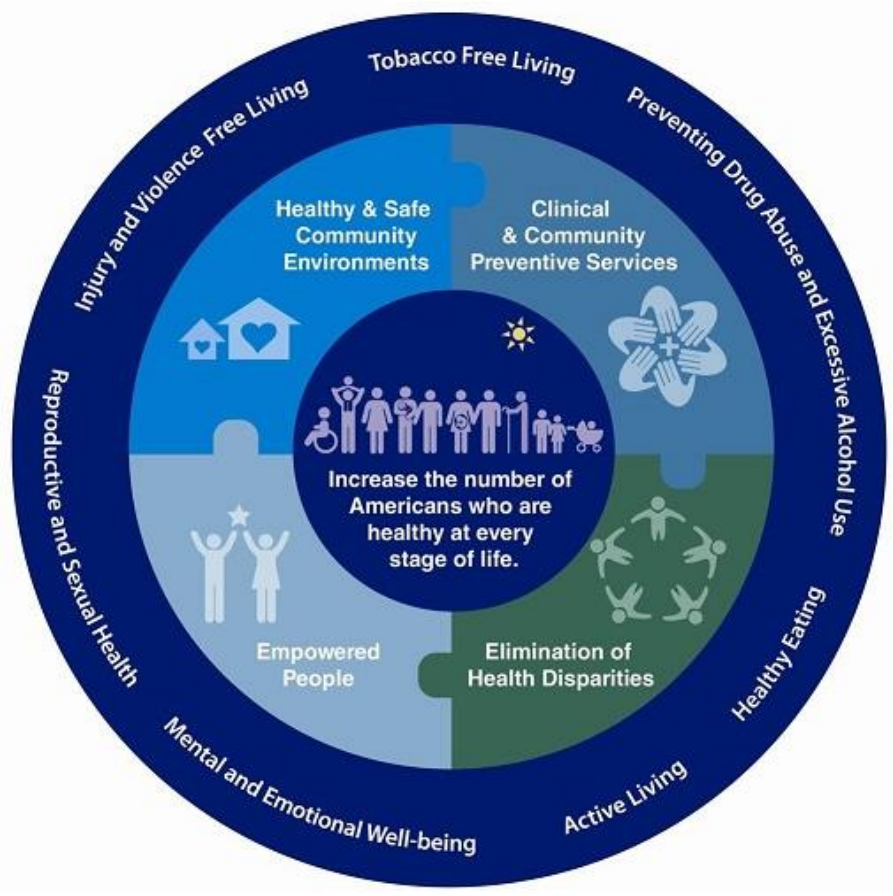
In addition to the above, Section 4001 of the ACA created the National Prevention Council (Council) (under the Office of the Surgeon General), which is comprised of 20 federal departments, agencies, and

offices, and is chaired by the Surgeon General of the United States. In 2011, the Council released the National Prevention Strategy, which was developed with input from multiple stakeholders, including the Prevention Advisory Group, stakeholders, and the public. The National Prevention Strategy serves as a guide to increasing the number of Americans who are healthy at all stages of life by focusing on prevention and by "integrating recommendations and actions across multiple settings to improve health and save lives."[16] Four strategic directions serve as the foundation for the initiative and as guides for actions that have been shown to improve health:

1. Healthy and safe community environments.
2. Clinical and community preventive services.
3. Empowered people.
4. Elimination of health disparities.

Each of the strategic directions is meant to stand on its own, and includes a set of recommendations derived through evidence-based methods to improve and build a prevention -based strategy. The priorities in the strategy "provide evidenced-based recommendations that are most likely to reduce the burden of the leading causes of preventable death and major illness." These include: 1) Tobacco free living, 2) preventing drug abuse and excessive alcohol use, 3) healthy eating, 4) active living, 5) injury and violence-free living, 6) reproductive and sexual health, and 7) mental and emotional well-being.

Figure 3: National Prevention Strategy



Source: The Surgeon General of the United States of America, US DHHS, National Prevention

[16] "National Prevention Strategy", The Surgeon General of the United States of America, US DHHS, https://www.surgeongeneral.gov/priorities/prevention/strategy/index.html

Strategy, https://www.surgeongeneral.gov/priorities/prevention/about/

Colorado Overarching State Initiatives

Colorado Healthy People

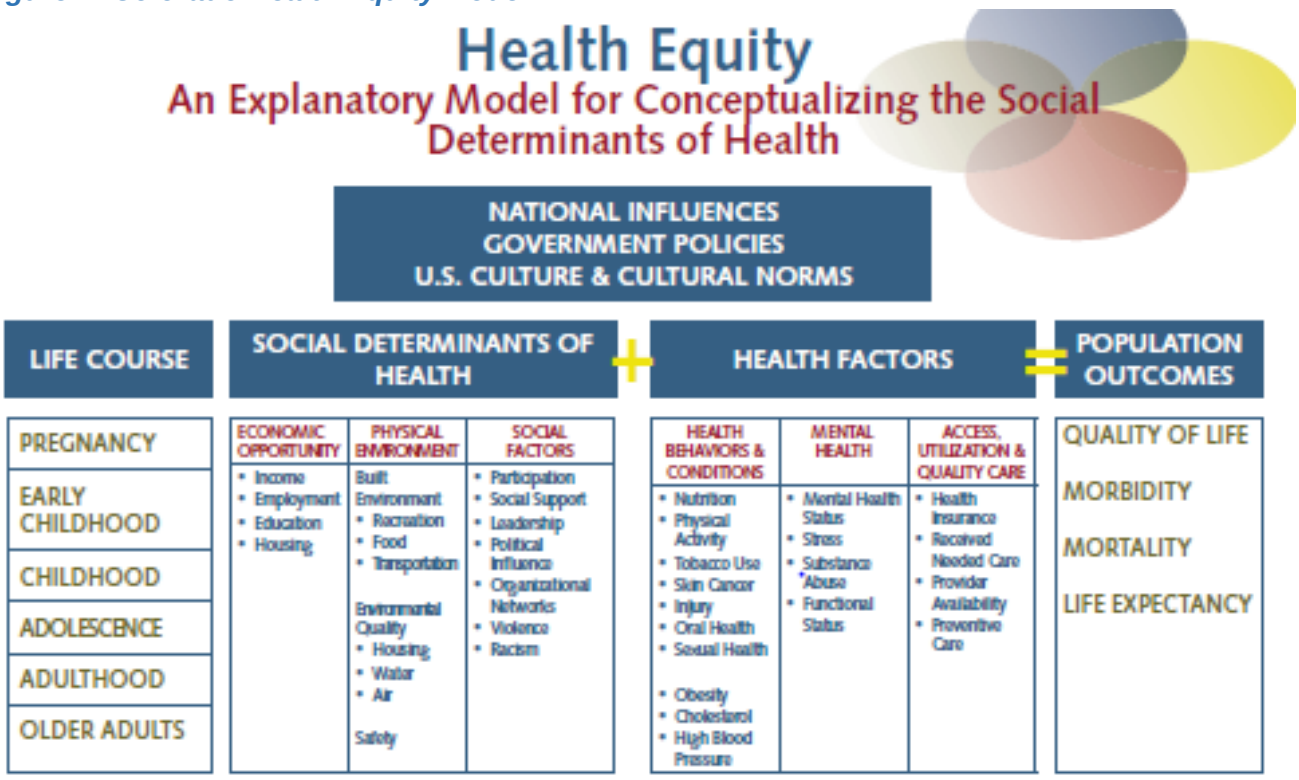
Healthy People 2020 serves a guide for individual state plans, such as that created by Colorado in the *Healthy Colorado: Shaping a State of Health. Colorado's Plan for Improving Public Health and the Environment 2015-2019*. Colorado's Health Equity model, developed by CDPHE, is founded on the goal of "achieving the highest level of health for all people."[17] The guiding frameworks of the Colorado plan include:

- The principles of health equity, environmental justice, and the SDoH.
- Local public health assessments and improvement plans developed by local public health agencies.
- Colorado's 10 Winnable Battles (healthier air, clean water, infectious disease prevention, injury prevention, mental health and substance abuse, obesity, oral health, safe food, tobacco, and unintended pregnancy).
- *The State of Health: Colorado's Commitment to Become the Healthiest State*: May 2013 Governor's Report (https://www.cohealthinfo.com/state-of-health/)
- ACA provisions that address population health (see Table 3).

Colorado's Health Equity model, presented in Figure 4, serves as the planning foundation for efforts springing from the Health People initiative and demonstrates the complex interplay of the SDoH, as well as the role of public health departments in addressing them.

[17] "Healthy Colorado: Shaping a State of Health. Colorado's Plan for Improving Public Health and the Environment 2015-2019, p. 2", *CDPHE*, https://www.colorado.gov/pacific/sites/default/files/OPP_2015-CO-State-Plan.pdf

Figure 4: Colorado Health Equity Model



Source: CDPHE, Healthy Colorado: Shaping a State of Health. Colorado's Plan for Improving Public Health and the Environment 2015-2019, p. 2, https://www.colorado.gov/pacific/sites/default/files/OPP_2015-CO-State-Plan.pdf

The Colorado Medicaid Accountable Care Collaborative: Health Neighborhoods

Colorado Medicaid's Accountable Care Collaborative (ACC) Phase 2.0 being implemented by the Department of Health Care Policy and Financing (HCPF) integrates physical and behavioral health, as well as takes steps towards greater coordination among all community providers and resources, not limited to medical care. In Phase 2.0, seven Regional Accountable Entities (RAEs) will be required to form Health Neighborhoods, which will be responsible for providing Health First Colorado (Colorado's Medicaid program name) beneficiaries with "holistic, integrated, and person- and family centered medical care."[18] HCPF expects that these Health Neighborhoods will coordinate to deliver services and supports across the spectrum of providers to meet the health and health care needs of Health First Colorado enrollees in each region. The RAE's will be given flexibility to incentivize regional and Health Neighborhood providers to connect enrollees to SDoH services and providers that can impact their overall health outcomes.

Colorado SIM Regional Health Connectors

Regional Health Connectors (RHCs), supported by the Colorado State Innovation Model (SIM) Project, are residents whose full-time job is to improve the coordination of local services to advance health and address the SDoH. RHCs focus on connections among clinical care, community organizations, public health, human services and other partners. RHCs connect primary care practices with surrounding

[18] "Accountable Care Collaborative Phase II Concept Paper", *The Colorado Department of Health Care Policy and Financing*, October 20, 2015. Background Information\Program Review Docs\ACC Phase II Concept Paper.pdf

resources to improve the health of a community, implement activities to improve clinical-community linkages, remove barriers to health care, and address factors that influence health.

Other Local and State Programs

Programs addressing the SDoH and identified in the CDPHE research programs are outlined in Table 4. These are not intended to represent all programs in Colorado that address the social determinants of health.

Table 4, State and Local Programs Identified in CDPHE Papers, by Paper

National & non-Colorado Initiatives	Colorado & Local Initiatives
Affordable Housing: Access to safe, quality housing impact on health	
• Tenant Based Rental Assistance, U.S. • Community Preventive Health Task Force, U.S. • Assessing: Moving to Opportunity HIA, OR, San Francisco Central Corridor HIA, CA • Healthy San Mateo Cty Five Ps, CA	• Denver Housing Authority HIA – S. Lincoln public housing • Denver Regional Transit-Oriented Development Fund • Boulder, Colorado – 2016/17 Housing Action Plan
Quality Housing: The home, its location, and its community impact on health	
• Corporation for Supportive Housing, U.S. (based in NYC) • HUD Promise Zones, U.S. • Health Homes, WA • Project Heart City Stress Inventory, MA • Harlem Children's Zone, NYC	• LiveWell Colorado • Urban Land Institute Building Healthy Places Colorado Initiative • Windsor Meadows • CO Dept. of Local Affairs, Affordable Housing Guide for Local Officials
Homelessness: Impact on health; focus on mental health, substance abuse disorder, chronic disease, violence as contributors to and symptoms of homelessness	

• Supportive Housing-Housing First Model
  ○ Health Care for the Homeless – Respite Care, MA
• Workforce Strategies model
  ○ Sound Families, WA
• HUD Ending Chronic Homelessness Initiative/Strategic Plan
	• Stout Street Health Center Integrated – Care Health Center, Denver
	• Work Programs for the Homeless, Denver
	• Urban Peak services for homeless youth, Denver, CO Springs
	• Denver Housing First Collaborative, Denver's Road Home – 10 Year Plan to End Homelessness
	• Supportive Housing: Howard Pikes Peak
	• Neighbor2Neighbor, Fort Collins
	• Continuum of Care, Rural Initiatives Program, Emergency Solutions Grants, Larimar county

Economic Opportunity: Impact of stable employment, opportunity development, etc. on health	
• Small Business Preservation and Development policies • Sector Partnerships strategies • Career Pathways Development strategies • San Mateo North B Improvement Initiative, CA	• CO Small Business Development Center • Increasing Postsecondary and Workforce Readiness (HB15-1170) • Sector Partnerships (21 across state) • Career Pathways Development via the CWDC
Family Friendly Business Practices	
• Family and Medical Leave Act • Americans with Disabilities Act • NM Task Force on Work Life Balance, NM • National Corporate efforts: American Express Corporation, Patagonia	• Boulder County policies • Corporate efforts: Children's Hospital Colorado, DaVita, Inc., Pinnacol Assurance, USAA
Paid Leave	
• Family Medical Leave Act (unpaid), U.S. • Paid leave mandates: CA, NJ, RI, NY	• No paid leave policies in CO
Child Care	
• Child Care and Development Fund	• Colorado Child Care Assistance Program

National & non-Colorado Initiatives	Colorado & Local Initiatives
• Early Head Start and Early Head Start-Childcare Partnerships	• Colorado Shines Early Head Start-Childcare Partnerships Grantees • Mile High United Way/Rocky Mountain PBS Partnership to Support Childcare Providers
Early Childhood Education: High quality early childhood education impact on health	
• Head Start, U.S. • The High/Scope Perry Preschool Project, MI • Carolina Abecedarian Project (ABC) and Carolina Approach to Responsive Education (CARE), NC • Early Childhood Four-Year-Old Program, OK • Abbott Preschool Program, NJ • 3-K for All program, NYC • Lottery for Education, GA	• The Colorado Preschool Program (SB 92-189) • Denver Preschool Program
K-12 Education: Quality education; keeping kids in school impact on health	
K-12 Education • Positive Behavior Interventions and Supports (PBIS) Framework • Peer-to-Peer Tutoring • Restorative Practices • Caring School Communities program • Lion's Quest Skills for Adolescence • Mindfulness-based Interventions • Project AWARE • Positive Action • School-Based Health Centers • Sources of Strength • Multi-Tiered Systems of Support (MTSS) Framework: KS	• Live Well Colorado Healthy Schools • Positive Behavior Interventions and Supports (PBIS) Framework: Pueblo • Caring School Communities: Aurora • Mindfulness-based Intervention: Denver • Restorative Practices: Longmont • Sources of Strength: CDPHE pilot • School-based health centers – CDPHE and the Colorado Association of School-Based Health Care
Neighborhood & Social Fabric: Community social connectedness/social capital impact on health	
• Positive Action for Today's Health (PATH) Study, U.S. • Santa Monica Wellbeing Project, CA • Kansas City Health Kids, KS	• SHARE Northeast Denver • LiveWell Huerfano County • Globeville Elyria-Swansea (GES) LiveWell • Mile High Connects
Criminal Justice Cradle to Grave Pipeline: Mitigating policies that channel students towards the justice system; enacting policies that break the cycle and the impact on health	
• AMIkids Personal Growth Model, U.S. • Juvenile Breaking the Cycle Program, U.S. • Philadelphia Police School Diversion Program, PA • NY Promise Zones, NY • WISE Arrest Diversion Program, NY	• Denver Public Schools Policy • Denver Public Safety Youth Programs • El Paso County Human Services outreach and education programs • Partners in Parenting