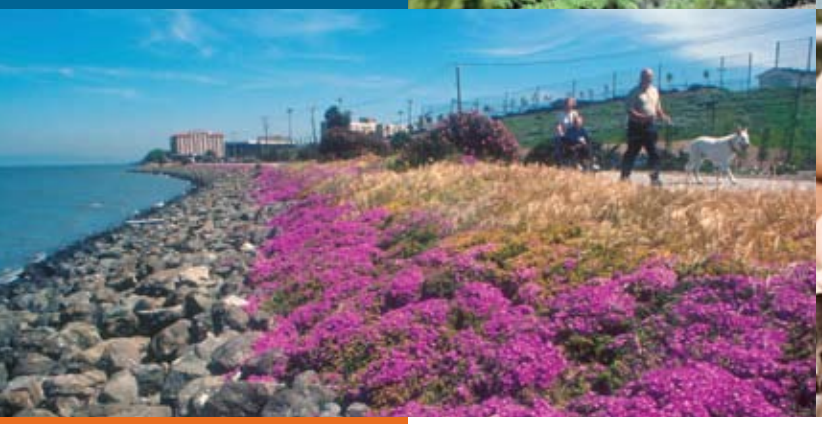

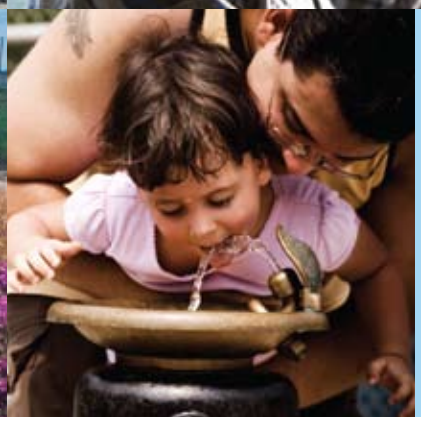

CHRONIC DISEASE PREVENTION FRAMEWORK

Produced by the CCLHO-CHEAC Chronic Disease Prevention Leadership Project

MARCH 2013

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TABLE OF CONTENTS

ABSTRACT 1

INTRODUCTION 2

- Scope of the Problem 2
- Economic Costs and Return on Investment 3
- Purpose of Framework 3
- Framework Development 3

THE FRAMEWORK 4

- Setting the Context 4
- A Broad Agenda and Comprehensive Approach 5
- Health Equity and the Social/Environmental Determinants of Health 6
- Engaging Community Partners to Achieve Equity 6
- State-Local Partnership to Create Unified Approach 7
- A Spectrum of Strategies for the Broadest Impact 7
- Funding to Support Sustainability 8

EVALUATION: MONITORING PROGRESS AND IMPACT 9

- Indicators and Outcome Measures Are Realistic and Reasonable to Achieve 9

RECOMMENDATIONS FOR ACTION 10

ENDNOTES 11

APPENDIX A 12

APPENDIX B 14

ABSTRACT

Chronic disease is the leading cause of premature morbidity and mortality in California, with tremendous public health, economic and societal consequences for the state.

Despite some significant advances in reducing overall incidence and mortality, chronic disease is the major contributor to health inequities in our communities. Local health departments (LHDs), legally mandated to protect community health, must make chronic disease and obesity prevention a major priority, particularly in low Income populations. Most chronic diseases cannot be addressed effectively through education or preventive health care alone. Without addressing the social and economic conditions, as well as the physical environment and community attitudes or social norms that influence community health, behavior change is difficult to sustain and chronic disease risk factors cannot be controlled.

This Framework emphasizes an approach with the highest potential impact: policies and priorities aimed at the community or population level.

It draws from the successful California tobacco control strategy, where individual and community change were achieved through environmental, policy, and institutional practices, and social marketing and other social norms interventions developed with public, private and community partners. It offers a common language and systematic approach for carrying out this work statewide and locally. It outlines an agenda that advances policy and systems changes; employs community engagement strategies; leverages state-local partnerships and cross-sector collaborations; and aligns with evidence-based practices. It makes several recommendations for state and local public health leadership to collectively advance a common agenda throughout California.

Cardiologist Dr. Jeff Ritterman takes his red wagon out on campaign to reduce sugar consumption in Richmond, California

INTRODUCTION

SCOPE OF THE PROBLEM

Chronic disease is the leading cause of premature morbidity and mortality in California, and the primary driver of increasing health costs in the United States. Cancer, heart disease, stroke, and respiratory diseases associated with obesity, tobacco use, and social, economic, and environmental risk factors account for 62% of all deaths in the state.[1] Almost half of all adults have at least one chronic disease[2]. Roughly 44% of men and 38% of women will develop cancer over their lifetime[3] and about 33% of men and 39% of women will develop diabetes.[4] These diseases cause major limitations in daily living for almost one out of 10 Americans—or about 25 million people.[5]

Chronic disease is the major factor in inequities in life expectancy and health outcomes associated with income, education, and ethnicity. Despite significant advances in reducing overall incidence and mortality, chronic disease health disparities persist in California and elsewhere most notably among historically low income communities:[6]

- While heart disease mortality declined for all population groups from 2000 to 2004, African Americans continued to suffer considerably higher mortality, with rates of 226 per 100,000 compared to 167.7 for whites and 125.7 for Hispanics[7].
- African Americans are twice as likely, and Hispanics 1.4 times as likely, to die of diabetes-related causes, compared to non-Hispanic whites.
- Obesity among adults correlates directly with education, with 18.1% of college graduates being obese compared to 33.8% of high school dropouts.[8]
- Life expectancy at birth for African American males living in California is 67.5 years, while for whites it is 75 years; African American females have an average life expectancy of 74 years compared to their white counterparts who can expect to live 80 years.[9]
- Education also strongly relates to life expectancy, with recent data indicating that white women with less than 12 years of education are now expected to live to age 73.5, where in 1990 that number was five years longer.[10]

ECONOMIC COSTS AND RETURN ON INVESTMENT

Chronic disease is the main factor driving health care costs in the United States today—comprising 18% of the GDP and representing more than one-sixth of the economy. Chronic disease cost the United States $1.3 trillion annually as of 2003 (latest figure available) and is likely to have risen since then. Of this, $277 billion was attributed to direct treatment and $1.0 trillion to lost productivity. According to State Controller John Chiang, "The economic cost to California of adults who are obese, overweight and physically inactive is equivalent to more than a third of the state's total budget."[11] Without effective prevention and management strategies, these costs will continue to increase.

Even modest investments in chronic disease prevention can yield dramatic health care savings. Funding proven environmental, community-based interventions to increase physical activity, improve nutrition, and prevent smoking is more cost-effective to reduce chronic disease and associated costs than clinical approaches alone.[12] Recent research indicates that prevention investments of only $10 per person per year could result in a national savings of $16.5 billion annually within five years. For California, this translates to a potential annual net savings within five years of $1.7 billion.[13]

PURPOSE OF FRAMEWORK

This Framework builds on the successful California tobacco control strategy, where individual and community change were achieved through environmental, policy, and institutional practices, and social norms interventions developed with public, private and community partners. Without changing the economic, physical and social determinants of health, behavior change cannot be sustained and chronic disease risk factors cannot be controlled. The epidemic nature of chronic disease and the persistence of related health inequities call for a more comprehensive approach.

The Framework provides a vision, common language, direction, and systematic approach for carrying out this work statewide and locally. Intended as a general guide for making chronic disease prevention a priority in local health departments (LHDs), it can be used to promote effective collaboration between the various public health leadership groups throughout the state. The Framework can also be a tool to educate decision-makers on the impact of chronic disease, the importance of prevention, and the potential economic return of investment in a proven, community-based approach.

Funding proven environmental, community-based interventions is more cost-effective to reduce chronic disease than using clinical approaches alone.

FRAMEWORK DEVELOPMENT

The California Conference of Local Health Officers-County Health Executives Association of California (CCLHO-CHEAC) Chronic Disease Prevention Leadership Project developed the CCLHO-CHEAC Chronic Disease Prevention Framework with partial funding from the *Network for a Healthy California*. The Project works to build capacity of LHDs throughout California to make chronic disease prevention a priority. It is directed by a statewide, cross-disciplinary Leadership Team (LT) representing 21 rural, urban, and suburban LHDs, as well as the California Department of Public Health. (See Appendix A.) The Framework Committee reviewed the work of key national and state chronic disease initiatives. These included the national Community Transformation Grant initiative, Communities Putting Prevention to Work, the National Prevention Strategy, the California Nutrition Education and Obesity Plan, National Association of County and City Health Officials (NACCHO) subcommittee on chronic disease prevention, and the Institute for Healthcare Improvement's Triple Aims for national health.

FRAMEWORK

SETTING THE CONTEXT

While LHDs must address a multitude of causes of disease and disabilities that impact community health, including communicable diseases, injury, alcohol, and violence, chronic disease and obesity prevention must become a higher priority for focused attention. The World Health Organization and Centers for Disease Control define chronic diseases as "diseases of long duration and generally slow progression, including heart disease, stroke, cancer, chronic respiratory diseases, diabetes and their related conditions." A growing body of research links these chronic diseases to specific risk factors—such as obesity, smoking, poor nutrition and physical inactivity—which are strongly influenced by economic and education levels, social and cultural norms, and the physical environment.

This Framework emphasizes an approach with the highest potential impact: policies and priorities aimed at the community or population level.

This Framework emphasizes an approach with the highest potential impact: policies and priorities aimed at the community or population level. Local community conditions can overwhelm the ability to achieve sustained health improvements through traditional education and preventive health care services alone. Physical environments that are pedestrian-unfriendly, have high concentrations of fast food outlets, or experience air or water pollution do not support healthy communities. Peer or cultural norms around lifestyle habits, or targeted marketing messages promoting unhealthy choices undermine health education efforts. Particularly in low income communities, economic realities like the inability to afford medical care, fresh produce, or recreational opportunities limit the ability to make healthy choices even when people want to do so.

The Framework offers a spectrum of strategies and program models, understanding that LHDs will select and adapt approaches to suit their local community conditions. It lays a path for transforming isolated and independent activities into a coherent, consistent, sustained, and mutually reinforcing prevention effort to benefit communities of all sizes and demographics statewide.

A BROAD AGENDA AND COMPREHENSIVE APPROACH

Responding to the complex and inter-connected environmental, social, and economic conditions that collectively influence health requires a broad agenda that will:

- **Advance policy, systems, and organizational change** interventions to address the underlying community conditions and influences.
- **Employ community engagement strategies** to reduce health inequities and to ensure benefit to all populations.
- **Leverage the strategic value of partnership and collaboration** across sectors and disciplines to effect system-wide change.
- **Align with established evidence-based best practices** and develop and test new practices.
- **Set achievable population health goals/outcome measures** to guide work and document progress.

California's tobacco control effort is an effective model to follow, with these main elements:

- **A strong state-LHD partnership** promoting the broadest impact through statewide coordination coupled with local innovation.
- **LHDs imbedding chronic disease prevention** in every community throughout the state.
- **Community engagement,** including partnerships with community-based organizations and residents to address health inequities effectively through focused policy and norm change.
- **A spectrum of strategies** implemented in a coordinated fashion, reinforcing the actions of different groups and partners.

Approaches that mitigate chronic disease risk factors can also affect other pressing public health concerns. Built environment solutions such as "Complete Streets," a national policy initiative to design streets for pedestrian and bicycles as well as vehicles, also can potentially reduce street violence and improve mental health. Eliminating polluting air emissions decreases not only respiratory illness risk, but can also impact global climate change. The Framework encourages LHDs to partner with groups that are tackling these community health issues, paving the way for common efforts to address multiple goals.

KEY PRIORITIES

Several evidence-based strategies are central to achieving the Framework's overall goal to create and reinforce environments that promote sustained health and prevent chronic disease, particularly in low income communities. Key priorities include:

- Improve healthy nutrition for all Californians through nutrition education and social marketing, reinforced by policy, systems, and environmental change that increase access to and consumption of healthy foods and decrease access to unhealthy foods and beverages.
- Increase daily physical activity rates by expanding activity opportunities in community, workplace, school and other settings, and accommodating them to all residents' needs.
- Create a healthy, safe physical/built environment that promotes active transportation.
- Reduce tobacco exposure through policy, systems, and environmental changes that limit or discourage tobacco use where people live, work, play and study.

HEALTH EQUITY AND THE SOCIAL/ ENVIRONMENTAL DETERMINANTS OF HEALTH

Achieving health equity is an imperative of this Framework. Health equity is defined as "an environment in which all community members have equal access to the resources needed to achieve their full health potential."[14] Attaining it requires explicit attention to address the avoidable and unjust social, economic, policy, environmental, or infrastructure conditions that prevent communities from equally reaching health. These "social determinants of health" (SDOH) cannot be controlled by individuals alone, and require systematic efforts at the community and policy level to improve health for all.[15]

California's tobacco control program illustrates how even carefully thought-out public health interventions can fall short in reducing health disparities. Since passage of Proposition 99 over 20 years ago, the program has led to impressive reductions in tobacco use, associated health care costs, and deaths. The improved health outcomes, however, have not been equally distributed among populations of color; lesbian, gay, bisexual, transgender, and questioning communities; people with disabilities; and those with low educational and socio-economic status. LHDs need to examine the barriers that inhibit success in these communities and develop approaches to close these gaps. They must build inclusive partnerships to integrate the diverse norms, values, experiences, assets and challenges within these communities in all phases of their planning, implementation, and evaluation.

LHDs are uniquely positioned to help forge alliances across jurisdictions, sectors, and disciplines to effectively address the complex risk factors of obesity and chronic disease.

ENGAGING COMMUNITY PARTNERS TO ACHIEVE EQUITY

LHDs have historically led the way in identifying local public health problems and solutions. The emergence of chronic disease as the leading cause of death requires them to redefine their role and engage in new partnerships. LHDs are uniquely positioned to help forge alliances across jurisdictions, sectors, and disciplines to effectively address the complex risk factors of chronic disease, including obesity prevention. As leaders, they can help partners recognize their shared goal and agenda: to promote healthy, safe, and sustainable communities.

Partners can include community-based and grassroots organizations; public and private sector health care systems, agencies and providers; local government; academic institutions; and residents and advocates. By tapping into different communities, these partners can increase awareness about obesity and chronic disease prevention and advocate for needed policy and environmental changes. Medical providers and health care systems, for example, are motivated to define their emerging role in national health care reform. They can be powerful allies for environmental, systems, and policy interventions that will facilitate individual behavior change. Academic institutions can support research, assessment, and evaluation efforts; help establish shared measurement systems; and help identify and promote evidence-based practices. Non-traditional partners such as city and county transportation and planning professionals have the expertise, responsibility, and resources to design healthier living environments.

Engaging directly with residents brings a different kind of credibility, accountability, and path to health improvement. With an often deep understanding of their neighborhoods' history, challenges, and assets, residents can be highly effective advocates with elected officials and decision-makers. They can also provide an avenue for holding government accountable for its commitments.

Engaging in partnerships across these sectors presents LHDs with opportunities to expand their influence into new areas that can significantly affect chronic disease.[16] By working with transportation planners, for example, LHDs can advance designs that include walking paths or well-lighted playgrounds, clean-fuel transit, and improved access to healthy foods. Partnerships with city agencies and local legislators around licensing and permitting can reduce "targeted marketing" in low-income, ethnically diverse neighborhoods by regulating the sale of alcohol, tobacco, and unhealthy snacks. LHDs can promote a Health in All Policies (HiAP) approach, where cities, schools, and others can begin to see how their own work and mission includes community health.

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STATE-LOCAL PARTNERSHIP TO CREATE UNIFIED APPROACH

The partnership between the state and LHDs can build on the state's leadership and perspective in establishing statewide directions and priorities, while promoting tailored innovations adapted to local needs. The California Department of Public Health (CDPH) can model a coherent and consistent approach by integrating this Framework's principles into its own chronic disease prevention programs as well as into its guidelines for distribution of funding.

LHDs have a key role in providing a statewide network that imbeds chronic disease prevention in all California communities. LHDs are the only local organizations with a broad statutory mandate to protect the community's health. They have the expertise and credibility to provide the public health perspective on local issues and well-established track records of collaborating with all segments of the community. LHDs can help others understand the links between community health and the environment, economics, and social norms. They can convene local coalitions, help assess community health trends, facilitate access to data systems, consult on data collection methodology and analysis, provide forums for sharing evidence-based best practices, and assist with strategic planning and evaluation. LHDs also have a unique access to other government institutions that can be shared with community partners.

A SPECTRUM OF STRATEGIES FOR THE BROADEST IMPACT

Effective chronic disease and obesity prevention involves a continuum of strategies acting on multiple levels to address risk factors and environmental determinants. The *Social Ecological Model*[17] and the *Spectrum of Prevention*[18] are two tools that have been used to structure the continuum of strategies used in public health prevention work. The Spectrum of Prevention is the model utilized for the California tobacco control movement and serves as a comprehensive starting point in framing a broader chronic disease prevention effort. It outlines a set of activities ranging from individual and

community education and social marketing to changing the systems and environments that can promote healthy communities and encourage individual behavior change. The Spectrum builds on local community knowledge by specifically including community partners and residents in planning. (See Appendix B for an example using sugar-sweetened beverage consumption). The levels of the Spectrum of Prevention are:

- Strengthening individual knowledge and skills
- Promoting community education
- Educating providers
- Fostering coalitions and networks
- Mobilizing communities and neighborhoods
- Changing organizational practices
- Influencing policy and legislation

The Spectrum model alone is not sufficient to address health inequities. The Bay Area Regional Health Inequities Initiative (*BARHII) Framework for Reducing Health Inequities* describes additional systemic factors and experiences that perpetuate health inequities: social (class, racial/ethnicity, gender and immigrant status); institutional (corporations/ business, government and schools); and neighborhood (physical and social environment, personal experience, population history, segregation).[19] These factors need to be addressed at each level of the Spectrum. Drawing from both models allows LHDs to effectively respond to unique local challenges in designing their interventions.

A funding strategy that combines local allocation, competitive community grant opportunities, and State-led strategies can achieve a uniform vision and direction while encouraging excellence and local innovation.

FUNDING TO SUPPORT SUSTAINABILITY

Sustainable and far-reaching chronic disease and obesity prevention requires a programmatic and administrative financing structure that mirrors the tobacco control model:[20] Key elements include:

- A comprehensive and coordinated statewide approach should strategically designate authority, oversight, and funding to achieve maximum reach and benefit. A funding strategy that combines local allocation, competitive community grant opportunities, and state-led strategies can achieve a uniform vision and direction while encouraging excellence and local innovation.
- Minimum funding allocations for all LHDs will reinforce norm change across the state and support dedicated program staff to ensure that all jurisdictions can carry out and sustain the work. Jurisdictions with very small populations can join together in consortiums to share funding allocations and combine efforts.
- Statewide technical assistance support must be available to all LHDs to develop uniform education and social marketing messages and other materials, provide forums for cross-jurisdictional learning and collaboration, and provide legal and technical support for policy development. Even the smallest local jurisdictions need to receive support to evaluate local level progress and contribute to statewide evaluation.

EVALUATION: MONITORING PROGRESS AND IMPACT

Improvements in chronic disease health outcomes can take many years to materialize. Documenting progress requires setting benchmarks for short-, mid-, and long-term policy and environmental changes that will lead to behavioral and eventually, health improvement goals. Developing integrated evaluation of community-based chronic disease and obesity prevention interventions will further bolster California's efforts to be accountable for distributing and using its limited resources, and position the state to respond to national accreditation efforts for public health agencies.

Several features of California's Tobacco Control Program evaluation are again useful for designing a plan that will demonstrate the impact of chronic disease and obesity prevention efforts at both the local and state levels:

- A standardized statewide approach, coupled with locally tailored evaluation plans, can track progress, correlate expenditures to outcomes, and document lives and dollars saved.
- Evaluation should be specifically funded and carried out by independent experts.
- Funded organizations need to set aside at least 10% of their budget for these activities.
- State staff needs to work directly with funded projects to ensure that evaluation methodologies are consistent and appropriately document the process and outcomes for programs.
- Quantitative data should be supplemented by community stories illustrating "real life" impact and outcomes, including increased community capacity to address community health issues.

Improvements in chronic disease health outcomes can take many years to materialize. Documenting progress requires setting benchmarks for short-, mid-, and long-term policy and environmental changes that will lead to behavioral and eventually, health improvement goals.

INDICATORS AND OUTCOME MEASURES ARE REALISTIC AND REASONABLE TO ACHIEVE

A number of national and state-level initiatives have already developed detailed indicators and outcome measures for the priority areas described in this Framework. Jointly selecting specific measures for California will be an important next step for a state-local partnership to consider, using these criteria:

- Can LHDs directly influence the outcome, or can partners be supported to take the lead?
- Do LHDs have access to the data needed to track the outcome and progress?
- Are there short-term and intermediate outcome indicators that will show progress toward a long-term health goal within a reasonable time?
- Does the outcome and associated indicators focus on the environment and health inequities?

A health equity lens is needed to evaluate whether efforts are reaching every community and increasing access to resources to achieve health. For example: Are policies being implemented and enforced uniformly in all communities? Do all groups have equal access to appropriate health-promoting opportunities? Do individual and community education, social marketing, communication plans and strategies incorporate community norms and values and use methods that will be most effective?

RECOMMENDATIONS FOR ACTION

This Framework proposes that all LHDs and the CDPH adopt the following set of recommendations to further advance comprehensive chronic disease and obesity prevention initiatives, particularly in low income communities:

RECOMMENDATION #1

CDPH should adopt the principles of this Framework, including the use of the full range of the Spectrum of Prevention and a health equity approach, both for its own state chronic disease prevention programs and in its support to all LHD efforts to address chronic disease.

RECOMMENDATION #2

Adopt a tobacco control-like model for programmatic and funding structures and mechanisms for all other chronic disease prevention efforts to ensure sustainability throughout California, including:

- Effective state-local partnership to combine a statewide perspective with local experience.
- Minimum allocations for all LHDs, with flexibility to support local priorities, strategies, and approaches.
- Separate competitive funding for innovations that reflect the local context, climate, diverse community needs and interests, and opportunities to partner.
- Designated funding to key community partners, such as voluntary/advocacy organizations that can work directly on policy with elected officials.
- Consider baseline funding for appropriate institutional partners, with designated LHD oversight for coordinating efforts.
- Earmarked funds for a materials clearinghouse, training and technical assistance, and external/independent evaluation services.

RECOMMENDATION #3

In partnership with CDPH, CCLHO and CHEAC, work to strengthen the authority, infrastructure and capacity of both the state and local health departments to address chronic disease and obesity prevention as a priority in a coordinated and integrated fashion.

RECOMMENDATION #4

State and local health departments will collaborate to identify environmental and policy change priorities, goals, outcomes, and indicators that are achievable, measurable, and include health equity measures.

RECOMMENDATION #5

Designate a portion of future taxes and other funds collected through passage of policies related to chronic diseases to go directly to chronic disease and obesity prevention at both the local and state levels.

RECOMMENDATION #6

CDPH and LHDs should assess existing funding streams, such as Women, Infants and Children (WIC), Community Transformation Grants (CTG) and USDA SNAP-Ed, to identify opportunities to leverage and coordinate categorically funded programs to promote broader chronic disease prevention efforts.

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APPENDIX B

A SPECTRUM OF PREVENTION APPROACHES FOR LOCAL HEALTH DEPARTMENT ACTION

Lessons from Tobacco Movement Webinar: Group Activity (Webinar 2012)

OBJECTIVE: By June 30, 2013, through a comprehensive community education effort, two local jurisdictions will adopt a tax or a fee on sugar-sweetened beverages.

STRATEGY BAND	EXAMPLES OF ACTIVITIES
Strengthening individual knowledge and skills	Individual nutrition education / Rethink Your Drink education about sugar content, connecting to obesity; Educate about policy solutions to reduce SSB* consumption
Promoting community education	Social marketing / Media campaigns / Education about health effects of SSB use
Educating providers	Provider trainings on health effects of SSB and alternatives; Engage County Medical Societies to make statement about SSB and relation to obesity
Fostering coalitions and networks	Promote and educate on SSB consumption impact on health, health advantages of water consumption, with existing Food Security, Physical Activity, Health Care groups
Mobilizing communities and neighborhoods	Work with PTAs / Sports Teams related to fundraising / Youth, educate on health impacts of SSBs
Changing organization practices	Work with local organizations to reduce access to SSB in organization environment Internal HD vending policies to restrict SSB and Increase other healthier alternatives, such as water Refreshment restriction policies for contracts funded by LHD, to eliminate SSBs at meetings, events
Influencing policy and legislation	Respond to requests for health data, best practices in policies, etc. from local elected officials Provide testimony on health impacts in local community at BOS hearings, city councils and others Review or help draft legislation based on best practices in other jurisdictions, on SSB-limiting policies

*SSB = sugar-sweetened beverage

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