

COMMUNITY RESILIENCE



Report Background

Community Resilience: A Community Engagement Primer for Health Professionals is produced by Emerald Cities Collaborative and is part of the Anchors in Resilient Communities (ARC) publications series. It is designed to advance a field of practice in anchor-community partnerships that focus on community health, wealth and climate resilience.

About Emerald Cities Collaborative

Emerald Cities Collaborative (ECC) is a national non-profit organization of community, labor, business, advocacy, development and academic organizations united around the goal of greening our metropolitan areas the high road - sustainable, just and inclusive- way. Established in 2009, our national and local coalitions adopted a three-part mission:

- **Green our Cities** emphasizing decisive action to reduce carbon/GhG emissions and to improve the health and resilience of other parts of the natural and built environments.
- **Build our Communities** building sustainable regional economies by promoting and leveraging resilient infrastructure investments to rebuild both low-income neighborhoods and a middle class with family wage jobs and business opportunities
- Strengthen our Democracy advancing equity, including broader community participation in the planning, implementation and outcomes of the emerging green economy, with special emphasis on historically underrepresented and excluded communities.

About Anchors in Resilient Communities (ARC)

ARC, a collaborative project of ECC, is a national initiative that advances models for engaging anchor institutions - large community-based institutions (universities, schools, hospitals, public housing authorities) - in ECC's high road mission. The goal is to harness the assets - financial, political and social capital - of anchor institutions to improve the health, wealth and climate resilience of their constituents and the communities in which they live.

ECC partnered with MIT-CoLab in the Bronx, NY and in Miami, FL and Health Care Without Harm in East Bay San Francisco, CA to test different anchor-community resilience initiatives. Anchors are partnering with community and labor groups to develop local sustainable food economy, a green and healthy building program, climate resilience community education, and community health needs assessments.

About this Publication

This primer is a companion guide to the Anchor-Community Engagement Workbook and is part of an on-going series of case studies and reports highlighting best practices, lessons learned and models for creating community resilience—health, wealth and climate resilience—through anchor-community strategies. The community resilience frame addresses the legacy of health and economic vulnerabilities of low wealth communities, but also climate change as a threat multiplier to already vulnerable communities. The other publications can be accessed at: www.emeraldcities.org.

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Section 1:

The Community Resilience Framework

Background

Health institutions across the U.S. are re-imagining health care and in the process reinventing themselves and how they do business. Instead of viewing health care as a delivery system for treating sick people, health care is increasingly viewed from the lens of wellness. This entails a radical change in America's health care delivery system; a community-centered health eco-system vs. physician centered health delivery system.

The core of community wellness is tackling the social determinants of health. It takes into account that 70% of all illnesses are preventable and are life-style vs. genetically determined. This requires shifting health care from diagnoses and treatment to the prevention of such common illnesses as asthma and other respiratory ailments, cancers, obesity, diabetes, high blood pressure, mental illnesses and drug addiction.

The factors that cause illnesses go far beyond the capacity of any health institution to fix. But health systems are in key positions to call attention to the social determinants of health, to organize a more effective community centered health eco-system, and to drive critical investments into broader community wellness efforts.

This primer provides a framework to help health institutions transition to a community-centered health eco-system. It defines:

- The rationale for a community-centered health eco-system
- What a community-centered health eco-system looks like
- How to plan and build a community-centered wellness program, including:
 - Metrics: measuring community wellness
 - Mapping: community assets
 - Mobilizing: effective community engagement

The Transformation of the American Health System: The Path Forward

The transformation of the American health system towards wellness and prevention is driven by cost, mandates, and the growing acceptance of non-western, holistic health frameworks.

The cost of health care has become an economic burden on both the economy as well as on individual families. It may be good for some parts of the health sector -- pharmaceutical industry and specialized medicine - but it is untenable to sustain such an expensive health system. A study on the public health challenges of the 21st Century by the Center for Chronic Disease Prevention at the CDC determined that the US per capita health expenditure is 2x the average (\$7k) of 29 developed countries, with life expectancy below other countries that spend less. Seventy-five percent (75%) of health care spending is on people with preventable chronic conditions.

These health costs are further complicated when such a health system works best for only those that can afford it. The most vulnerable communities cannot afford or do not have access to expensive health treatments. They need a health care system that stops them from getting sick.

Preventing illnesses is considerably more effective and cheaper than treating them accordingly to a recent General Surgeon's report. They cite, for instance, that a 5 percent reduction in the prevalence of hypertension would save \$25 billion in 5 years.¹

The Affordable Care Act (ACA) is also driving health systems to wellness solutions. The law set up a system of incentives for health institutions to keep people healthy vs. treating them after they are sick. Relatedly, IRS standards for non-profit hospitals are raising the bar for better understanding and investing in the social determinants of community health.

Finally, a holistic health framework continues to grow. Consumers are appreciative of the healing arts and healthy living. Increasingly apparent are the connections between physical health and mental, emotional, and spiritual well-being, which is further impacted by one's economic, social and physical environments. Our social networks, or the lack thereof, for example, determine our sense of well-being. Research shows a strong reciprocal relationship between mental health and chronic diseases. Similarly, limited income predetermines nutritional levels, depression, the prevalence of obesity, Type II diabetes, substance abuse, infant morbidity and pre-mature deaths. Add to this climate change, which is now considered a threat multiplier to health and poverty.

These drivers of change, however, do not make change easy. How do you make a shift from our current health care delivery system to a community-centered wellness system? Current efforts are underway to transform our \$2 Trillion health industry from a tertiary to primary health care delivery system. The US health sector is the 8th largest sector of the U.S. economy that entails a comprehensive system of health enterprises and a workforce hierarchy that ranges from the

⁽see: https://www.surgeongeneral.gov/priorities/prevention/strategy/appendix1.pdf)

unskilled to highly specialized professions. A primary system of care requires shifting from a hospital/doctor-centered paradigm to a community clinic/paraprofessional health system.

Figures 1 and 2 graphically show the differences between the traditional tertiary and a primary health care system. The differences entail what kinds of health services to deliver (preventive vs. chronic and acute care), where to deliver health services (churches, school and local pharmacies vs. hospitals), and who are the primary health providers (paraprofessionals and outreach workers vs. doctors and nurses).

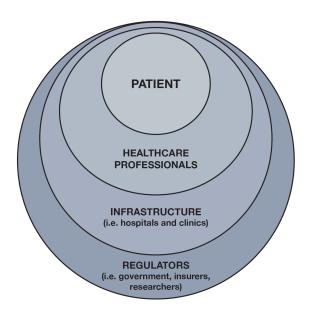
This clearly is an important and disruptive change. This involves moving resources from inpatient facilities to outpatient facilities and from specialty doctors to nurses, paraprofessionals and non-traditional providers.

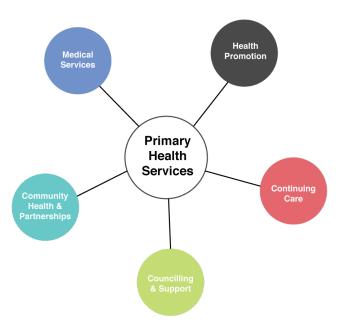
Figure 1

Figure 2

Diagram of A Tertiary Health Delivery System

Diagram of A Primary Health Care System





Building a comprehensive primary health care system is an important advancement. It is not, however, a community-centered wellness system focused on resilience.

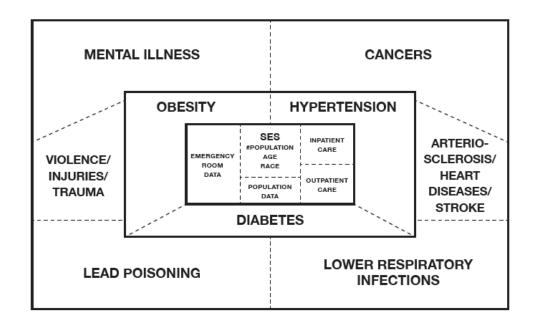
From Wellness to Community Resilience

A community resilience program radically departs from even the progressive population health and wellness model of recent years. It focuses on the structural underpinnings (economic, physical and social) of health disparities and not just health care or health promotion services. It is an asset-based vs. a deficit-based delivery system. It does not view the community as sick without capacity for self-healing or resilience.

The traditional (deficit model) approach to identifying health needs and strategies is to examine the health problems of a community. Using health statistics, hospital data, and perhaps some socio-economic and demographic data from the census, researchers provide health administrators a snapshot of what is wrong (see figure 3). None of these data, however, explain the underlying causes of the problems or identify the levers for eliminating them. The typical solution is to invest in indigent/sick care and perhaps some consumer outreach and education services. But these solutions don't change how the community is organized or functions so as to better support community-wide wellness, to overcome challenges and to build generative systems of care.

Figure 3

Community Health Needs Assessment (Deficit Model)

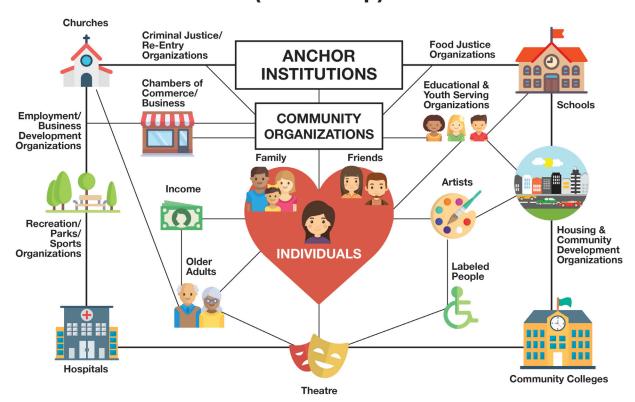


Rather than limiting its focus on population illness, or even their socio-economic predictors, a community resilience approach focuses on community-level challenges, such as dysfunctional economies, public safety, food, energy and water systems. More importantly, community assets are harnessed to foster sector or systems level changes. It recognizes communities as resilient --- well endowed with a tremendous range of individual, organizational, and institutional capacities. These assets are incorporated into the wellness arsenal to address difficult, seemingly intractable impediments to health, including issues of poverty, environmental health, as well as social and racial injustices. Without addressing these structural challenges, wellness will be an elusive endeavor.

The community resilience model integrates a full range of community assets into the health delivery system (see figure 4). Community economic development organizations, environmental organizations, youth organizations, public and private sectors partners are essential actors and anchors in community wellness. The gifts of the elderly, youth, musicians and artists, business owners are not left off the table; they are essential vessels for health promotion and management.

Figure 4

Community Health Assessment (Asset Map)



Given that the traditional health care delivery system was not built to focus on community resilience, it is likely unprepared, under-resourced and underdeveloped to promote resilience. The good news is that health institutions do not have to go it alone. Strategic partnerships with public, private and community-based organizations with the expertise and complementary resources help to get generative health outcomes that emanate from resilient communities. A strategic and intentional program of inclusion is needed, however, to leverage these assets.

The First Steps Towards Resilience

Building community resilience entails a community-centric wellness program that diagnoses the health of the community and prescribes a cure that leads to generative community health outcomes. Community health differs from population health in that it seeks to prevent the conditions that cause 70% of illnesses. Specifically, heart diseases, cancers, lung diseases, strokes and unintentional injuries are the top 5 causes of death and disabilities in the U.S. Together they account for 63% – or almost 900,000 – deaths each year in people under the age 80. According to the Center for Disease Control (CDC), between 20% to about 40% of deaths from each of these causes could be prevented. While population health focuses on strategies to change consumer/individual behaviors to minimize these health problems, community-centric wellness or community resilience strategies focus on the larger environmental and economic factors that produce and reproduce these health challenges, putting entire communities at risk.

The unit of analysis, therefore, is on the community itself and not the individuals in the community. Population health metrics focus on population rates of unemployment, diabetes, high blood pressures and cancers and on health promotion and health management strategies, such as early screening, cholesterol and diabetes monitoring, for example. Community metrics, however, focus on the community conditions that lead to these illnesses. It focuses on changing key community/regional systems-- economic, food, energy/utility, housing, transportation, correctional, educational -- to minimally "do no harm" and to, ultimately, operate to support community-wide health outcomes.

The prerequisites to advancing a community resilience/ community-centered wellness program involve:

Metrics: Measuring Community Resilience/Wellness

Mapping: Community Assets

Mobilizing: Effective Community Engagement

Each of these elements will be further detailed in the sections that follow.

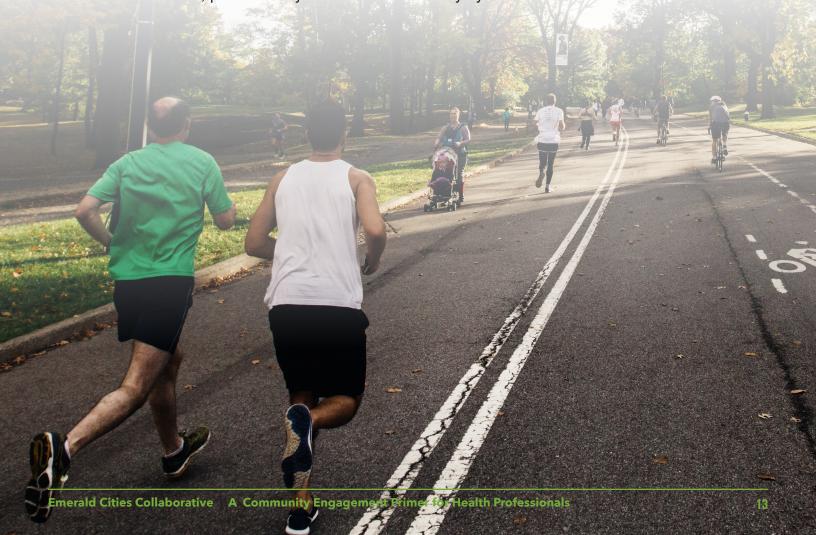
Section 2:

Metrics: Measuring Community Resilience

The first step in a community resilience/wellness program is identifying the **metrics** of community resilience to assess the health of the community. It asks the core question: what's the target?

Healthy communities are relatively well defined. They reflect high quality places to work, play and raise children. They provide access to affordable housing, good employment, education, recreation, shopping, and other basic needs and community amenities. They are safe from crime, floods, pollution, and the insecurities of natural and man-made disasters. They are fortified by resilient infrastructure that reliably moves goods, people, water and energy to homes and businesses. They radiate feelings of belonging and mutual interdependence.

A 2018 U.S. News Healthiest Communities study conducted by the <u>University of Missouri Center for Applied Research and Engagement Systems (CARES)</u> makes the point: where you live determines how well you live. The top ten healthiest places included, Falls Church, Loudon, and Fairfax Counties in Virginia; Douglas, Broomfiel, Routte and Ouray Counties in Colorado; Los Alamos, New Mexico; and Hamilton County Indiana. Whether rural or urban, the healthiest communities ranked high on 80 metrics across 10 health-related measures of community health and well being that were identified by the <u>National Committee on Vital and Health Statistics</u>. These high performing communities had well functioning economies, educational systems, quality natural environments, public safety and other community systems.



Envisioning and defining healthy, livable and resilient communities is easier than planning and developing them. It is generally understood that a person's life chances can be predicted by his/her zip code. While not deterministic, a person's economic, educational, social and physical environments influence access to resources, opportunities and, ultimately, health status. But many communities must overcome legacies of rural and urban poverty, segregation, economic dislocation, racial discrimination, and decades of divestment and now displacement through gentrification from reverse migration. Fostering a healthy community, therefore, goes beyond individuals and must capture and reverse the structural conditions that undermine life chances of an entire population that live in underperforming communities.

How conducive is the living environment for a healthy lifestyle? How good are the schools? Is there an extended family network of support? Is this community located near toxic emitting land-uses? What are the climate risks? These and other questions are among the key social determinants of health. They are the pre-conditions to diabetes, cancers, asthma, obesity and other health challenges. They provide clues to a community's resilience.

So, what does a healthy, resilient community look like? The anatomy of a healthy community is, in many ways, analogous to the anatomy of a healthy body. There are several inter-related parts. Specifically, a healthy community requires a well functioning:

- 1. community economy,
- 2. built and natural environment, and
- 3. social/civic infrastructure.

Healthy Community Economies

Research shows a strong link between poverty and illness. This section discusses strategies to lift people into better health by improving how the local economy functions, especially as it relates to families that live in high poverty communities.

Population health typically measures a community's economy by the level of unemployment, underemployment, or level of education of its residents. Community-resilience, on the other hand, uses a wider lens and measures what is best characterized as: 1) drought, 2) leakage, and 3) isolation.

Drought

Drought is a way to describe when there is not enough money in a community to support basic family needs, including food, clothing, shelter, education, and medicine. Measures of drought exist within the healthy communities index developed by the National Committee of Vital and Health Statistics, and they include: household income, public assistance income, unemployment, labor force participation, weekly wages, employment diversity, job proximity and business growth.

These are generally population level data and do not consider other factors that contribute to a poorly functioning local economy. The fact is, a person's economic situation is often caused by structural factors. This includes a weak or extractive local business sector, discrimination in hiring and contracting, redlining and/or predatory lending, or even the complete absence of mainstream banks. These factors, especially when combined, prevent economic mobility and wealth generation that undermine a community's health and resilience.

A structural lens to drought considers:

- High rates of unemployment/underemployment (income and wages).
- Lack of community capital needed for economic mobility, including the lack of savings, loans and investments for mortgages, home improvements, to start or grow business, and educational opportunities. These are the essential investments needed for wealth generation and a high performing community economy.
- High costs of goods and services due to lack of market competition. The axiom is true that "the poor pay more" due primarily to the lack of business competition in their communities.

Sample strategies to address drought include:

- Income/wages: living wage campaigns, local hire and procurement commitments from anchor institutions and public sector investments.
- Community capital: community reinvestment policies; alternative financial institutions community lending programs to help communities start businesses, fix up their homes or increase educational options for their children; community equity schemes.
- Cost of goods/services: social enterprise and business development to reduce costs through market competition; affordable housing; utility supports.

Leakage

Leakage depicts a situation in which a community's income does not stay or circulate in the community long enough. The result is a loss of the community's regenerative capacity - the ability of the community to expand the quality and quantity of its public services (health, education, welfare, fire, police, etc.), resilient infrastructure (water, sewer, energy, etc.), as well as its housing, economic and recreational assets. Leakage undermines community resilience.

Even the most impoverished communities have resources from earned wages, the informal economy, third party "government' payments, savings and other sources. But they often "leak out" of the community, transferring local capital to absentee (business and real estate) owners, subsidizing the economy of other communities. This is primarily due to the community's lack of capital to own, leverage and control its own assets. Renters are strengthening the balance sheets of apartment owners. Buying from Home Depot vs. a locally owned hardware business undermines community wealth creation achieved by circulating dollars within the community.

Independent retailers return

more than three times as much money

per dolar of sales than

chain competitors.

"

The tools for leakage prevention includes:

- Community land banks to keep local real estate under local control
- Local, sustainable sector (supply-chain) development (e.g., local sustainable food sector, clean energy sector)
- <u>Cooperative enterprises</u> food, housing, energy, lending
- <u>Social enterprise and local business development</u> using import substitution, that replaces goods produced/bought outside the community with goods and services produced within are among the successful strategies.
- Buy local campaigns
- Alternative local currency systems

The benefits of these leakage strategies are multi-faceted. The obvious economic benefits include: circulating capital within the community, lowering the costs of goods and services (market competition), creating local jobs and businesses, increasing community wealth/capital and outside investments.

Before you buy, consider...

How much of your \$100 purchase stays in your community when spent at

an independent local store

an in-town chain outlet

a remote
online store
(if delivery driver resides locally)







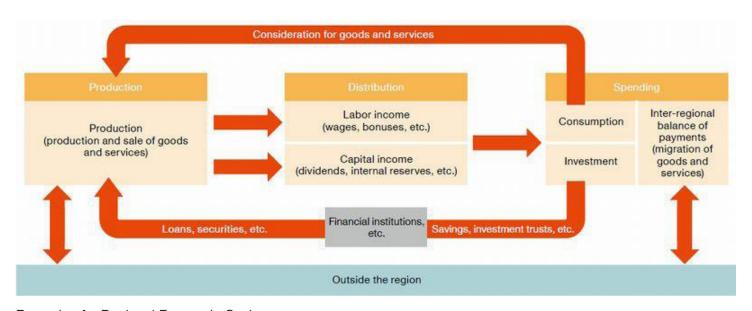
Beyond the return on capital, an interesting number of health and environmental articles on Inner Wellness and The Economics of Happiness point out that locally scaled economies - buying local products from local businesses keeps money circulating closer to where you spend it - are key to ecological sustainability, authentic living, climate resilience and adaptation, social capital formation and community building, and overall community security and well-being.

In fact, it is interesting to note that the environmental sustainability program for Japan's Ministry of the Environment entails a community-building model through local money circulation (See figure 5).

Figure 5

Community Building through Local Money Circulation Analysis

-- The Case of Minamata, Japan



Example of a Regional Economic Cycle

Source: Ministry of the Environment. JFS Newsletter No.168 (August 2016)

Isolation

As the title suggests, isolation is when local communities' are economically disconnected or physically segregated from opportunities within the larger regional economy. This includes access to quality housing, schools, retail, public services and jobs, especially in high, economic growth sectors. Public sector housing, transportation and zoning policies, as well a private sector real estate and banking policies intentionally segregated communities by race, class and land-use. Adding insult to injury was the emergence of de-industrialization, suburbanization, and the resulting capital, business and white flight that began in the late 1950s.

Many urban communities across the U.S. are now experiencing an in-migration of suburban and climate refugees. The result is gentrification; a new wave of dislocation/isolation of the urban poor as they are pushed out of new opportunities for jobs, housing, retail and other benefits of urban revitalization.

Added to this physical isolation are the unresolved problems of discrimination in hiring networks and a skill asymmetry between white-collar jobs and the unskilled and semi-skilled rural and urban poor.

Finally, isolation also refers to the lack of cultural and social integration into the American mainstream. Research shows that one of the most critical factors associated with perceived and actual well being is how connected people are to others and their sense of efficacy with respect to being a part of the American dream. Social relationships provide emotional supports, helping networks, access to services and resources, a sense of security and so many other things. Moreover, social integration across race, class, age, and gender into civil society is critical to a person's social and economic mobility. (See also: social capital/civic infrastructure section of this report).

The remedy to isolation involves:

- Anti-gentrification/ policies/strategies
- Integrated land-use policies inclusive zoning and mixed use housing
- <u>Mixed-income neighborhoods</u>/housing policies
- Reverse commute programs to connect urban workers to suburban jobs
- Skills training to connect un/semi-skilled workers to high skill sectors
- Anti-discrimination and cultural education and exchange

Healthy Built and Natural Environments

Our built and natural environments are significant predictors of community resilience and population health. It is difficult to be healthy if you live in unfavorable, overcrowded or stressful living and workplace conditions, or live or work around chemicals, toxins and areas exposed to air or water pollution. These environmental conditions are insidious. They take years to manifest as health problems and they do not lend themselves easily to cure. Similarly, many lifestyle diseases, such as obesity, are associated with the lack of open and recreational space.

In fact, fixing the built and natural environments can, according to a recent study, reduce each of the number one cause of repeat emergency room visits in all major age groups:

Table 1

Repeat Emergency Room Visits by Major Age Groups

Age Category	Number 1 Repeat Emergency Room Visits
Under 1 year	Bronchitis
Between 1-17	Asthmas
44-65	Cardiovascular problems

The Built Environment

A healthy built environment includes, at a minimum: 1) housing that is adequate and affordable; 2) quality basic infrastructure, including water/sewer, energy and transportation systems, and 3) environmental health (air and water quality).

The American Public Health Association calculates the health impacts of America's built environment. It includes 6,600 premature deaths, 150,000 asthma attacks in children, 3,300 heart attacks, 2,800 hospital admissions and 490,000 missed work/school days annually in the United States. A disproportionate number of these are felt by those with the least resources and the least access to quality healthcare—low and fixed-income Americans; in part because low-income communities are stuck living in high toxic neighborhoods, including nearby freeways, factories, power plants, brownfields and other stranded industrial uses.

- Housing Quality and Health. Housing affordability and adequacy are among the predictors of population health and community resilience. Poor housing conditions include the presence of lead, radon, carbon monoxide, asbestos and other toxins that lead to brain and nervous system and long-term developmental impairments, as well as cancer, neurotoxicity. Pest infestations, water leaks, poor ventilation can result in mold, mites and other allergens associated with poor health. Cold, overcrowded housing leads to colds and respiratory illnesses, as well as stress. Poor housing is most susceptible to lead to higher rates of morbidity and mortality from climate induced extreme weather.
- Housing affordability and Health, on the other hand, can reduce malnutrition, diabetes, anxiety and depression. Housing that is well maintained and not overcrowded ensures the reduction in injuries, substance abuse and mental illness.
- Air Quality and Health According to the US Environmental Protection Agency (USEPA), 35 million people in the United States are exposed to air toxins emitted from road traffic. The transportation sector is a significant source of harmful air pollutants, including greenhouse gases. Mobile sources emit more than half of the nation's benzene, toluene,



HEALTH INEQUITIES

Communities of color breathe nearly 40% more polluted air than whites and live in counties with high levels of pollution. Asthma & other health problems are common.

and acetaldehyde, the air toxics of greatest public health concern, along with 91 other airborne chemicals.

Children and adults living or working near roadways are also more likely to suffer from asthma and other respiratory diseases, as well as atherosclerosis and other cardiovascular problems. Other health effects associated with exposure to poor air quality near roadways include cancer, adverse reproductive outcomes, and impaired neurocognitive performance in children. Low-income communities and some communities of color are at risk for higher levels of pollutant exposure, because their homes are more likely to be located near busy roadways (APHA - Date: Nov 10 2009 Policy Number: 20099)

- Water Quality and Health Aging water and sewer infrastructure are growing health challenges. Lead leaking from pipes and faucets in homes and schools are the source of major concern as it leads to developmental disabilities, which has been associated with the cradle to prison pipeline. Specifically, developmental challenges often lead to poor educational outcomes that predict increased rates of joblessness, economic crimes, and greater attachment to the criminal justice and correctional systems.
- Land-use and transportation policies that take their greatest tolls on health, equity and the economy include:
 - Traffic injuries which is the leading cause of death in the US for people under 34 years of age,
 - Non-motorized transportation the quality of non-motorized infrastructure is often lower in low-income and minority communities, contributing to higher pedestrian fatality rates.

The Natural Environment

The natural environment focuses on our open spaces and the growing impacts of climate change on health.

Parks and open spaces

Green spaces are assets essential to good health. According to the U.S. Surgeon General 60% of US adults do not meet the recommended levels of physical activities and 25% are completely sedentary. Sedentary lifestyles are estimated to contribute to as many as 255,000 preventable deaths per year and physical inactivity is a major contributor to the rising rates of chronic illnesses such as type II diabetes and heart disease.

A healthy natural environment includes outdoor/recreational space and services (open, active

and passive). It is preventive medicine for a range of ailments. In the U.S., an evaluation of the largest 85 cities in the country (population 57.2 million) found the health savings from parks was an estimated \$3.08 billion. Among the actual and perceived benefits are: general health, reduced stress levels, reduced depression, strokes, immune system functions, intracellular anti-cancer proteins and improved fitness.

Environmental benefits include climate related health problems, including: reduced heat islands (strokes), respiratory ailments from air pollution due to carbon sinks, and gastrointestinal ailments from storm water runoff and sewer overflows.

City planners, public health professionals and recreational professionals use different standards to determine the appropriate population to recreational ratios. And the standards differ by type of recreational space. The American Public Health Association uses the following standards to determine the adequacy of a community's recreation and open space which should be considered in any health needs assessment.

Table 2

Minimum Standards for Recreational Space by Type of Space

Type of Recreation Space	Minimum acreage/1,000 popl	Minimum acreage
Playground	2.75 acres/1k popl; 6 acres/5k popl	2.75 acres
Neighborhood Park (Single family)	3.5 acres/5k popl 1.5 acres/1k popl	1.5 acres minimum
Multifamily neighborhood	6 acres/5k popl 2 acres/1k popl	2-6 acres minimum
Major Parks	2.5 - 4 acres	100 acres



Climate Change and Extreme Weather Events

The impacts of carbon emissions on the environment - fresh water, biodiversity, food, ocean acidification - and extreme weather events - heat waves, floods, hurricanes - must become part of a community's health assessment and measure of community resilience. Climate change has been called a threat multiplier. Individual and community economic, health and social vulnerabilities are exacerbated by the impacts of climate change. Fossil fuel combustion leading to air pollution and extreme weather events contributes to respiratory conditions, heat strokes, injuries, water-related diseases (gastro-intestinal, liver and kidney damage, legionnaires disease), vector-borne diseases (malaria and Lyme disease), stress, among other things. The chart on the next page identifies - in broad terms - some of the environmental and health effects of climate change.

Table 3

The Effects of Climate Change on the Environment and Health

Climate Change Impacts	Extreme/Prolonged Heat Waves	Storms/Major Water Events		
Environmental Effects	 Wildfires Drought Sea Level rise from melting snows Increases in outdoor air pollutants (ozone and fine particulate matter) Diminished food production 	 More intense precipitation Flooding Storm surge events Sea Level Rises from (Extreme Heat) 		
General Health Effects	Heat related illnesses/ deaths:	Drowning; injuries Water-related illnesses/ deaths:		
Mental Health	Exposure to traumatic events due to loss of property, jobs/income, life, health, displacement, etc.: • Post-traumatic stress disorder, • Depression and anxiety; substance • Abuse; strains on social relationships			

Social Cohesion/Social Capital

A well functioning and health community must have a well functioning civic infrastructure at the center. Just as a healthy heart is the engine of a healthy body, civic/social capital is the engine of a healthy, resilient community. While not directly associated with illnesses, it is directly connected to community resilience. It helps a community to mitigate and adapt to community challenges and supports community wellness.

Social cohesion answers questions regarding how well organized is the community? How dense are its institutional assets and how well connected are the different stakeholders and the various parts of the social system. It determines how well a community is able to get things done, or to fix things that may be broken or develop a sense of worth, self-sufficiency and resilience under adversity.

Numerous studies have determined that different forms of social capital are critical to a healthy community. People with wider social networks are more likely to be employed (Aguilera, 2002), to progress in their career (Lin, 2001) and to be paid more (Goldthorpe et al., 1987). Social networks reduce crime rates (Sampson, 2012; Sampson et al., 1997) and improves social identity and life chances (Ray Forrest and Ade Kearns (2001); it affects personal well being (Helliwell and Putnam, 2004; Helliwell, 2003) and health (Veenstra, 2002 and 2000). Social cohesion is also the determining factor in climate resilience and coping/adaptive capacities, determining whether a community is able to "bounce back" from extreme weather events and other forms of major disruptions (Adger, 2003, Nakagawa & Shaw, 2004).

The dimensions of social capital, as delineated by the Organizations of Economic Cooperation and Development (OECD), include:

- · The number and types of associations,
- Personal Relationships the structure and nature of people's personal relationships and is concerned with who people know and what they do to establish and maintain their personal relationships.
- Social Network Support the level of resources or support that a person can draw from their personal relationships, but also includes what people do for other individuals on a personal basis.
- Civic Engagement the actions and behaviors that can be seen as contributing positively
 to the collective life of a community or society such as volunteering, political participation
 and other forms of community actions.

 Trust and Cooperative Norms - the shared values that shape the way people behave towards each other and as members of society. Trust and values that are beneficial for society as a whole (such as for example solidarity and equity) can determine how much people in a society are willing to cooperate with one another.

Measuring social capital is difficult. There is no one or easy way to measure the various dimensions (trust, personal relationships, etc.) or types (individual, organization, community) or degrees of social capital. You must consider both direct (surveys) and indirect (proxy data) to hedge a guess on the degree of social capital in a household or community. Some of the measurements include:

- Political participation (electoral data)
- Community involvement (# of community organizations)
- Informal networks/sociability (community surveys)
- Trust, norms and sanctions (community focus groups)

Summing Up

Table 4 outlines the community resilience metrics that most directly impact the major preventable health challenges in the U.S. The risk factors leading to heart diseases, for example require improving the community's economy and built environments, including wages, concentrated poverty, recreational spaces and programs. Looked another way, addressing community level poverty will reduce heart disease, cancers, lung diseases, mental health and infant morbidity/mortality. Or similarly, if respiratory issues are of concern, then major interventions involve fixing the built and natural environments, including carbon emissions, recreational/open space access, and toxic land-uses.

Table 5 provides more details on community resilience strategies to promote community-wide wellness for specific preventable diseases.

Table 4

Highlights of Community Resilience and Major Preventable Health Risks

Community Resilience Factors	Community Resilience Metrics	Major Preventable Health Risks					
		Heart Diseases Strokes Obesity/ Diabetes Cholesterol High blood pressure	Lung/ Respiratory Disease Asthma Lower respiratory	Cancers	Mental Health Stress Anxiety Hypertension Substance Abuse	Accidents Injuries/ Violence	Infant Morbidity/ Mortality
Community Economy	Drought Un/under Employment	•		•	•		•
	Lack of financial svcs/ wealth				•		
	Isolation/ Concentrated poverty	•	•	•	•	•	•
Built/ Natural	Air pollution		•				
	Water pollution		•	•			•
	Poor Transportation Infrastructure	•	•	•		•	
	Non- motorized infrastructure	•				•	
	Recreational space	•	•		•		
	Climate Impacts		•	•	•	•	

Table 5

Major Preventable Diseases and Sample Community Resilience Strategies

Preventable Diseaases	Health Risks	Community Economy (Drought, Leakage & Isolation)	Built/Natural Environment	Social Capital
Heart Disease/ Stroke	Obesity Cholesterol High blood pressure	Income Strategies Livable wages Employee/Community Equity Job Creation Strategies Anti-Leakage Capital Formation/Collective Economic Strategies Investment clubs Coops (workers/buyers) Community-owned enterprises Real Estate Land banks Buy Local Campaigns Alternative Local Currency Systems Local supply chain development Isolation Inclusion and Access Policies Anti-gentrification, integrated land-uses, affordable housing, reverse commute programs, cultural education	Built Environment Transportation policies to reduce automobiles Land-use policies to increase exercise/ walking/biking Natural Environment Increase outdoor space Increase fitness programs	Health promotion Exercise clubs Diet Mutual Aid (local currency program) Church food banks Job/Investment Clubs Group purchasing/ coops- food coops Housing coops
Lung Disease	COPD Bronchitis Asthma, Lower respiratory disease		Climate and environmental justice initiatives Land-use planning Clean energy/carbon and air pollution reduction Green and Healthy Homes - indoor air pollution	Energy/climate justice campaigns Health promotion Health management support
Cancers		Job creation/Income strategies Capital formation/collective economic strategies Public and community investment strategies to improve water, energy and food systems Community-wide affordable housing investment in affordable and healthy foods	Green & Healthy Homes Program to cure sick buildings (lead, asbestos) Reduce Carbon emissions via energy efficiency programs Chemical fumes, dust, air pollution Land-use policies Clean energy strategies	Environmental Justice and Clean up campaigns
Unintentional Injuries	Trauma Violence Substance Abuse	Income strategies	Bike and vehicular protection infrastructure	Anti-violence campaign Correctional/criminal justice reform
Infant Morbidity		Income strategies	Green and healthy homes	Health promotion

Section 3:

Mapping: Community Assets

Community Health Needs Assessments (CHNA) are commonly used in a hospital/doctor centered health delivery system. Often this is a database search of prevalent health problems in a community. One CHNA is often indistinguishable from any other. It cites levels of diseases prevalent in a community and proposes health care services, health promotion and health management options to change them. Innovations in conducting a CHNA have been noted. Some have actually talked to residents as required by ACA, but often leads to the same patient focused health care strategy. Others have developed innovative programs, most notably improving food access as primary prevention to nutrition related health problems.

A community resilience model, however, includes mapping a community's assets as opposed to merely its deficits. This offers a number of different opportunities for health institutions.

- It leverages public, private and community investments with those of health institutions.
- It identifies levers of change. What is doable beyond the resources of health institutions? Where are the community's capacities?
- It determines areas of underdevelopment
- It opens the door to partnerships that engender efficacy (we can do this) and a collective vision of community resilience.

Asset-Mapping: Background

Asset mapping is rooted in the long tradition of Asset-Based Community Development (ABCD) first promoted by John McKnight and John Kretzmann (1980s). It is still used today in the community development field and is an essential tool for the community wellness and resilience agenda of health institutions.

Specifically, it maps a community's assets as the primary building block of a resilient community. ABCD harnesses the skills and social capital of local residents, the political power and subject matter expertise of local associations, and the political and financial capital of local institutions to build community resilience.

The major categories of community assets identified by McKnight and Kretzmann include:

- Human resources resident skills, knowledge, experience, personalities and ideas
 gathered through surveys, focus groups and community organizing. Imagine harnessing
 the talents of musicians, artists, fitness specialists, gardeners, and/or seniors for an
 anti-obesity campaign and a community-wide program of healthy eating. And otherwise
 imagine giving individuals a sense of efficacy and worth, that they are part of an important
 community enterprise that is not only empowering, but is making a difference in delivering
 positive health outcomes.
- Natural resources: land, water, forests, wildlife, and sun. Are there open spaces that if
 incorporated into a community wellness program provide health venues and alternatives
 to substance abuse, anxiety, stress levels and violence, through fishing and other
 recreational outlets?
- **Physical resources**: fixed, structural or man-made, buildings, homes, churches. Never under-estimate the importance of meeting spaces, safe havens, cooling centers, resilience centers, among other uses.
- **Social resources**: relationships, friendships, networks, traditions, cultures. Tapping into the community's culture(s), networks are perhaps the most important ways to ensure a health safety net for wellness. It is the role of health institutions to strengthen the network of support in a community as part of its health strategy.
- **Economic resources**: cash, capital, savings, wages, pensions. Banking and other financial institutions, as well as community capital, if harnessed for community wellness, are the economic engines community wealth creation.
- **Spiritual resources**: faith, hope and love, prayer, worship. Worship institutions are communities of trust, as such are essential convening, educational and centers for all forms of community engagement. They are outreach and movement building centers and centers for health and healing.

The development of this inventory of community assets is just the beginning of your mapping. You need to undertake an assessment/diagnostic of these assets to determine how to best use them in your community resilience program. Central to this process is:

- Defining your target community, and
- Delineating the various types of organizations

Defining Community

Generally, the prevailing question is always "who is the community". This suggests a level of confusion, fear and paralysis when introduced to the dense array of organizations that have different needs, if not demands, on health institutions.

This is perhaps the scariest part of the new community resilience enterprise given the limited outward facing activities/programs within health establishments. You are likely to encounter a host of divergent points of view, significant cleavages, competing interests, and splintered subgroups. The likely difficulties of organizing a representative and accountable citizens' group to be a part of a cohesive and enduring anchor-community partnership can not be understated in the face of competition and, often, distrust of institutions.

This seemingly complicated undertaking is best facilitated if you understand your goals and your community's assets. There are different types of communities to consider.

Types of Communities

There are extensive networks and people representing geographic, demographic, special interest and political actors

Geographic Communities

First, you need to define your geographic target area. Where is your sphere of influence? Where do you want to make a difference? Health institutions work within and have defined service territories. These may or may not coincide with the political, economic and social geographies that ultimately define the health of a community or the resources you need to affect structural or community change. Here is what you need to consider:

- Service territories Service territories are artificially constructed geographies that are essentially planning areas likely constructed without clear rhyme or reason, and certainly not with a community-centered wellness framework. A well functioning health service area should nestle within or otherwise align with clearly defined and well-functioning services territories of fire, police, emergency management, chambers of commerce, etc.
- **Jurisdictional/political territories** include your power resources. Policy pushes and changes in a community's well being requires a working relationship with local, state and federal agencies and elected officials.
- **Neighborhood geographies** are at the impact level. Where do you need or can you make the greatest impact... where do you want to have the most visible, material difference?

In general, you should operate at 2 levels of geographies: 1) define your largest target area - that includes the broadest logical/natural boundaries that include the major stakeholders and institutions (public service sectors, educational and health institutions, business sectors, political jurisdictions) needed to leverage maximum social, political and economic capital to transform the structural challenges to community resilience; and 2) the smallest impact area - that represents the major challenge area and where you might target for visible impact.

Constituent Communities

In addition to geography, the community is comprised of numerous individuals, constituencies and community organizations, representing such interests as:

- ✓ Religious/faith
- ✓ Ethnic and social justice interests
- ✓ Neighborhood constituencies/concerns
- ✓ Youth
- ✓ Community-based services
- ✓ Housing
- ✓ Health and Environmental interests
- ✓ Labor and business interests
- ✓ Social justice organizations, and the list goes on.

This list affirms that there is no one community. You will be exposed to only segments of the larger community, not its entirety. Moreover, these segments do not represent all the voices and interests of their particular sector. Strategic choices must be made as to how to best garner the voices of the community. There are different ways to do this, including:

Organizing the unorganized involves probably the most authentic, but perhaps difficult community engagement strategy. This entails door knocking and getting direct input and participation from residents that may or may not be involved in other community organizations. This seeks the broadest level of community engagement as opposed to "representative" input. This is slower, more difficult terrain and does not involve charismatic leaders sophisticated in the ways of organizational and institutional change. But it is essential if you want long-term community change and buy-in to make a meaningful impact on household level improvements in health or to create community wealth or resilience. Moreover, community organizing at this level brings in the voices of frontline communities -- those most affected by the problems - but have historically been excluded from decision making processes.

- Organizing the organized involves working with existing organized groups. It provides a
 shortcut to organizing stakeholder interests, reaching specific target populations, getting
 critical input, feedback and engagement. The largest, loudest, most financially endowed
 organizations, however, may not have credibility in the larger community.
- Organizing coalitions involves tapping into existing efforts to organize multi-stakeholder coalitions. The work involves coalescing multi-stakeholder interests around a common vision and purpose. This is especially useful for consensus building communityengagement model.
- **Special interest organizing** involves organizing specific communities directly impacted by issues of concern affordable housing, diabetes, educational inequities, environmental justice, etc. -- as participants in designing and implementing solutions.

The Typology of Community-Based Organizations

In defining community it is also helpful to recognize the different types of community based organizations. Most health institutions partner with a handful of organizations to provide a discrete set of services – nutrition, workforce, housing - for a defined community. A community resilience framework requires a broader set of partners that can work at the service as well as the policy, program and project development levels, changing the structural conditions that mitigate against a community's resilience.

Different groups provide different assets and capacities and have their own theories of change, goals and strategies. Even organizations working within the same sector such as the environment may share a mission to improve access to clean water but not strategies. Some focus on research, others on legislative policies, others on community education or water equity campaigns, and others on implementing green infrastructure projects at the community level. These are all important roles and contribute to a comprehensive resiliency strategy.

A helpful typology of community organizations has been established and updated by Jack Rothman in 2001 and has been enhanced by others. The matrix on the next page provides a general framework for distinguishing models of community organizations. Most community organizations fall within one of three categories: community service, community action or community development. They differ with respect to the change they seek, the strategies the use and the role of community stakeholders and practitioners.

Table 6

Typology of Community Based Organizations

Types of CBOs	Target Population	Problem Definition	Change Goal	Strategy/ Tactics	Role of Residents	Role of Practitioners
Community Service/ Social Planning	Pre-defined service area	Substantive social problems, such as health, housing, jobs.	Social Reform Improve/ Increase program services/ community systems	Top down Gathering data about problems Deliver program services	Consumers of services Program recipients	Power structure as employers and sponsors. Fact gatherer and analyst, program implementer
Community Organizing	Defined constituency (geographic or interest-group)	Issues of social justice, equity, oppression.	Social change Shift power structure/ relationships Increase community power and redistribution of resources	Bottom-Up/ Resident organizing and leadership development Community- driven issue identification, campaign development and community action: Lobbying, advocacy, Policy development Direct action, and negotiation	Oppressed Resident driven - seen as leaders, constituents/ members Develop a collective consciousness among all people who are affected by the conditions; activist advocate negotiator, partisan, agitator.	Power structure as problem.
Community Development	Neighbor-hood level	Structural market failures (labor, credit, retail & housing markets)	Alternative, market development (community- owned economic development) Community capacity and self-help/ self- determination Locality development	Community- public-private partnerships Asset based community development Involves a broad cross section of people in determining and solving their own problems. Technical planning/ development	Resident driven developers and owners of community assets	Members of power structure as collaborators in a common venture.

The significance of this typology gets sharper when you begin to consider the different types of community engagement. The fact is, each type of organization has a role to play in building community resilience.

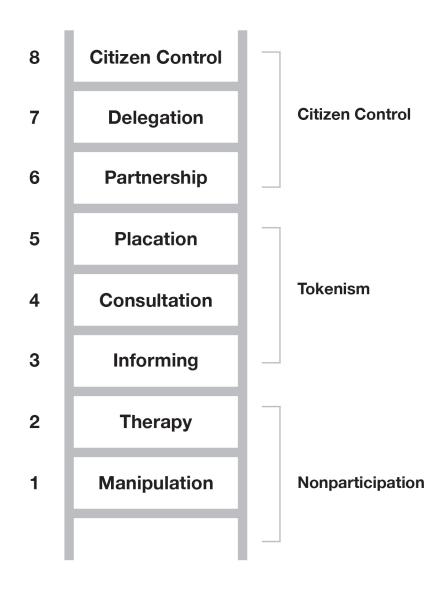
Section 4:

Mobilizing: Effective Community Engagement

After metrics and mapping, you are now ready to mobilize. Effective community engagement is the ultimate key to a successful community resilience program. Just as there are different types of community organizations, there are also different types of community engagement strategies.

Types of Community Engagement

In 1969, Arnstein developed a typology of community engagement that is still used today. She defines a gradient of participation and assigns a value to each step on the ladder of participation.



Arstein's Ladder (1969)Degrees of Citizen Participation

Arnstein characterized step 1 - 2 as non-participation and 3-5 as different levels of tokenism, with step 8, full citizens control, being the best. Specifically, according to Arnstein:

- **Manipulation and Therapy** are non participative. The aim is to cure or educate the participants. The proposed plan is best and the job of participation is to achieve public support through public relations.
- **Informing**. A most important first step to legitimate participation. But too frequently the emphasis is on a one-way flow of information. No channel for feedback.
- **Consultation**. Is a legitimate step using attitude surveys, neighborhood meetings and public enquiries. But Arnstein still feels this is just a window dressing ritual.
- Placation includes co-option of handpicked 'worthies' onto committees. It allows citizens to advise or plan ad infinitum but retains for power holders the right to judge the legitimacy or feasibility of the advice.
- **Partnership**. Power is in fact redistributed through negotiation between citizens and power holders. Planning and decision-making responsibilities are shared e.g. through joint committees.
- **Delegation**. Citizens holding a clear majority of seats on committees with delegated powers to make decisions. Public now has the power to assure accountability of the program to them.
- Citizen Control. The impacted communities -- those most affected by the problems
 handle the entire job of planning, policy making and managing a program, e.g.
 neighborhood corporation with no intermediaries between it and the source of funds.

This typology is useful in at least one important way. It makes clear that not all forms of community engagement are alike and that the higher you go up the ladder of participation the more genuine and engaged residents are in defining, implementing and benefiting from the solutions.

Community Engagement For Community Resilience

Another way to understand and approach community engagement relates to aligning community health/resilience goals with different community engagement strategies. The fact is, while different levels of community engagement are more participatory than others, a variety of community engagement strategies are needed, at the same time to address multiple objectives. This is the "all-in" approach.

In this context, there are three broad community engagement categories to consider: market based, empowerment and epistemic.

Market-Based Strategies

It is widely recognized that changing health outcomes is difficult without also changing consumer knowledge, attitudes and behaviors in such areas as, healthy eating and lifestyles. Market-based strategies - fliers, brochures, and workshops -- are often used for these purposes, to increase resident awareness about obesity or diabetes prevention. A variety of market-based strategies are used to reach out to inform and educate consumers.

Informing/Marketing/Direct Service

These are all forms of engagement that are transactional, one-way forms of communication. The tools used include fliers, brochures and other marketing materials, community education workshops, telemarketing, etc. When marketing efforts get to scale, such as the "No Smoking" marketing campaigns of the 80s, they have the potential to radically change attitudes and behaviors about healthy living and resilient communities.

Consultation

Consultation is a market-based strategy that relies on tools such as surveys, public meetings and hearings. These tools can be effective and efficient in gathering information. For example, consultation is useful in developing an effective marketing "message" and a campaign that will address the needs of specific target populations. At a minimum, the proposed product/service - in this case community health and resilience -- is more likely to be structured to meet community needs and concerns if their opinions are considered. These are, however, one-time, non-relationship building events. They provide limited opportunity for meaningful participation among community members. Depending on the context, there may be little accountability to the people from whom information is being requested.

Community Empowerment Strategies

Massive outreach and education strategies are necessary, albeit not sufficient to overcome structural barriers, such as health, educational or income inequality. A qualitatively different approach is needed for systems change work, such as replacing the fossil fuel economy with a clean energy economy that can concurrently address issues of health, climate and the environment, and the economy.

Community empowerment strategies are qualitatively different from market-based strategies. They are structured to build a "collective voice" and "power base" - as opposed to identifying "individual preferences and needs" - as a force for effecting how policies and markets work. But they are also different levels of "organizing" employed in Community Empowerment Strategies. Partnership and community organizing models, as opposed to mobilization strategies, are essentially considered the "deeper" forms of community engagement. With these forms, you can think of community engagement as both a means and an end: by opening up the space for people to form new relationships and take action together, the approach enables individuals to gain value from community investments, while fostering a shared culture of deep democratic

engagement. Community organizing and partnership models are particularly important where 'social capital' is considered the essential prerequisite for building healthy and climate resilient communities, for acknowledging a shared fate, for crafting a common vision of a healthy, resilient community and for mutually benefitting from the outcomes.

This section delineates the attributes of three types of community empowerment strategies: 1) mobilization, 2) community partnerships, and 3) community organizing model. Each has a role to play in building community health, wealth and climate resilience.

Mobilization

Mobilization describes episodic activism such as rallies, on-line petitions, boycotts, union organizing campaigns, town hall meetings and accountability sessions. The emphasis is not on long-term engagement or relationship building among participants, but these tools can all be effective in making bold statements. They can also help to catalyze much-needed change or energize a group of people. While this is not an engagement method used by Anchor institutions that typically focus on "service delivery", it is a powerful community resilience strategy seeking to change the status quo, such as changes to local policies, community local and economic conditions, and to increase the knowledge and buy-in of a large number of community members. The limits include: short-term horizons, the absence of decision-making and power-building structures, the importance of long-term relationships, trust building and social capital.

Community Partnerships

This form of community engagement operates more often at the 'project level'. These are often contractual agreements between health institutions and their community partners to deliver a set of programs, services, such as collaborating on a housing project, or a farmers market. An authentic partnership model, however, requires a shared set of principles and defined roles in the decision-making, responsibilities and benefits.

Community Organizing

Community organizing brings together the talents, skills, knowledge and resources of people in a community in order to increase their collective power, shift the existing power dynamics and increase the capacity of local communities and stakeholders to advance community change. Organizing is different from other forms of engagement because it emphasizes building relationships among the most impacted and excluded communities, consolidating perspectives, ideas and thoughts into collective action, and the process of personal and shared transformation that takes place when people work together for progressive social change.

Epistemic Communities

The collaborative model is a consensus building strategy that is central to the anchor-community engagement model. Diverse stakeholders are involved and are considered equal partners in the enterprise. They agree to share responsibility for decision-making and planning, with mechanisms in place to resolve conflict and ensure mutual accountability. In this way, the collaborative model can help to challenge societal norms and redistribute power.



This, in academic circles, is called "epistemic communities" and aligns the various stakeholder communities, including public sector, private sector, base-building organizations that have the capacity to mobilize and organize, with organizations that represent key constituencies (geographic, economic, professional, demographic; affordable housing developers, public housing authorities, tenants rights organizations; faith-based organizations; neighborhood groups, and public health advocates, among others). The goal is to work through differences, find common ground and a vision of shared destiny, form trusting long-term relationships, share assets and collectively develop strategies to build a more resilient community.

For more details on how to launch an Anchor-Community Engagement program please refer to the **Community Engagement Workbook** in this publications series, as well as case studies of Anchors in Resilient Communities (ARC) - East Bay, Bronx and Miami) at: www.emeraldcities.org

