State Legislative and Regulatory Action to Prevent Obesity and Improve Nutrition and Physical Activity

National Center for Chronic Disease Prevention and Health Promotion

Division of Nutrition, Physical Activity, & Obesity

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Increasing Capacity to Track Policies that Support Obesity Prevention and Control

Obesity is recognized as a major public health challenge in the United States. Currently, 38% of U.S. adults and 17% of children aged 2–19 years are obese. [1,2] Adult obesity is associated with an increased risk for many serious health conditions, including: coronary heart disease, hypertension, stroke, type 2 diabetes, certain types of cancer, and premature death. [3,4] Obese children are more likely to have high blood pressure, insulin resistance and type 2 diabetes, respiratory problems, joint problems and experience social stigma. [5,6,7,8,9,10,11] Moreover, the financial burden of obesity is costly. It is estimated that the United States spent an estimated $147 billion in 2008 dollars on related medical care costs for adults, with 23% of this total financed by Medicare and 19% by Medicaid. [12]

States have a compelling interest to promote healthy behavior and curb epidemics. Healthy citizens live longer, contribute to a productive society, and are a vital asset to the local economy and community stability. An unhealthy population, on the other hand, has higher medical costs, poorer health outcomes, and decreased work productivity. Poor nutrition and physical inactivity are among the most important risk factors driving the obesity epidemic. Implementing policies that support evidence-informed obesity prevention practices and programs is an important step towards improving the health and well-being of citizens and may help mitigate the financial burden obesity has on the United States.

Recognizing the unique role that states play in promoting health and preventing disease, CDC monitors state legislative and regulatory action that supports healthy eating and active living. This data is housed and maintained by CDC in the online database of *State Legislative and Regulatory Action to Prevent Obesity and Improve Nutrition and Physical Activity* (SLRA). The SLRA is available to public health practitioners, opinion leaders, policymakers, and researchers in the field, and provides access to information on state legislation that supports obesity prevention and organizes this information based on unique searchable meta-data (e.g. state, setting, year, policy topic, health category).

History of the SLRA

In 2001, CDC's Division of Nutrition, Physical Activity, and Obesity (DNPAO) developed a Web-based, state legislative database that allows users to search for legislation pertaining to nutrition, physical activity, and obesity prevention in all 50 states, as well as the District of Columbia. In 2009, DNPAO initiated a series of enhancements to the database to improve its utility and better align it with CDC priority strategies to improve nutrition, increase physical activity, and prevent obesity. Enhancements included organizing state legislation and regulation into five key intervention settings—communities, schools, early care and education (child care), worksites, and hospitals. In addition, DNPAO improved its procedures for identifying and categorizing legislation and conducted a user-based needs assessment to improve the overall usefulness of the database. This report describes the methodology for updating the SLRA and presents one type of legislative analysis that can be conducted using its enhanced search features.

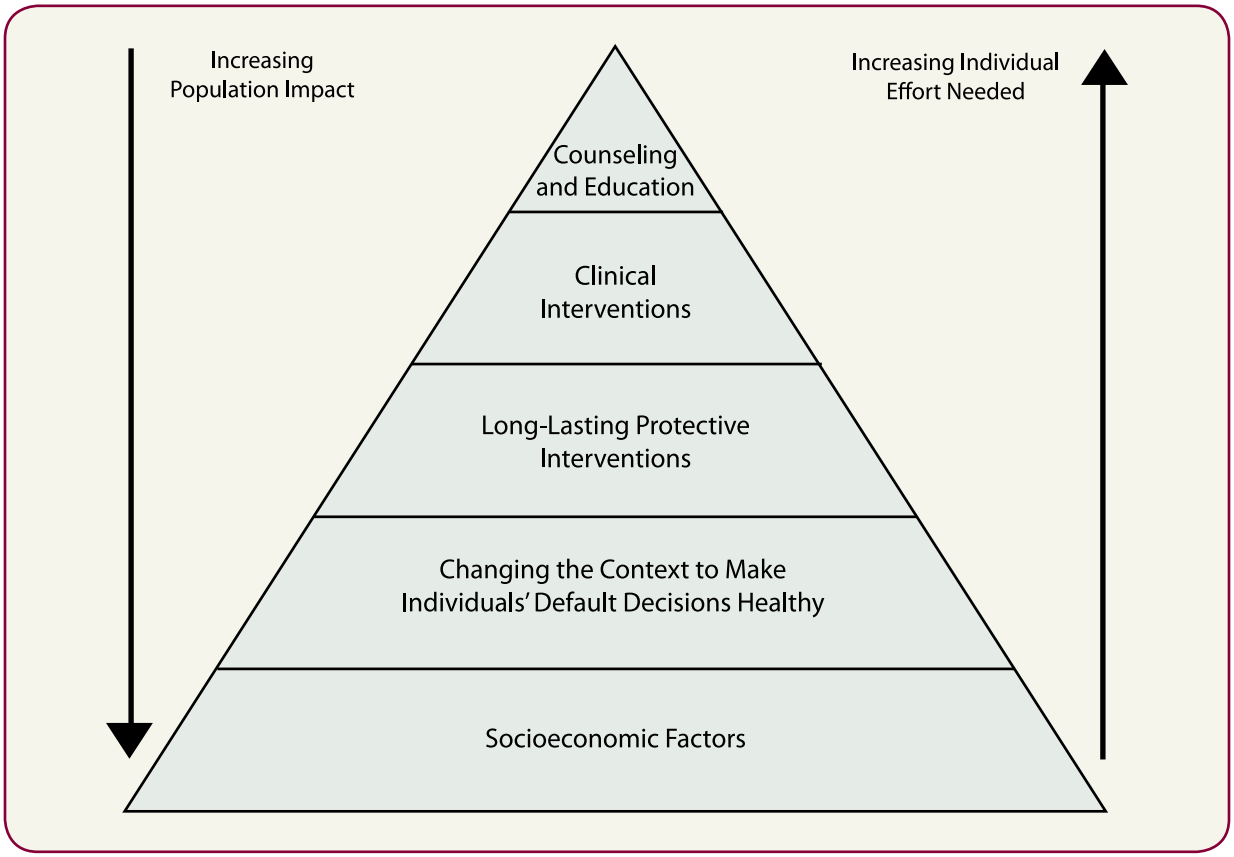



Methodology

Conceptual Framework

The conceptual framework for the SLRA is grounded in a population-based approach to preventing obesity. Although behavior change is made at the individual level, multisectorial initiatives that address the social, economic, and physical environments where people live, work, learn, and play have the greatest potential for impacting health. Figure 1[13] displays the Health Impact Pyramid developed by CDC Director, Thomas R. Frieden, MD, MPH. This pyramid demonstrates how positive changes to the environment can have a broader impact on population health, rather than attempting to influence individual behavior one person at a time. While clinical interventions and counseling are important, population level strategies that focus on improving the socioeconomic factors and the social and physical context in which individuals make health decisions may be more effective at supporting healthier lifestyle choices. Such an approach can reach large segments of the population, rely less on individual effort, and leverage social momentum to promote health and prevent obesity.

Figure 1—The Health Impact Pyramid



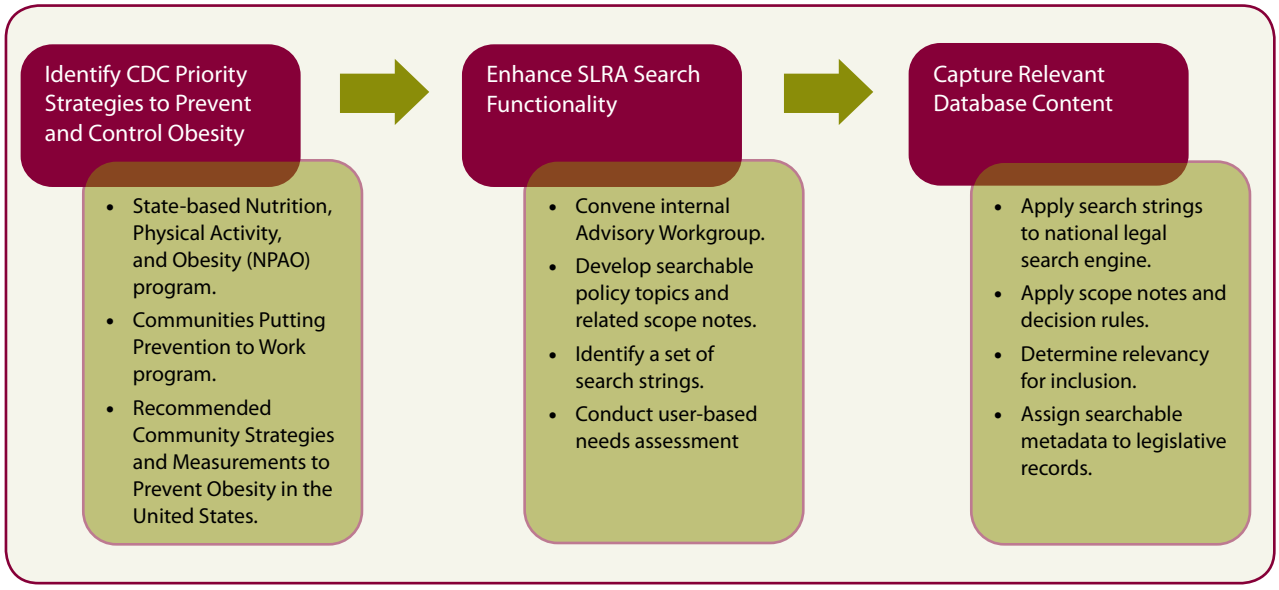
Recognizing the potential for greatest impact, state and local governments are implementing comprehensive, multisectorial solutions to improve the health of their citizens and prevent obesity. Examples include improving nutrition standards in early care and education centers, schools, hospitals, and workplaces; increasing access to water in schools and child care facilities; and increasing the number of people who meet recommended physical activity guidelines by increasing access to bike paths, trails, and park facilities. The SLRA enables its users to identify and track state legislation and regulation that supports science-based obesity prevention initiatives and improves population health outcomes.

Process for Updating the SLRA

Beginning in 2009, CDC embarked upon a process to better align the content of the legislative database with CDC priority strategies to prevent obesity. The two primary objectives of this effort were to: a) improve the search functionality of the legislative database, and b) develop a more standardized process for capturing relevant legislation and regulation to include in the database. Figure 2 illustrates the stepwise, iterative process that was used by the project team to update the SLRA. Each step is described in greater detail in the following sections.

This process provided the basis for updating the SLRA and ensures that content included in the database is aligned with CDC's priority strategies to prevent and control obesity.

Figure 2—SLRA Database Development Process



Identification of CDC Priority Strategies to Prevent Obesity

First, the project team conducted a comprehensive review of CDC priority strategies to improve nutrition, increase physical activity, and prevent obesity. These evidence-informed strategies were obtained from the following sources:

- CDC's state-based Nutrition, Physical Activity, and Obesity (NPAO) program. [14]
- CDC's Communities Putting Prevention to Work program. [15]
- CDC's Recommended Community Strategies and Measurements to Prevent Obesity in the United States. [16]

Enhancing Search Functionality

Next, the project team developed a standardized process so legislation and regulation could be consistently indexed under appropriate database search filters, allowing users to easily identify and track relevant nutrition, physical activity, and obesity policy. First, the project team assigned a broad health category — nutrition, physical activity, or obesity— to each CDC priority strategy included in the database. The project team then convened an internal advisory group comprising CDC Subject Matter Experts (SME) in the areas of built environment, nutrition, physical activity, obesity prevention, breastfeeding, and public health policy. The advisory group developed a set of searchable policy topics that captured the primary intent of each priority strategy, as well as corresponding scope notes that defined each policy topic (Figure 3 provides an example of this process).

Figure 3—Process Example

CDC Priority Strategy to Prevent Obesity	Assigned Health Category	Assigned Policy Topic	Scope Note
Increase support for breastfeeding during working hours.	Nutrition	Breastfeeding	Measures that support breastfeeding in the workplace including setting up breastfeeding facilities, providing time and private space for breastfeeding during working hours, creating a flexible work environment that allows breastfed infants to be brought to work, providing onsite child care services, and providing paid maternity leave.

This process provided the framework needed to consistently code and index legislation, which allows users to conduct tailored searches using database search filters (i.e. health category and policy topic) and track policies related to their area of interest over time.

Capturing Relevant Database Content

To systematically identify relevant state legislation and regulation to include in the database, the project team generated a set of 49 search strings that are applied to a national legal search engine that collects bills and regulations from all 50 states, as well as the District of Columbia. The search strings were developed using the SLRA policy topics and their corresponding scope notes, and are available upon request. In any given legislative session year, the search strings are applied to a national legal search engine. Analysts review legislative records and compare them against policy topic scope notes and CDC approved decision rules. On the basis of this comparison, analysts make a final determination as to whether the legislative record is relevant for inclusion in the SLRA. If relevant, every bill and regulation is assigned to a searchable "health category," "setting," and "policy topic" and indexed in the database according to searchable metadata (i.e. bill number, status, year, sponsor, bill history, regulation number, and regulatory agency).

As an example of this process, consider the 2009–2010 legislative session year. Approximately 212,000 bills and nearly 30,000 regulations were introduced by all 50 U.S. state legislatures, as well as the District of Columbia. Using the database search strings, the project team identified approximately 7,000 records that were potentially relevant for inclusion in the SLRA. Next, legislative analysts reviewed each record against the policy topic scope notes and decision rules and determined that only 2,273 legislative bills and 282 regulations were relevant for inclusion in the SLRA.

User Testing

To ensure the needs of key stakeholders were met, the project team conducted a user-based needs assessment of the old legislative database. Stakeholders were grouped into three categories—state practitioners, CDC internal stakeholders, and staff from national or state policy offices. Users were asked a series of questions to understand their experiences using the database and identify areas of needed improvement.

CDC identified the following three constructs for the assessment:

1. Awareness of the database.
2. Perceived use of the database.
3. Experience using the database.

In addition, stakeholders were asked to identify and prioritize functional capabilities of a legislative tracking system, such as the SLRA. In general, end-users prioritized the following:

- Search for legislation specific to nutrition, physical activity, and obesity in order to conduct research and policy analysis.
- Easily locate health related policies to assess the practices and strategies adopted by other states.
- Conduct comparative analyses of previous and current legislation to inform new policy development.
- Compare similar types of legislation and how they fared in different environments.
- Connect state efforts with related federal initiatives or legislation.
- Access a "free" resource that enables users to conduct in-depth legislative data searches.
- Have a "one-stop-shop" where information required for policy research could be housed in one database.

Lessons Learned

Public health policy has the potential to be a powerful tool for advancing evidence-informed interventions to address critical public health issues. The continued development of publically available data systems that are capable of collecting and categorizing public health policy over time will play a critical role in determining both policy impact and reach. As CDC works to refine and improve the SLRA for its users, several key lessons have emerged that may be of value to similar efforts—

- SMEs can help to inform the development and scope of a legislative database. The specific type of expertise needed will depend on the priorities and objectives of the database.
- The development and maintenance of a legislative database should be an iterative, ongoing process, to ensure the continued accuracy and relevancy of database content over time.
- As decision rules for the database are determined it is beneficial to document them, including the justification and rationale for the decision rules.
- Soliciting input from diverse stakeholders helps to ensure it will serve the needs of end-users and have a structure that supports and aligns with the priorities and objectives of the database.
- Obtaining input from stakeholders allows the database content to more accurately reflect current practices in the field.

SLRA Public Access

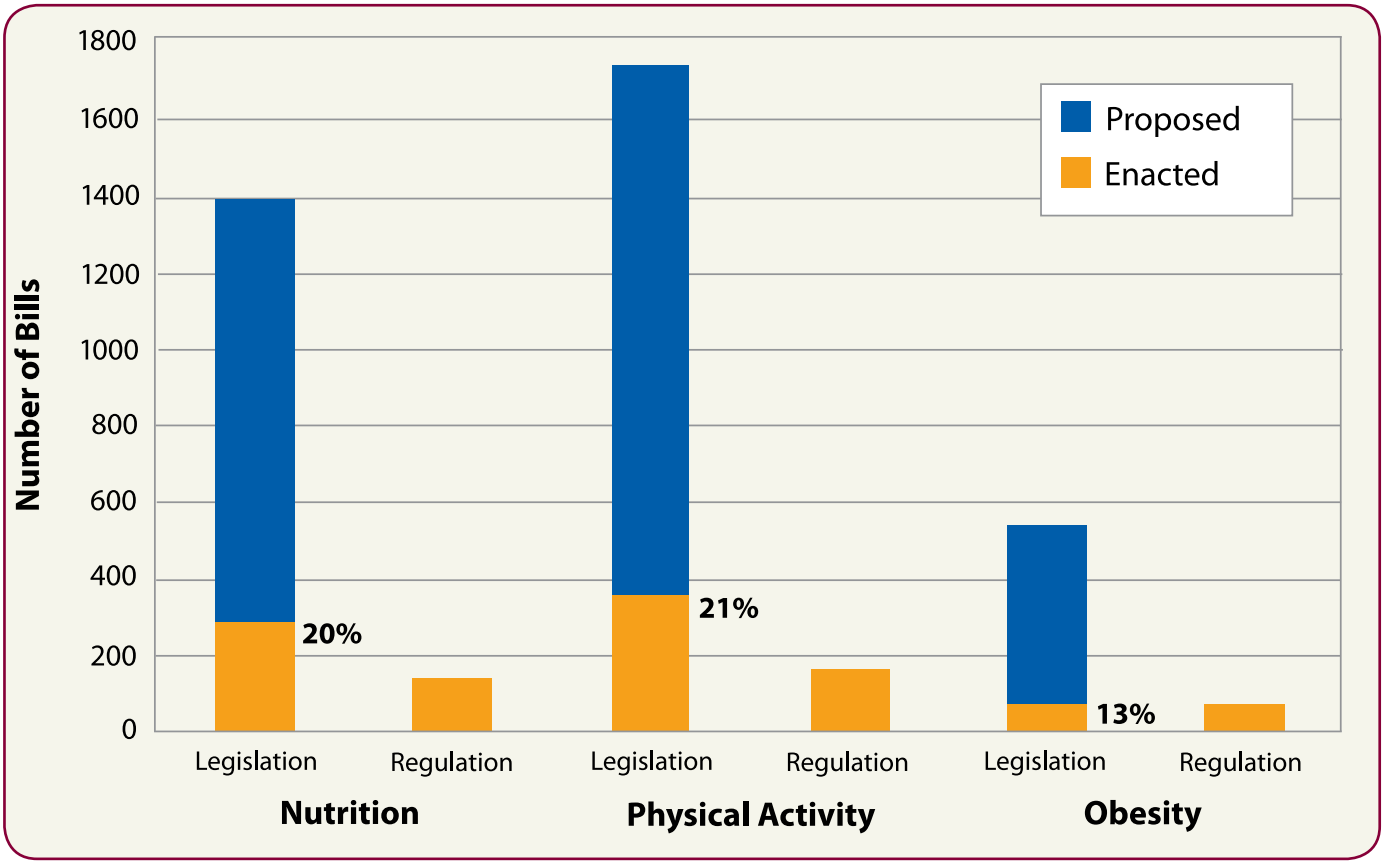
The SLRA database is a free, online, publicly available data source. The database allows users to conduct searches by health category, policy topic, setting, year, bill/regulation number, and status. The database provides a brief summary of every bill and regulation, as well as a link to each state's legislative Web page. State legislative information is available from 2001, and regulatory information is available from 2009.

Currently, the SLRA tracks 64 policy topics under the following three broad health categories: nutrition, physical activity, and obesity (see Appendix A). It is CDC's hope that the SLRA will be used to inform state-based policy efforts to prevent obesity, and increase our understanding of policy and its impact on population health outcomes over time.

SLRA Legislative Analysis (2009–2010)

Table 1 provides an example of the type of legislative analysis that can be conducted using the SLRA. The table shows legislation and regulation enacted in the 2009–2010 legislative session year, and displays data by SLRA health categories (i.e. nutrition, physical activity, and obesity). During the 2009–2010 state legislative sessions, a significant effort was made by state legislatures to target nutrition, physical activity, and obesity initiatives nationwide, resulting in more than 1,700 bills being proposed, several hundred of which were actually enacted. The table displays both proposed and enacted legislation, as well as adopted regulations. Legislative bills addressing physical activity and nutrition greatly outnumbered those targeting obesity. However, it should be noted that these categories are not mutually exclusive, so a bill may fall under two, even three health categories.

Table 1—Summary of Legislation and Regulations by Health Category, 2009–2010



Appendix A

SLRA Searchable Policy Topics Displayed by Health Category

Health Category	Policy Topics	
Obesity	Access to Drinking Water	Marketing Restrictions
	Appropriations	Menu Labeling
	Body Mass Index (BMI)	Portion Size
	Chain Restaurants/Zoning	Stigma/Discrimination
	Disparities/Equity	Sugar Sweetened Beverages
	Food Restrictions	Task Forces/Councils
	Front of Package Labeling	TV/Screen Viewing
	Health Insurance Coverage	
	Liability and Indemnity	
Nutrition	Access to Healthy Foods	Food Security
	Appropriations	Fruits and Vegetables
	Breastfeeding	Health Insurance Coverage
	Correctional Facilities Farms Programs	Incentives
	Counter Advertising	Media Campaigns
	Dietary Guidelines	Medical Care Facilities
	Disparities/Equity	Point of Purchase Promotion
	Farm Direct Foods	School Nutrition
	Farmers Markets	Sodium
	Farming Incentives	Task Forces/Councils
	Food Assistance Programs	Trans Fats
	Food Deserts	Vending
	Food Policy Councils	
Physical Activity	Access to Recreational Opportunities	Mixed Use Zoning
	Active Transit	Neighborhood Safety
	Appropriations	Parks, Recreation and Trails
	Bicycling	Pedestrians/Walking
	Counter Advertising	Physical Activity Requirements
	Disabilities	Physical Education Requirements
	Disparities/Equity	Safe Routes to Schools
	Health Impact Assessment	School Siting
	Health Insurance Coverage	Signage for Recreation and Transportation
	Incentives	Street-Scale Design
	Liability and Indemnity	Task Forces/Councils
	Media Campaigns	

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