

# Improving Support *for* Health Promotion *and* Chronic Disease Prevention

Summary of Key Messages from Reports of the Institute of Medicine

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INSTITUTE OF MEDICINE  
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# Preface

This paper was commissioned by the Vitality Institute, an organization with a mission to advance knowledge about the evolving science and art of chronic disease prevention and health promotion in order to build healthier societies. The paper is intended to inform the Vitality Institute Commission on the Prevention of Chronic Diseases in Working Age Americans, a group of health and business leaders that aims to identify and support multi-stakeholder solutions that will address the burden of chronic diseases and their associated costs by placing evidence-based prevention at the center of health care policies and actions in the United States (<http://www.thevitalityinstitute.org>).

In recent years the Institute of Medicine (IOM) has produced several expert consensus studies on topics that are directly relevant to this aim. This paper reflects the content of reports published since 2010 identified through a search of the report database on the IOM website for keywords associated with chronic disease prevention and health promotion (see Appendix A). The cutoff date was chosen to focus on reports with a recent review of the evidence base. A subset of reports was selected for in-depth review on the basis of whether the reports' charge or interpretation of their charge included the primary topic of interest to the Vitality Institute. Report content was reviewed, grouped by theme, and summarized.

This paper is derived entirely from these existing IOM consensus studies and does not include new analyses of evidence or make new recommendations. The content therefore reflects committee-authored consensus studies that underwent a rigorous review process to ensure that their findings, conclusions, and recommendations were well grounded in the available evidence, which is fully articulated in the reports.

Taken together, these IOM reports convey consistent, evidence-based support for the importance of chronic disease prevention and health promotion. The reviewed reports cover a range of public health strategies that fall on the spectrum of health promotion to prevention to treatment to disease management. For the purposes of this paper, the words "prevention" and "health promotion" are used together broadly to include strategies that aim to keep people healthy before they have acquired conditions that require clinical care, and strategies for maintaining healthy lifestyles as people manage diagnosed diseases.

This paper does not repeat or summarize in detail the litany of specific policies, programs, and other intervention approaches recommended in these reports. Instead, recognizing that one of the barriers to advancing health promotion and chronic disease prevention is the lack of large-scale uptake of recommended policies and activities, the Vitality Institute asked the IOM to focus this paper on the gap among health, public health, and health policy professionals and the decision makers whose actions they seek to inform and influence.

Although the identified IOM reports may not focus primarily on bridging this gap between the available knowledge and the actions being taken, they do share common messages highlighting ways in which those in the health and public health sectors can make it more likely that decision makers will adopt the policies and practices that they recommend. These themes of improving widespread uptake of prevention and health promotion strategies are the focus of this paper.

This paper is primarily intended for the Vitality Institute Commission to use as it seeks to bridge the gap and influence future policy decisions in new ways. The content is therefore intended to be informative for stakeholders who are developing and communicating the evidence and other information to influence decision makers. It may also be useful to the leaders and policy makers themselves in the public and private sector who are, or should be, making critical decisions about investments in health.



## Citation Key: Report Abbreviations

APOP	<i>Accelerating Progress in Obesity Prevention: Solving the Weight of the Nation</i> (2012)
BEGOP	<i>Bridging the Evidence Gap in Obesity Prevention: A Framework to Inform Decision Making</i> (2010)
CVD	<i>Promoting Cardiovascular Health in the Developing World: A Critical Challenge to Achieve Global Health</i> (2010)
EOP	<i>Evaluation of PEPFAR</i> (2013)
EOPE	<i>Evaluating Obesity Prevention Efforts: A Plan for Measuring Progress</i> (2013)
ESB	<i>Educating the Student Body: Taking Physical Activity and Physical Education to School</i> (2013)
FPH:IHF	<i>For the Public's Health: Investing in a Healthier Future</i> (2012)
FPH:LP	<i>For the Public's Health: Revitalizing Law and Policy to Meet New Challenges</i> (2011)
FPH:MA	<i>For the Public's Health: The Role of Measurement in Action and Accountability</i> (2011)
FAVCBP	<i>An Integrated Framework for Assessing the Value of Community-Based Prevention</i> (2012)
LWCI	<i>Living Well with Chronic Illness: A Call for Public Health Action</i> (2012)
PCPH	<i>Primary Care and Public Health: Exploring Integration to Improve Population Health</i> (2012)
PPSCH	<i>A Population-Based Policy and Systems Change Approach to Prevent and Control Hypertension</i> (2010)
TQMPH	<i>Toward Quality Measures for Population Health and the Leading Health Indicators</i> (2013)
USHIP	<i>U.S. Health in International Perspective: Shorter Lives, Poorer Health</i> (2013)





# Introduction

## THE POTENTIAL OF CHRONIC DISEASE PREVENTION AND HEALTH PROMOTION

In recent years, several Institute of Medicine (IOM) consensus studies have come to similar conclusions about chronic disease control in the United States and across the world. Drawing on the available evidence and expert consensus analysis, these reports highlight the great potential for preventing or delaying many cases of costly chronic diseases and for decreasing the burden of these diseases by focusing on upstream environmental, social, and behavioral root influences on health.

Investing in population-based and individual nonclinical prevention interventions has the potential for a large return because these interventions can influence a broad array of outcomes and can be less expensive than clinical care. The IOM reports include recommendations for action to increase awareness, improve diets, and increase physical activity. They also make recommendations for health promotion and prevention programs and for policy and legal interventions. Key examples of report recommendations can be found in Appendix B.

A concerted effort to support prevention across all levels of government can positively influence health. For example, over the past few decades the United States has seen great improvements in tobacco control, lead poisoning prevention, and the use of vaccines to prevent diseases.

Prevention in a broad, non-disease-specific sense has begun to play a bigger role over time in both policy and government-funded research. A major prevention achievement occurred in 1978 when the U.S. Department of Health and Human Services (HHS), the locus of responsibility for the U.S. health system, developed the Healthy People national prevention agenda. The program was updated in 1990 and again in 2010 and is overseen by the Office of Health Promotion and Disease Prevention at the Office of the Assistant Secretary of Health of HHS (FPH:IHF).

The U.S. government has also slowly been increasing and expanding its recognition of the problem of chronic diseases. For example, in 2001 obesity was officially recognized by HHS in the Surgeon General's *Call to Action to Prevent and Decrease Overweight and Obesity*. A large increase in the number of laws that encourage obesity reduction occurred between 2003 and 2005, and in 2004 the National Institutes of Health (NIH) released a strategy for research on obesity-related topics (APOP).

The recent Affordable Care Act (ACA) also includes prevention measures that could have a widespread effect on the U.S. population. To prioritize prevention across the federal government, it established a National Prevention, Health Promotion, and Public Health Council, which is intended to evaluate and coordinate prevention activities across government departments. The ACA also strengthens coverage of preventive services by insurance plans, Medicare, and Medicaid.

The Prevention and Public Health Fund was also created under the ACA and has been used to strengthen the public health workforce, provide grants to states to bolster public health infrastructure, and create and maintain health promotion programs. One of these programs is the Community Transformation Grant program, which aims to improve health by supporting change across multiple environments that affect a person's health (LWCI).

## CHANGE IS SLOW

Although these health promotion activities look promising, change has been slow. The United States has yet to make substantial progress in advancing the country's prevention strategies, and people in the United States are living shorter lives in poorer health than those in other high-income countries despite spending more per capita on health care (FPH:IHF; USHIP).

It has been difficult in the United States to develop and implement legal and political strategies around health promotion. Funding for public health and prevention has been reduced at the local, state, and federal

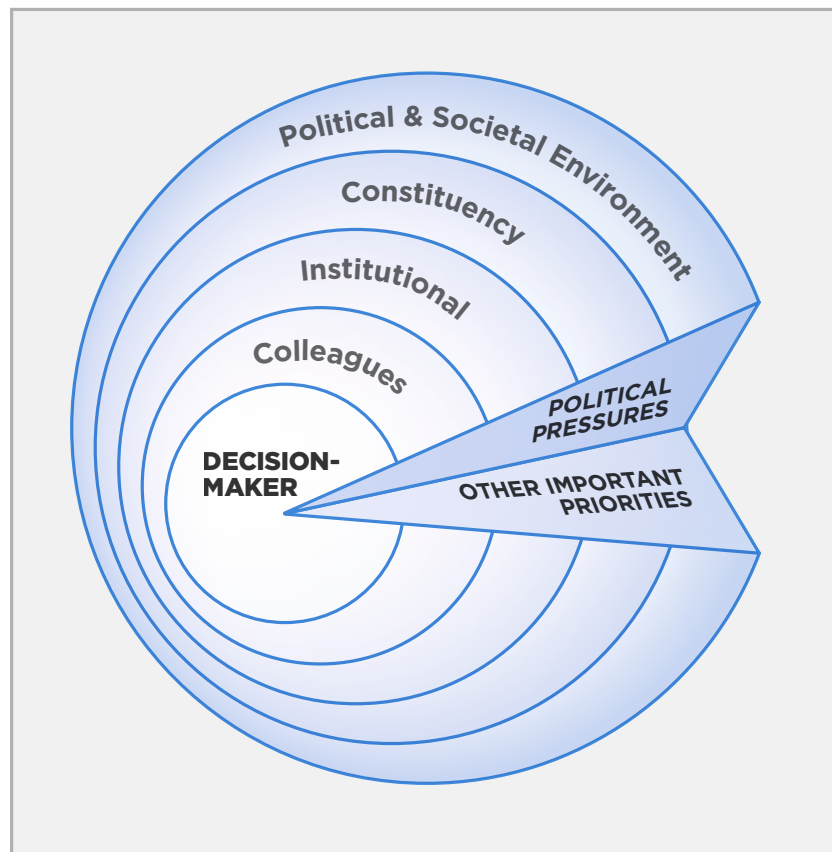
levels, and most health efforts focus on the medical care delivery system (PCPH; FPH:IHF). The public health workforce has also been shrinking, and there has been very little investment in information technology for public health in comparison to the health delivery system (PCPH).

## ENABLING CHANGE

Why has the United States been slow to adopt effective prevention strategies more comprehensively when the evidence supports it so strongly? An increase in prevention and health promotion requires support among the influential decision makers (politicians, policy makers, employers, administrators, and so forth) who craft policies and determine how to allocate funds. It can be tempting to simply blame these decision makers for not paying enough attention to the available evidence that supports prevention and health promotion or for choosing more politically expedient immediate payoffs rather than long-term benefits. Yet the various competing pressures they face are complex and legitimate, and these pressures cannot always be set aside as a matter of simple choice. Instead of putting the burden of making transformative progress so heavily on the decision makers, what more, beyond persuasion, can be done to increase the likelihood that policy makers will favor prevention and health promotion?

The public health field has shifted away from trying to directly convince the individual to change and has instead focused on addressing environmental and social health determinants in ways that make healthier choices the easier choices. This shift arose from the understanding that individuals are faced with an incredibly complex array of situations they do not control and that their choices are motivated by their experiences and the people they know (see Figure 1). It is not reasonable to expect that health will always be at the top of the list among a person's many competing priorities.

Just as there has been a shift to making healthful choices the easiest possible choices for individuals, prevention proponents can do more to make it easier and more desirable for policy makers to adopt the choices that are healthier for our country.



**FIGURE 1** Influences on the decision maker.

## PAPER OVERVIEW

This paper summarizes what the IOM reports have said about the uptake of prevention and health promotion approaches by political leaders and policy makers, and it relates what these reports recommend that various stakeholders—advocates; public health, health, and health policy professionals; researchers; and others—do to increase support among these decision makers in the future.

The first section of the paper discusses barriers to uptake. What hinders decision makers from providing substantial support and resources to prevention and health promotion approaches?

- **Complexity of health problems and solutions.** There is no straightforward, easy solution. Progress will require better use of information and increased coordination of multiple players.
- **Competing pressures and priorities.** Health is not the only important issue.
- **Delayed benefits of prevention and health promotion.** Other activities have more apparent and immediate impacts, which often make them more appealing than prevention and health promotion.
- **Uncoordinated or underutilized existing resources.** Policies and resources that do exist are not always complementary or well used, making it difficult for decision makers to support prevention activities even when they want to.

The remaining sections focus on ways to address these barriers. What can those who aim to shape policy for better health do to make it more likely that a decision maker will act to improve prevention and health promotion?

- **Understand decision makers' needs and how health can support them.** Like all humans, decision makers have core values, priorities, and motivations that are influenced by a complicated array of people and knowledge. Rather than competing with other priorities, how can prevention proponents overlap with other needs and desires of decision makers?
- **Generate and coordinate good, usable information.** There is abundant and compelling evidence in favor of prevention and health promotion, but decision makers do not have time to sort through a large volume of information. What do decision makers really need to better understand prevention and health promotion, how can these data be generated, and how can existing data be better coordinated, synthesized, and communicated?
- **Make it easy for decision makers to move toward health promotion.** For decades, a unidirectional, information-heavy approach to providing decision makers with evidence that supports prevention has not been working. How can decision makers be connected with not only helpful information but also tools, people, and incentives to make health promotion decisions easier?
- **Leverage available assets to use resources effectively.** Many opportunities exist to coordinate already existing policies and resources so that they are better utilized. How can current policies, programs, and resources that are consistent with health promotion goals be leveraged to more effectively use existing human, financial, and material assets?



# Barriers to the Prioritization of Prevention and Health Promotion

Many factors may contribute to why decision makers do not make choices that support prevention and health promotion efforts. The IOM reports discuss some of these factors: the complexity of the problem and the available prevention and health promotion solutions, competing pressures and priorities, the delayed manifestation of the benefits of health promotion, and uncoordinated or underutilized existing resources.

## COMPLEXITY OF HEALTH PROBLEMS AND SOLUTIONS

Preventing chronic diseases or promoting health by establishing and maintaining wellness are not straightforward tasks. Wellness sits in every corner of life—in families, schools, neighborhoods, grocery stores, soccer fields, and dance floors. Social networks, economic and physical environments, and individual traits all influence health, and addressing these determinants of health can have wide-reaching effects on the well-being of a community. Even when decision makers are convinced of the value of prevention and health promotion approaches, they are faced with multiple options, and the best path forward may remain unclear.

Take just one hypothetical example: The residents of a high-crime, low-income area have high rates of obesity and related chronic diseases. How does a leader choose to intervene? Should she focus on promoting physical activity by making the neighborhood safer for walking, given that residents currently choose to drive to run errands rather than walk to nearby businesses? Does she encourage local adults to patrol the streets, offering extra eyes and friendly faces in the community? Does she have the resources to increase the community's police presence? Does she take a long-term view on crime and invest in education and family support with the hopes of creating a more nonviolent, walkable community in the future? Does she instead build a free recreation center? Does she focus on economic development, hoping to push out crime by raising the economic status of the neighborhood and bringing in a greater variety of businesses, perhaps including better sources of healthful foods? Will that harm the residents by increasing the costs of living in the neighborhood? Any of these interventions will affect a variety of people to different degrees and will require allocating limited resources to some issues rather than others among the many that affect the community. It is difficult to predict the full range and magnitude of positive and negative effects each choice will have.

The immense complexity of prevention and health promotion and the lack of understanding around the full potential impact of certain interventions may be discouraging to decision makers. Unfortunately, the information and the multisectoral support needed to better understand and address the multifaceted nature of prevention and health promotion approaches are often difficult to find or coordinate. These difficulties, discussed below, add to the friction that may prevent decision makers from moving forward toward these approaches.

### *The Right Information Is Difficult to Find and Interpret*

Determining what questions to ask, where to look for information, and which interventions to choose to best improve a population's well-being can be an overwhelming task. When decision makers do not have the information that matters to them and cannot easily access the information that already exists, the default option can easily become to deprioritize prevention in favor of matters that are less complex or more formally established.

A lack of clear, coordinated information on prevention and health promotion often leaves policy makers and the public unaware of important health trends and potential responses (PPSCH). At the local level, policy makers often do not have the data necessary to comprehensively understand problems and potential solutions in their communities. At the state and national levels, decision makers are often overwhelmed with uncoordinated, sometimes conflicting, data that exist in multiple databases. Policy makers are faced with multiple estimates and survey results and can be unsure of where to look for the best measurements (FPH:MA, PPSCH, CVD, TQMPH).

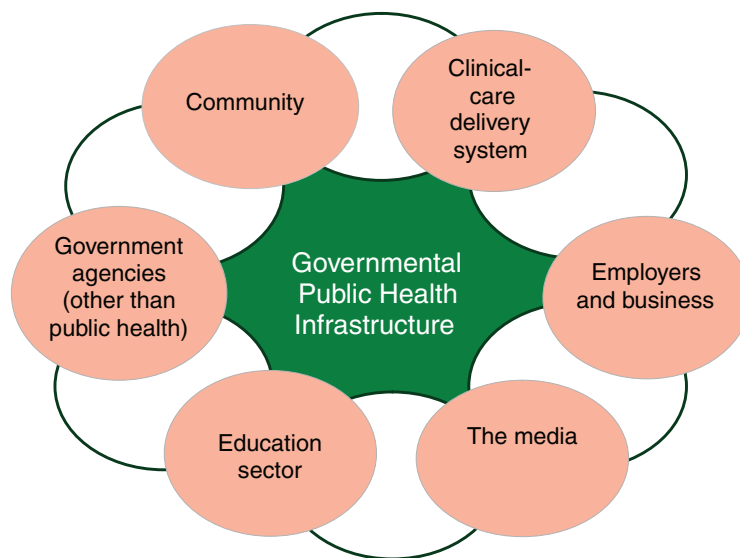
Even when decision makers do want to focus on prevention and health promotion, they are still faced with a plethora of information on potential actions to take. To help them wade through the abundance of information that exists just on prevention, they will need tools to assist them in transparently making informed choices for widespread well-being while still representing the wants and needs of the public (BEGOP, FAVCBP, TQMPH).

Of course, clear and accessible information alone will not be sufficient to improve uptake—decision makers also need support from the right partners and the will to make the necessary changes. Nonetheless, research and coordinated data collection that directly tackle decision makers' most pressing questions can drastically improve the environments in which they are expected to make choices that prioritize improving health.

### *Complexity Requires the Involvement of Many Stakeholders*

The complexity of prevention and health promotion not only makes it difficult to gather useful data, but it also requires the involvement of many people from different sectors and organizations. The public health sector lacks the power to influence impactful decision making and implement large-scale solutions on its own, and opportunities to enact policies often lie within other government agencies. The public health sector might be involved in identifying threats to health and opportunities for prevention interventions, but transportation, zoning, education, and agriculture departments, for example, may need to be responsible for implementing effective approaches. In addition to other sectors of government, the private sector, the media, and communities also have a critical role to play. Figure 2 illustrates some of the sectors needed to support prevention and health promotion approaches, and Table 1 provides examples of decisions that nonhealth sectors could consider to support well-being (FPH:LP).

The quantity and diversity of stakeholders needed to successfully support prevention and health promotion approaches requires engaging not only those already motivated by health-related goals but also those who are driven by very different pressures and considerations. Coordinating stakeholders within the health sector is difficult enough, and trying to align goals and decision making among the health, housing, transportation, and other sectors is even more so. This complexity may make these approaches less feasible and attractive to decision makers than more straightforward or immediately impactful remedial solutions to community problems.



**FIGURE 2** The health system.

NOTE: This figure illustrates some of the many sectors and stakeholders that contribute to population health and that may be brought to the table. The governmental public health infrastructure—agencies at all geographic levels, with their varying capabilities—stands at the center due to its special statutory role and expertise in protecting the public's health.

SOURCE: FPH: LP, p. 17.

**TABLE 1** Examples of Policy by Stakeholder

Stakeholder	Policy Examples
Clinical care delivery system	Adopting standards to improve quality of care, providing preventive services
Employers and business	Providing employee wellness tools and incentives, developing policies adopting voluntary standards improving healthfulness of products
The media	Requiring relevant training for health journalists, formulating standards for conveying health and scientific information
Education sector	Adopting nutritional standards, developing and implementing physical activity guidelines for the school day, incorporating health information in the curriculum with the explicit goal of improving health literacy, making schools into community centers—supporting families, opening playing fields and playgrounds to community use (through joint use agreements), etc.
Government agencies (other than public health)	Implementing health in all policy approaches—considering potential health impacts of policies, adopting policies with the secondary goal of improving health
Community (including individuals and families, organizations, faith groups)	Advocating for healthier community environments in interactions with legislators, government executives, and private sector

SOURCE: FPH:LP, p. 18.

## COMPETING PRESSURES AND PRIORITIES

Policy makers and other decision makers can prioritize only a few of the many important issues that face their communities, and prevention and health promotion are not necessarily at the top of their lists. Decision makers can find it difficult to choose the “healthiest” policies and investments if these choices are resisted by groups of their constituents. The following discussion describes some of the pressures that decision makers face that may deter them from prioritizing prevention and health promotion.

### *Decision Makers Face Pressures to Focus on Other Priorities*

Decision makers often have limited time and resources, yet many problems that demand their attention. National leaders, for example, often devote most of their energy to economic policy or foreign affairs (USHIP). Especially in low- and middle-income communities and countries, policy makers are faced with many other serious and imminent challenges and thus see chronic disease prevention and management as less of a priority (CVD).

### *Decision Makers Face Pressures from Those Affected by Change*

To address chronic disease prevention and health promotion adequately, policy makers will need to redistribute resources and, of course, will face resistance from those who are negatively affected (USHIP). Both public-



and private-sector interests may be harmed by drastic priority shifts, and policy makers must be convinced that their decisions are worth the disruption if they are to resist strong counterpressures (APOP).

### *Decision Makers Face Competing Pressures Even Within the Health Sector*

Even within the health sector, people often cannot agree on what are exactly the most effective—or “healthiest”—policies or interventions. Influential decision makers are bombarded with conflicting arguments on what aspects of health to value most, and prevention and health promotion are often deemed less important than other health issues.

When policy makers do focus on health, they usually address concerns over the formal health care system rather than the social determinants of health (USHIP), and primary prevention and medical treatment are often competing for funding, attention, and other resources. For example, the Affordable Care Act’s already modestly funded Prevention and Public Health Fund has been tapped into to provide support for the primary care workforce as well as to merely replace previously cut funds in public health and in the budget of the Centers for Disease Control and Prevention (CDC). Furthermore, in February 2012, more than two-fifths of the fund was cut and redistributed to a variety of other activities, including the protection of physicians against cuts in Medicare reimbursement fees (FPH:IHF).

Primary prevention and medical treatment can often be united in a disease-centered approach to health, but disease silos can also become narrowly focused and a hindrance to broader cohesion around prevention. For example, many advocacy groups address different chronic diseases, and sometimes their efforts become fragmented due to little coordination and communication among them (CVD).

### *Decision Makers Face Pressure to Preserve Individual Freedoms*

Policy makers often face the challenge of determining how best to ensure community health while preserving individual freedoms. Especially in the United States, the argument that the government should attend to distal social and environmental determinants of health is often not convincing if doing so limits individual choice (FPH:LP, APOP). Many argue that what people eat or feed their children or whether they walk or drive are personal choices that should not be influenced by the government. People might value health, but they also might equally value their ability to make their own choices about their behavior, quality of life, and health care.

## **DELAYED BENEFITS OF PREVENTION AND HEALTH PROMOTION**

Another hindrance to the uptake of prevention and health promotion strategies is that the effects of an intervention designed to address complex health determinants may not present themselves for years. Prevention and health promotion can be less attractive than clinical care because these efforts often take longer to affect population health in a measurable way. Policy makers often look for more immediate returns on their investments because that is what some constituents want, because they have terms that end before the impacts of their prevention efforts manifest, or because other competing problems arise that require immediate attention (USHIP).

Current funding timelines are also not very compatible with prevention and health promotion programs for which a time lag exists between action and impact. Public health funds are allocated on an annual basis, but prevention activities do not lend themselves easily to yearly updates. Initiatives related to hospital infrastructure and NIH biomedical research, on the other hand, are supported by stable and consistent congressional appropriations (FPH:IHF).

Decision makers must balance long- and short-term community and political goals, and the challenge for the health sector is how to propose strategies that meet the desires of policy makers while also investing in the future. How does the health sector encourage policy makers to value long-term payoff, and how does it develop better methods for capturing and displaying the short-term benefits that are helpful to decision makers?



## UNDERUTILIZED OR UNCOORDINATED EXISTING RESOURCES

Even when policy makers do value the returns provided by prevention and health promotion strategies, they might find it difficult to move forward effectively because the existing resources that support health are underutilized or uncoordinated. Organizational and political factors impede communication among people, lead to disjointed or inflexible funding, prevent efficient collaboration and strategic distribution of projects, and hinder information sharing. Improving this environment would make it easier for the decision maker to navigate the prevention and health promotion landscape and would increase the productivity of current resources even if decision makers were never to support the strategies that the public health sector promotes.

Policies that are inconsistent with the goals of prevention and health promotion strategies also hinder progress, and sometimes recommendations that the health sector promotes are not easy to execute in the current policy environment. An example of a conflict between prevention and external policies is the deeming of physical education as “nonessential” by the No Child Left Behind Act, which aims to improve student performance in math and reading. As a result, extra math and reading periods have encroached into the time initially set aside for physical activity, and school wellness policies are not strong enough to prevent this (ESB). In this case, even if a decision maker aims to make healthy policy decisions about wellness in schools, that individual will have to work within the existing constraints of the act.

## FROM BARRIERS TO OPPORTUNITIES

In summary, barriers in the current social, political, and research environments prevent decision makers from defaulting naturally toward the uptake of prevention and health promotion approaches. The following sections will discuss opportunities for lowering these barriers and making the healthy choice the easy choice for decision makers. The IOM reports suggest approaches that adhere to the following principles:

- Understand the decision maker’s needs
- Generate useful information
- Make the decision-making process easier
- Leverage available assets



# Understand Decision Makers' Needs

A pragmatic route for the public health sector is to find ways that will make it as easy as possible for decision makers to care about health goals and take appropriate action to achieve them. Just as clinicians need to understand the lives of their patients better, including the reasons for their behaviors, the motivations that will drive them toward or away from well-being, and the assets they already possess, so too should prevention and health promotion advocates understand the decision makers whose choices they are trying to change.

Different decision makers will have different motivations, loyalties, interests, resources, supporters, and constituents and will choose strategies that are compatible with those factors. Decision-making contexts that proponents of prevention and health promotion seek to influence also vary widely. They might include, for example, health departments deciding how to divide their budgets, federal or state legislators deciding whether to enact specific prevention legislation, a city planning department deciding whether and how to incorporate health aims in its development plan, a community group deciding how to distribute volunteers among projects, a school board member deciding whether to vote for a measure to send parents reports of their children's body mass index levels after mandatory school screenings, or an employer deciding which employee wellness program to implement (FAVCBP, ESB).

To design programs and interventions that decision makers will support, the health sector will need to build trust, align goals, and provide useful information. This is more likely to happen if processes exist for better understanding the varying needs and contexts of stakeholders in the policy-making realm and for identifying opportunities within those needs for promoting health.

## DEVELOP LISTENING AND FEEDBACK MECHANISMS

Systematic and institutionalized mechanisms for bidirectional communication and feedback can help ensure that those who are proponents of prevention and health promotion have opportunities to listen to the needs and values of the decision makers they are trying to influence. To this end, public health departments can expand their roles as conveners of external stakeholders in order to better understand each other's perspectives, more closely align goals, and better coordinate resources (discussed more in the subsequent section titled "Leverage Available Assets") (FPH:IHF). There is also a need for more mechanisms to gather input from decision makers and the public on how they use data and what information they currently need (discussed further in the section titled "Generate Useful Information" below) (FPH:MA).

## DEVELOP ONGOING RELATIONSHIPS

Scientific evidence or communications products are not the only effective instruments of persuasion—decisions are often highly influenced by personal relationships. In addition to periodic opportunities for communication and feedback, a multisectoral approach to prevention and health promotion will require building real relationships and trust with decision makers by discussing population health, sharing information, and working together to plan research and choose policies (FPH:LP).

In many cases, policies or interventions can best be furthered by supportive executives (mayor, governor, or president) or other champions who have taken a personal interest in prevention and health promotion, even if these activities are not a priority within their agencies (PPSCH). Interests in health promotion are often piqued through trust-embedded relationships, which can open a decision maker's eyes to the value of prevention and health promotion strategies and open the eyes of the proponents of those strategies to the needs of the decision maker.

### Examples of Relevant IOM Recommendations

#### *For the Public's Health: Revitalizing Law and Policy to Meet New Challenges*

The committee recommends that state and local governments

- create health councils of relevant government agencies convened under the auspices of the chief executive;
- engage multiple stakeholders in a planning process; and
- develop an ongoing, cross-sector, community health improvement plan informed by a Health in All Policies approach. Stakeholders will advise in plan development and in monitoring its implementation.

#### *An Integrated Framework for Assessing the Value of Community-Based Prevention*

The committee recommends that those involved in decision making ensure that the elements included in valuing community-based prevention interventions reflect the preferences of an inclusive range of stakeholders.

#### *Evaluating Obesity Prevention Efforts: A Plan for Measuring Progress*

Relevant federal agencies (e.g., in the Departments of Agriculture, Commerce, Health and Human Services, Labor, Transportation), in collaboration with academics, nongovernmental organizations, and state and local health departments, should coordinate existing efforts to ensure that federal, state, and local assessment, monitoring, surveillance, and summative evaluation systems include a mechanism for feedback to users of evaluation data.

## Generate Useful Information

As discussed previously, health and well-being are complex, and developing or choosing prevention and health promotion strategies can be daunting. Better information about the interactions of health determinants, the impacts of policies and programs on health, and the resources needed to implement various interventions can potentially improve a decision maker's ability to make healthier decisions.

Indeed, one of the responsibilities of health departments is to develop the skills and knowledge needed to inform policy making related to health across different sectors. This responsibility includes making sure that people working in these sectors understand the state of their community's health, the factors that influence health, and the steps they could take to improve it (FPH:IHF).

A key part of this responsibility is understanding the information decision makers need and providing it in ways that will be most useful to them. Before gathering and generating evidence around prevention and health promotion, researchers, advocates, and health professionals must understand why decision makers need information, what they need, and what they are trying to do with it. The questions that need to be answered will depend on the context and the people involved, and understanding these questions will improve the usefulness of information for potential users. Some examples of different information needs for various types of decision makers can be found in Table 2 (EOPE).

To generate the best evidence to present to decision makers, researchers and policy shapers will need to conduct research and analysis that is useful to decision makers, create standards and guidelines that help them identify high-quality evidence, and develop systems and processes that standardize and coordinate data collection and analysis.

### FOCUS ON RESEARCH AND ANALYSIS THAT IS USEFUL TO DECISION MAKERS

There are endless aspects of wellness that researchers could choose to study, and all of these angles may be useful in some way to advance understanding of health. High-level decision makers have time to study only a limited amount of information before they make a decision, however, and some data might be more useful or appealing to them than others. The public health sector must understand what information the decision maker is likely to use and whether this information is available. The following subsection discusses some of the information that may be most important for advancing the uptake of prevention and health promotion.

#### *Study Risk Factors, Protective Factors, and Health Determinants*

There is an ongoing need to understand risk factors, factors that protect health, socioeconomic and environmental determinants of health, and the disparities that influence health. All of these factors are critical to inform priorities and to select or develop appropriate and effective interventions. Given that communities lack accurate data at the local level on environmental, behavioral, and social determinants of health in their neighborhoods, decision makers might have difficulty in determining the interventions that will best fit their communities (FPH:MA, CVD). This gap could be addressed, for example, by the formation of a concerted and systematic effort to capture this kind of data (EOPE, PPSCH).

As the health sector continues to gather information on health determinants and risk and protective factors, it also needs to develop ways to make this information usable to policy makers. Conceptual models of social determinants of health in particular may be useful, but they are also complex and do not provide decision makers with a clear picture of how to target specific populations in certain circumstances within a specific time frame.

**TABLE 2** Summary of the Users of Obesity Evaluation Information and Their Roles and Needs

Evaluation User	Role	Needs
Community partners or coalitions	<ul style="list-style-type: none"> <li>provide differing perspectives and priorities</li> <li>efforts depend on partnerships for sustainability</li> </ul>	<ul style="list-style-type: none"> <li>to know why it is important to take action on obesity prevention compared to other problems</li> <li>knowledge of which strategies are effective for their specific situation</li> <li>information about implementation and lessons learned from other places</li> <li>clear communication strategies to convey information effectively</li> <li>to know options for action</li> <li>often require some guidance about how to implement options</li> </ul>
Local decision makers and managers	<ul style="list-style-type: none"> <li>may lead or be part of formal community coalitions</li> <li>often are drivers for change</li> <li>innovate and share information about how to institute and implement relevant policies</li> </ul>	<ul style="list-style-type: none"> <li>to track progress to know when to apply course corrections, manage implementation, and emphasize or de-emphasize a course of action</li> <li>timely and accessible data at the local level</li> <li>a good sense of “what works”</li> <li>assess strategies recommended by decision makers to determine whether the strategies are feasible, acceptable, and likely effective</li> <li>be responsive and accountable to constituents and external funders</li> </ul>
Health care providers and health insurance plans	<ul style="list-style-type: none"> <li>health care providers: opportunity to guide patients about healthful diet and physical activity</li> <li>health insurance plans: interest in the evaluation to manage the financial risk related to health consequences of excess weight</li> </ul>	<ul style="list-style-type: none"> <li>health care providers: better information on “what works” for them to recommend, in the specific context of their communities and health care settings</li> <li>nonprofit hospitals: knowledge of “what works” at a community level to assure good use of resources</li> <li>health insurance plans: cost-effectiveness of various strategies for building the business case for employers and consumers</li> <li>health insurance plans: standardized data collection</li> <li>health insurance plans: information on community program resources</li> <li>health insurance plans: data to target and refine communication</li> </ul>
Employers	<ul style="list-style-type: none"> <li>control access to the workplace, an important and pervasive setting for health promotion</li> </ul>	<ul style="list-style-type: none"> <li>confidence that wellness programs will reduce not only health care costs, but also absenteeism and health-related productivity losses</li> <li>knowledge to create the best program for their workforce</li> </ul>

Evaluation User	Role	Needs
Federal and state policy makers	<ul style="list-style-type: none"> <li>power to greatly influence obesity prevention in government, business, and nonprofit organizations</li> <li>make and administer policy at federal and state levels</li> </ul>	<ul style="list-style-type: none"> <li>comparative effectiveness of alternative strategies along with cost and cost-effectiveness</li> <li>geopolitical jurisdiction comparisons</li> <li>best way to define issues</li> <li>funder organizations: need to hold grantee organizations accountable for the use of funds</li> <li>clear and easily digestible information to help frame choices and correctly interpret evidence</li> </ul>
Advocates	<ul style="list-style-type: none"> <li>essential to the policy development process, particularly for public health</li> <li>often serve as knowledge brokers</li> </ul>	<ul style="list-style-type: none"> <li>be visible and persistent</li> <li>decide on which prevention strategies to focus</li> <li>information from the research community to support claims about “what works” and applicability to the populations at greatest risk</li> <li>information on what similar communities and states are doing</li> <li>knowledge of whether specific advocacy appeals or framing of the issues and stratagems work in different contexts</li> <li>information on policy progress and the needs for improvement</li> </ul>
Federal and state agency administrators	<ul style="list-style-type: none"> <li>oversee accountability and reporting requirements for funds distributed to state and local levels for initiatives</li> <li>dissemination, translation, and local implementation</li> </ul>	<ul style="list-style-type: none"> <li>a variety of data elements that are not always available</li> <li>indicators such as changes in programs, policies, or environments for planning and mid-course corrections</li> <li>best available evidence of effectiveness</li> <li>external validity and generalizability</li> </ul>
Funder Organizations	<ul style="list-style-type: none"> <li>keep the policy conversation going</li> <li>champion continued social and system changes</li> <li>educate to encourage advocacy for change at all levels</li> <li>publicize progress</li> </ul>	<ul style="list-style-type: none"> <li>see indicators of progress on the way to health and social changes</li> <li>tangible signs of progress both in interventions and outcomes to retain the interest of leadership and boards of trustees</li> <li>evidence about what works in community-level initiatives to invest resources</li> </ul>

SOURCE: EPOP, p. 44.

### *Measure the Proximal Effects of Prevention Efforts*

Policy makers and politicians often serve for just a short time, and coalitions that form to support prevention policies may not last long enough to sustain prevention investments. If the value of a policy or intervention continues to be measured primarily by assessing its long-term health impact, then it will be very difficult to promote activities that require many years to affect population health. Methods for measuring proximal or interim effects of interventions are needed to demonstrate the more immediate value of changing policies and investing in prevention and health promotion interventions (EOP, TQMPH).

### *Measure the Wide-Reaching Effects of Disease Prevention Efforts*

The value of prevention may lie outside the traditional health sphere, and the effects may not be captured well by traditional measures of health outcomes. Supporters of prevention and health promotion should consider developing indicators that better measure population well-being more broadly—for example, indicators that measure community well-being, the value that arises out of community-member engagement, and resources used.

Some IOM reports suggest developing a single indicator for population well-being that could capture complex components of health and complement the gross domestic product measure as another indicator of a country or community's well-being. This ideal indicator could, for example, measure community benefit in the way that quality-adjusted life years and health-adjusted life expectancy measure health (FAVCBP).

### *Increase Efforts in Implementation Research*

Another area of research that could aid decision makers is implementation science. Promising prevention and health promotion strategies exist, but evidence is lacking on how to make them work at scale and achieve consistent effects. Challenges that are not foreseen in controlled research studies often arise during implementation and prevent policies and programs from having their intended effects.

If policy makers do not have evidence that prevention interventions are feasible and will improve chronic disease outcomes or change risk factors when implemented widely, they are less likely to risk valuable resources and political reputations on these programs. Information on how to implement interventions better is critical for decision makers to understand the type of political and infrastructure support needed for prevention activities to be successful. Implementation research for prevention activities will look at policies and programs in real, complex contexts and will help decision makers and implementers address such challenges as low workforce capacity and political and cultural parameters (FPH:IHF, CVD, LWCI, BEGOP).

### *Conduct Economic Analysis That Is Optimally Useful for Policy Decisions*

Policy makers allocating money and other resources are usually interested in the policy proposals that will put their funds to best use. Stronger evidence that prevention programs will reduce near-future costs or provide good returns may contribute to persuading policy makers to adopt these programs (LWCI).

Nevertheless, those seeking to influence policy decisions should be aware that arguments lauding the financial benefits of prevention policies are not always convincing to policy makers. This may be the case especially if the benefits are seen later than the time frame of interest to policy makers or if those benefits are accrued outside of the policy maker's domain.

To inform investment decisions most effectively, supporters of prevention and health promotion may need to start by understanding and informing the parameters and expectations policy makers place on economic analyses, as these may not currently align with the most appropriate ways of assessing prevention interventions. For example, to assess fully the potential for return on investment, policy makers may need clarification on the need for accepting economic analyses that show a long-term time frame for impact.

Economic analyses also need to clarify where exactly the benefits of prevention end up, because they are often reaped by people and sectors different from those making the initial investment. For example, the savings that come from school or workplace policies for better nutrition and greater physical activity are often seen more clearly in clinical care settings than in the schools or workplaces. Policy makers will need to be conscious of this when requiring certain sectors to use their resources for prevention and health promotion activities that will not directly benefit their budgets later.

In addition, cost-effectiveness or cost-benefit analyses are useful in decision making only if the proposed policy or program is affordable in the first place. If the implementing agency does not have the funds necessary to initiate the program, then it is not feasible to continue advocating for the program despite the argument that it might be beneficial in the future (CVD).

Finally, as mentioned previously, merely showing the long-term effectiveness and potential financial benefits of prevention programs may not persuade policy makers of the immediate urgency of these policies and investments. Many ethical, social, and political aspects add to or detract from the perceived value of an intervention, and these factors need to be considered in addition to financial costs and benefits (LCWI).



*Link Policy to Population Health Outcomes*

Decision makers are more likely to be motivated to support prevention policies and programs if they can clearly see that their work has a positive impact on population health. There is currently a gap in understanding the relationship between policy requirements and population health, and more attention needs to be given to related research (LWCI).

To monitor and measure the impact of policies successfully, methodologies for understanding causal relationships between public policy and its intended outcomes will need to be further developed, and federal and state governments will need to develop more systematic methods of tracking policy impact (USHIP). National trend data will also need to account for differences in settings in which policies are enacted. Resources, environmental settings, population characteristics, traditions, and policies differ from community to community, and policy makers need to understand that though a policy or program might positively impact health in a certain way in one setting, it might have different effects in their communities (ESB, CVD).

Showing the link between policy and health outcomes is difficult for several reasons. First, it involves extensive tracking, which, if standardized and centralized, requires the government to enforce regulations, hire new staff for consistent monitoring, and add work to the loads of already busy staff. Furthermore, at the implementation level, tracking is often difficult because of human resource and material constraints (ESB). The long-term nature of prevention effectiveness also means that measuring policy impact requires data that are often difficult to obtain because they involve longitudinal follow-up and assessment and affect outcomes that are difficult to measure (LWCI). When the data are obtained, they are often scattered and uncoordinated, coming from the government, private sector, foundations, and nonprofit organizations, all with their unique methods.

*Develop Faster and More Powerful Research and Development Cycles*

To be more responsive to the needs of the current decision-making environment, the public health sector must become better equipped to do research that will enable policy makers and implementers to adequately innovate, adapt, and respond quickly to the evolving nature of chronic disease threats and opportunities for intervention. In making an analogy to industry, one report observes that public health currently uses the research model of “steady-state” industries rather than a research-and-development model of failing fast and often and producing a steady stream of effective innovations. Steady-state industries devote about 2–3 percent of their budgets to research and development, whereas fast-paced pharmaceutical, biotechnology, medical technology, and software industries invest about 15 percent. Because of the economic magnitude and dynamic nature of chronic health problems, research on prevention activities should look more like research in the technology and software industries (FPH:IHF).

**APPLY CONSISTENT STANDARDS FOR ASSESSING QUALITY OF EVIDENCE**

Policy makers are faced with an abundance of data and information. To sift through it all, grapple with conflicting information, and extract the most useful information, there is a need for consistent standards on how to assess the quality of available evidence.

Although it would simplify matters to have a simple hierarchy of evidence, in reality there is no single gold standard of evidence that can be used to answer all types of questions. Often a question will require multiple types of evidence that together provide a more holistic understanding of the situation. For example, experimental or quasi-experimental studies are often the best evidence when assessing causal effects at the individual level. At the systems and populations level, however, nonexperimental evidence, such as descriptive research or qualitative analyses, often provides the best evidence because it better captures the complexity of an uncontrolled environment (BEGOP, FAVCBP). Therefore, a precursor to assessing the quality of the evidence is determining whether it is appropriate for the question being addressed (see Tables 3 through 9; BEGOP).

Once the type of evidence has been deemed appropriate for the question at hand, its quality needs to be assessed. Table 10 (page 22) provides a summary of the criteria for assessing different types of evidence (BEGOP).

**TABLE 3** Types of Observational Evidence and Examples of Their Uses

Type of Evidence	Questions That Could Be Addressed	Specific Applications
Quantitative Surveys, Longitudinal Studies, and Opinion Polls	Based on measurements or self-reports of height and weight, how many people are obese in a given region? (“Why” question)	A <b>cross-sectional sample survey</b> yielding descriptive data on levels of obesity using height and weight indicators
	Going forward, do self-reported eating choices change in a group of adolescents exposed to different levels of calorie information at their school cafeterias? (“What” question)	A <b>longitudinal cohort study</b> yielding analytic breakdowns of teens’ eating choices according to menu labeling policies in their respective school cafeterias
	Given two or more intervention options, which ones do stakeholders prefer? (“How” question)	A <b>cross-sectional sample survey</b> or poll yielding descriptive data on stakeholder preferences
Analysis of Existing Databases	Based on the health department’s data on a city population, what were the recorded levels of cardiovascular disease related to obesity in 2007? (“Why” question)	A <b>secondary analysis</b> of the <b>correlation or other measure of risk</b> between levels of measured obesity and cardiovascular disease in a selected <b>cross-sectional sample</b>
	Based on the health department’s data on a city population, what are the trends in cardiovascular disease and obesity levels from 2005 to 2010? (“Why” question)	A <b>trend analysis</b> comparing data for 2005 and 2010 for the percent of people with cardiovascular disease and the percent of people with obesity
	Based on the health department’s data on a city population, what are the past lifestyle correlates of cardiovascular disease in obese and nonobese adults in 2007? (“Why” question)	A <b>retrospective, case-control analysis</b> of the relationship between past lifestyle factors and cardiovascular disease in obese and nonobese adults
	Compared with another intervention, what are the costs for implementing and operating a school-based program districtwide, based on data from pilot or single-site studies? (“How” question)	A <b>cost-feasibility</b> analysis using preexisting budget and accounting databases
	What combination of factors maximally predicts stakeholder preferences with regard to program participation and use? (“How” question)	A <b>projection</b> analysis using preexisting databases on stakeholder preferences, participation, and program management
	What level of sales taxes or excise taxes on sugar-sweetened beverages directly results in decreased consumption of these beverages in a state by 50%? (“What” question)	A <b>modeling</b> study in which data on price elasticity, together with data on patterns of sales and consumption of these beverages, are used to estimate the effective level of taxation to decrease consumer consumption by 50%
	Which neighborhoods have the highest rates of childhood obesity, and what other characteristics of these neighborhoods might influence these rates? (“Why” question)	A <b>geographic mapping</b> study in which the locations of food stores and outdoor recreational facilities are plotted by neighborhoods or zones around neighborhoods alongside area data on child obesity prevalence
	What would be the potential reach of a policy to require calorie labeling on menus of chain restaurants? (“How” question)	Analysis of administrative data on food retail establishment locations and customer sales for the types of restaurants that would fall under the policy

SOURCE: BEGOP, p. 102.

**TABLE 4** Types of Experimental and Quasi-Experimental Evidence and Examples of Their Uses

Type of Evidence	Questions That Could Be Addressed	Specific Applications
Randomized Controlled Trial (RCT)	Compared with another intervention, are the obesity outcomes better for individuals assigned at random to receive this intervention than for those assigned not to receive the intervention? (“What” question)	A <b>randomized controlled trial</b> of a manipulated nutrition program in two groups of obese adults who were placed in the program based on a coin flip (The random assignment usually balances individual characteristics across those who receive or do not receive the program so that the result can be interpreted as “all other things being equal”; some statistical controls may be required.)
Quasi-experimental Study	Compared with another intervention, are the obesity outcomes better with this intervention when administered to adults in two similar communities? (“What” question)	A <b>matched-cohort study</b> design comparing obesity outcomes of a manipulated nutrition program in two communities (The two communities are the groups that are matched on relevant characteristics; other potential influences on intervention outcomes are statistically controlled.)
	Using ongoing obesity measures as control data in a group of children, is body mass reduced when this intervention is administered in alternating cycles? (“What” question)	An <b>interrupted time series study</b> tracking changes in obesity outcomes over time when a nutrition program is administered periodically

SOURCE: BEGOP, p. 103.

**TABLE 5** Types of Qualitative Evidence and Examples of Their Uses

Type of Evidence	Questions That Can Be Addressed	Specific Applications
Logic Modeling or Program Theory Analysis	What are the underlying assumptions about how an intervention will improve health outcomes? What are the expected causal pathways? What intervening factors in the larger system and community are likely to affect outcomes? (“What” questions)	A <b>content analysis</b> and <b>systematic review</b> of documents and literature relevant to an intervention to develop a logic model or causal path diagram
Process Delivery and Implementation Monitoring	What features of program implementation are associated with the maximum effect of this program? (“What” question) What are the documented barriers to implementation of this intervention, and how have they been overcome? (“How” question)	A <b>qualitative focus group interview</b> of program delivery personnel from an effective program

SOURCE: BEGOP, p. 104.

**TABLE 6** Types of Mixed-Method Evidence and Examples of Their Uses

Type of Evidence	Questions That Can Be Addressed	Specific Applications
Surveys Combined with Randomized Controlled Trial (RCT)	What self-reported individual-, family-, and community-level factors moderate effects on obesity outcomes when an intervention is randomly assigned to one of two adult groups? (“What” question)	A <b>randomized controlled trial</b> of a manipulated nutrition program using two groups of obese adults, with <b>survey-based data</b> of individual-, family-, and community-level factors <b>analyzed as potential moderators</b> of outcomes
Qualitative Analysis Combined with Quasi-experimental Study	Is there qualitative evidence to show that an intervention was implemented as intended when outcomes improved in a time series analysis? How consistently and authentically was the intervention implemented when effects were obtained? (“What” questions)	A <b>content analysis</b> of food logs, menus, and meal plans combined with an <b>interrupted time series study</b> tracking changes in obesity outcomes when a nutrition program is implemented periodically

SOURCE: BEGOP, p. 105.

**TABLE 7** Types of Evidence Synthesis Methods and Examples of Their Uses

Type of Evidence	Questions That Can Be Addressed	Specific Applications
Systematic Reviews: Experimental and/or Quasi-experimental Studies	Based on formal syntheses of experimental or quasi-experimental research, what is the evidence on the effectiveness of this intervention? (“What” question)	A <b>systematic review</b> of effects of mandatory school exercise programs on childhood obesity levels
Meta-analyses: Experimental and/or Quasi-experimental Studies	Based on meta-analysis of effects from experimental or quasi-experimental research, what is the evidence on the effectiveness of this intervention? (“What” question)	A <b>meta-analysis</b> to estimate the average effect on childhood obesity levels found in eligible studies of mandatory school exercise programs
Mixed-Method Syntheses: Stakeholder Studies	Based on a formal summary of results, what are the facilitators of and barriers to implementation of this intervention in light of stakeholder perspectives? (“What” question)	A <b>“realist” review</b> using mixed-method analysis of stakeholder participation studies (drawing on the realist philosophy of science)

SOURCE: BEGOP, p. 106.

### *Develop Processes and Systems for Systematically Gathering Information*

Data will be most useful if they are coordinated and systematically collected and reported, and federal agencies, state and local health departments, and nonfederal partners need to standardize data collection and analysis (EOPE). For example, a proliferation of disparate indicator sets can be overwhelming to decision makers, and a lack of consistent measuring makes it difficult for people to see clearly how health status has changed over time. Indicators therefore need to be standardized and easily accessed (FPH:MA).

More broadly, there is a need for a robust, centrally coordinated research infrastructure to establish the effectiveness and value of public health and prevention strategies, mechanisms for effective implementation of these strategies, the health and economic outcomes derived from investing in these strategies, and the comparative effectiveness and impact of this investment (FPH:IHF).

**TABLE 8** Types of Parallel Evidence and Examples of Their Uses

Type of Evidence	Questions That Can Be Addressed	Specific Applications
Research Evidence on Effects of Parallel Interventions	Given the existing evidence on the effectiveness of tobacco and alcohol taxes, would soda taxes be similarly effective in reducing obesity on a large scale? (“What” question)	<b>Intervention impact or effectiveness studies</b> showing that strategies to influence public behaviors work
Parallel Research on Legal Issues	Given the constitutional issues involved in restricting free speech, what grounds have been used to justify controls on advertising? (“What” question)	<b>Content analysis</b> of relevant cases to identify arguments that have been advanced for and against such restrictions and how these arguments have been resolved
Parallel Research on Implementation Process or Policy Development	<p>Given that eating and physical activity are individual behaviors but are affected by policies and programs in the broader community, what are some precedents for environmental and policy approaches that impact personal behavior, and how were they achieved and justified? (“What” question)</p> <p>Given that obesity is a populationwide problem for which many of the drivers are a part of the social fabric, what can be learned from approaches used in other public health efforts of similar scope and complexity? (“How” question)</p>	<p><b>Case studies</b> of effects of populationwide interventions on nutrition, physical activity, obesity, or cardiovascular disease or obesity in other countries<sup>a</sup></p> <p><b>Retrospective case analysis</b> of successes related to other complex public health issues that have been addressed by policies that have led to social change<sup>a</sup></p>

<sup>a</sup> See Economos et al., 2001; Eriksen, 2005; Kersh and Morone, 2002.

SOURCE: BEGOP, p. 109. See BEGOP for complete references.

**TABLE 9** Types of Expert Knowledge and Examples of Their Uses

Type of Evidence	Questions That Can Be Addressed	Specific Applications
National Committee Reports Based on a Deliberative Process	In view of present and potential human and monetary costs of treating current levels of obesity or obesity-related diseases, what types of actions are recommended within and outside of the health care system? (“What” question)	Reasoned and formal <b>analysis by a committee of established experts</b> , such as a report by a committee convened by the public or private sector with established bias and conflict-of-interest procedures
Guidelines from National Associations, Health Foundations, and Committed Practitioner or Health Professional Organizations	Given the availability of effective measures to treat high blood pressure, what steps are needed to improve levels of blood pressure control in the population at large? (“What” question)	Public <b>statements of consensus</b> by a committee of established professionals and practitioners
Other Expert Statements	How does this intervention fit with community politics or national policy priorities? On what basis should it be given high priority? (“How” questions)	The <b>considered opinion</b> of experts in a particular field or practitioners, leaders, stakeholders, and policy makers able to make informed judgments on implementation issues and having local or governmental expertise (e.g. doctors, lawyers, nutritionists, scientists, or academics able to interpret the scientific literature or specialized forms of data, such as legal evidence)

SOURCE: BEGOP, p. 110.

**TABLE 10** A Typology of Study Designs and Quality Controls

Sources of Evidence (research designs, tools, and methods for evidence gathering)	Existing Criteria for Assessing Quality of Evidence
Nonexperimental or Observational Studies	<p>Can be assessed by criteria grouped by Liddle et al. (1996):</p> <ul style="list-style-type: none"> <li>• Descriptive information about the review or study (e.g., type of intervention)</li> <li>• Study design, implementation, and analysis</li> <li>• Overall assessment of the study</li> </ul> <p>Transparent Reporting of Evaluations with Nonrandomized Designs (TREND) is a new attempt to establish criteria for nonrandomized intervention studies that has produced a preliminary statement of criteria for judging such studies (Des Jarlais et al., 2004).</p>
Experimental and Quasi-experimental Studies	<p>Can be graded by assessment of study design, selection bias, confounding; blinding; data collection and classification of outcomes, follow-up, withdrawal and drop-out, and analysis (Rychetnik et al., 2002, as outlined by the Oxford-based Public Health Resource Unit).</p> <p>Quality of an RCT is based on (Higgins and Green, 2009):</p> <ul style="list-style-type: none"> <li>• Assignment to treatment and control groups and blinding</li> <li>• Degree of potential confounding</li> <li>• Classification of outcomes and follow-up</li> <li>• Appropriate analysis (e.g., “intention to treat”)</li> </ul> <p>Study design is evaluated by levels of evidence (as in those of the Canadian Task Force on the Periodic Health Examination or the Task Force on Community Preventive Services and the U.S. Preventive Services Task Force [USPSTF]). Criteria for the USPSTF are summarized by Harris et al. (2001) and updated by Pettiti et al. (2009).</p>
Qualitative Research	<p>Standardized quality criteria have not been agreed upon, but should reflect the distinctive goals of the research. As an example of criteria, quality may be determined by the audit trail of processes and decisions made and the credibility of the study methods (Rychetnik et al., 2002, Table 3):</p> <ul style="list-style-type: none"> <li>• Clarity of objectives and research questions</li> <li>• Appropriate selection of method to meet aims</li> <li>• Clear rationale for sampling strategy</li> <li>• Appropriate use of triangulation</li> <li>• Audit trail in data collection and analysis</li> <li>• Explicit research position and role</li> <li>• Clear basis for findings</li> <li>• Transferability of findings</li> <li>• Relevance, usefulness, importance of findings</li> </ul>
Mixed-Method Experimental Studies	<p>Quality criteria for mixed-method research derive from the quality criteria used for quantitative and qualitative designs separately. A 15-point checklist of criteria for mixed-method research and mixed studies reviews is presented by Pluye et al. (2009). Three points on which mixed-method research can be judged are:</p> <ul style="list-style-type: none"> <li>• Justification of the mixed-method design</li> <li>• Combination of qualitative and quantitative data collection–analysis techniques or procedures</li> <li>• Integration of qualitative and quantitative data or results</li> </ul>

Sources of Evidence (research designs, tools, and methods for evidence gathering)	Existing Criteria for Assessing Quality of Evidence
Evidence Synthesis Methods	<p>Questions to consider when appraising a systematic review include (Public Health Resource Unit, 2006):</p> <ul style="list-style-type: none"> <li>• Did the review address a clearly focused question?</li> <li>• Did the review include the right type of study?</li> <li>• Did the reviewers try to identify all relevant studies?</li> <li>• Did the reviewers assess the quality of all the studies included?</li> <li>• If the results of the study were combined, was it reasonable to do so?</li> <li>• How are the results presented, and what are the main results?</li> <li>• How precise are these results?</li> <li>• Can the results be applied to the local population?</li> <li>• Were all important outcomes considered?</li> <li>• Should practice or policy change as a result of the evidence contained in this review?</li> </ul>
Parallel Evidence	Quality is determined by the underlying study designs of the parallel evidence sources in the same way that it is determined for the primary evidence.
Expert Knowledge	<p>Questions to consider when appraising expert knowledge include (World Cancer Research Fund and American Institute for Cancer Research, 2007):</p> <ul style="list-style-type: none"> <li>• Were methods of review and development of recommendations described?</li> <li>• Was expert knowledge (1) derived from an expert panel, (2) derived from an original review of the literature, and (3) based on published peer-reviewed literature specified in a bibliography?</li> </ul> <p>A description of the computer-based Delphi Method for utilizing expert knowledge reliably is provided by Turoff and Hiltz (1996).</p> <p>A description of procedures used to quantify expert opinion (using specialized software) is in Garthwaite et al. (2008).</p>

SOURCE: BEGOP, p. 125. See BEGOP for complete references.

### Examples of Relevant IOM Recommendations

#### *For the Public's Health: The Role of Measurement in Action and Accountability*

The committee recommends that the Department of Health and Human Services support and implement the following to integrate, align, and standardize health data and health-outcome measurement at all geographic levels:

- a core, standardized set of indicators that can be used to assess the health of communities
- a core, standardized set of health-outcome indicators for national, state, and local use
- a summary measure of population health that can be used to estimate and track health-adjusted life expectancy for the United States

#### *U.S. Health in International Perspectives: Shorter Lives, Poorer Health*

The National Institutes of Health or another appropriate entity should commission an analytic review of the available evidence on (1) the effects of policies (including social, economic, educational, urban and rural development and transportation, health care financing and delivery) on the areas in which the United States has an established health disadvantage, (2) how these policies have varied over time across high-income countries, and (3) the extent to which these policy differences may explain



### Examples of Relevant IOM Recommendations *Continued*

cross-national health differences in one or more health domains. This report should be followed by a series of issue-focused investigative studies to explore why the United States experiences poorer outcomes than other countries in the specific areas documented in this report.

#### *Bridging the Evidence Gap in Obesity Prevention: A Framework to Inform Decision Making*

Government, foundations, professional organizations, and research institutions should catalyze and support the establishment of guidance on standards for evaluating the quality of evidence for which such standards are lacking.

#### *Living Well with Chronic Illness: A Call for Public Health Action*

The committee recommends that public and private research funders increase support for research on and evaluation of the adoption and long-term maintenance of healthy lifestyles and effective preventive services (e.g., promoting physical activity, healthy eating patterns, appropriate weight, effective health care) in persons with chronic illness. Support should be provided for implementation research on how to disseminate effective long-term lifestyle interventions in community-based settings that improve living well with chronic illness.

#### *Primary Care and Public Health: Exploring Integration to Improve Population Health*

To link staff, funds, and data at the regional, state, and local levels, the Health Resources and Services Administration (HRSA) and the CDC should join efforts to undertake an inventory of existing health and health care databases and identify new data sets, creating from these a consolidated platform for sharing and displaying local population health data that could be used by communities.

#### *Promoting Cardiovascular Health in the Developing World: A Critical Challenge to Achieve Global Health*

Research to assess what works in different settings—the National Heart, Lung, and Blood Institute and its partners in the newly created Global Alliance for Chronic Disease, along with other research funders and bilateral public health agencies, should prioritize research to determine what intervention approaches will be most effective and feasible to implement in low- and middle-income countries, including adaptations based on demonstrated success in high-income countries. Using appropriate rigorous evaluation methodologies, this research should be conducted in partnership with local governments, academic and public health researchers, nongovernmental organizations, and communities. This will serve to promote appropriate intervention approaches for local cultural contexts and resource constraints and to strengthen local research capacity.

- Implementation research should be a priority in research funding for global chronic disease.
- Research support for intervention and implementation research should include explicit funding for economic evaluation.
- Research should include assessments of and approaches to improve clinical, public health, and research training programs in both developed and developing countries to ultimately improve the status of global chronic disease training.
- Research should involve multiple disciplines, such as agriculture, environment, urban planning, and behavioral and social sciences, through integrated funding sources with research funders in these disciplines. A goal of this multidisciplinary research should be to advance intersectoral evaluation methodologies.
- In the interests of developing better models for prevention and care in the United States, U.S. agencies that support research and program implementation should coordinate to evaluate the potential for interventions funded through their global health activities to be adapted and applied in the United States.



# Make the Decision-Making Process Easier

Generating and collecting useful information is a start to creating useful policy interventions for prevention and health promotion; however, the road between having information and generating support among decision makers can be long and winding. Even if high-quality information is generated and coordinated to be maximally useful in the ways described above, decision makers will still be faced with a potentially overwhelming amount of data on various subjects and from many perspectives. For decision makers with little time to spend on interpreting this information, the volume alone can be a barrier to favoring prevention and health promotion.

Research on intervention effectiveness does not automatically lead to clarity on the right policies to enact. In reality, even with strong evidence that links policies or interventions to desired outcomes, decision makers will never have all the evidence they need to be completely certain of their choices. There is no fool-proof way to compare and choose interventions, and the degree of certainty needed to recommend an intervention is not absolute. Interventions that are expensive and risky will require stronger evidence than more affordable and lower-risk changes.

In addition, the strength of the evidence is not the only factor that influences policy, programming, and funding decisions. Decision makers also consider experience, personal and professional relationships, the values of constituents and other stakeholders, and organizational and political constraints.

Decision makers are more likely to support prevention and health promotion if they can more easily navigate these many factors. This will require making information easily accessible, integrating information into standard decision-making processes, and developing frameworks that guide decision makers to make good choices through transparent processes.

## MAKE INFORMATION EASY TO ACCESS AND INTERPRET

Policy makers will be more likely to use available evidence if they can access it quickly and can easily understand its implications for making policy or intervention decisions (TQMPH). The HHS Health Indicators Warehouse is one example of a system that has made a large contribution to better data availability by developing interactive interfaces to better serve the needs of its users. The database makes federal health data widely available and integrates them with information on other factors that affect health, including the U.S. Department of Agriculture (USDA) Food Environment Atlas (FPH:MA).

Another strategy for simplifying the interpretation of information is to use consistent formats for reporting evidence that make it easy to compare and weigh various options. For example, standardized categories (such as “effective,” “promising,” “untested,” and “no likely benefit”) could make it easier for decision makers to compare the anticipated effectiveness of interventions (BEGOP).

Yet another strategy is to use “knowledge brokers” who can translate research into policy. Intervention evaluations that have had the strongest effect on policy have been those that made concerted efforts to bridge the divide between research findings and recommendations for policy action. Potential translators include congressional agencies such as the U.S. Government Accountability Office or the Congressional Research Service, advocates, or other experts (EOPE).

## INTEGRATE KNOWLEDGE INTO THE DECISION-MAKING PROCESSES

Research knowledge should ideally be integrated into the context of the systems or organizations that routinely facilitate the work of policy makers. An integration model takes into account the ways in which knowledge flows through relationships and social networks that are shaped by organizations and systems with unique dynamics, priorities, and expectations. This model also encourages cyclic communication that goes beyond

one-way dissemination and includes the delivery of feedback and experiential knowledge from practitioners and policy makers to researchers and advocates (PPSCH).

## FOLLOW A DECISION-MAKING FRAMEWORK

In addition to having accessible and useful information on prevention and health promotion, decision makers need guidance on how to wade through this information and other factors that influence their choices. Frameworks that provide standardized guidance and processes can help leaders to consider large amounts of information and opinions to make good decisions around prevention and health promotion. This requires that decision makers commit to using a framework and that those generating the information commit to preparing the needed evidence and reporting it in a way that follows the framework. Under those circumstances, decision-making frameworks can allow users to be quick, consistent and neutral, and transparent (FAVCBP, BEGOP).

**Quick.** The impacts of prevention interventions are often not straightforward and easily identifiable, and they pervade beyond health boundaries into other systems of life. Policy makers could spend a lifetime trying to assess all angles of the impacts of potential actions, but a straightforward framework guides them through what is thought to be the most relevant information. A good framework should remind them of the important questions they need to consider and will suggest standard processes that allow decision-making work to become faster and easily repeated (BEGOP).

**Consistent and neutral.** Anyone who makes a decision will be influenced by inherent values and perceptions and a variety of external forces. A standardized decision-making process can help people to neutralize their approaches and choose the policies and interventions that will best serve an entire population of people. It should integrate information and address conflicts in both evidence and beliefs.

A good decision-making framework will help leaders to bring all viewpoints to the table and explore and work through disagreements, rather than glossing over them. One test of a framework's neutrality is whether it is deemed valid and useful by multiple groups of people who strongly disagree with each other on the issue at hand (FAVCBP).

**Transparent.** Formal guidance and frameworks provide the public with clarity around how decisions are made. They require leaders to state goals and to articulate clearly their reasons for making difficult choices. For example, sometimes prevention interventions improve aggregate health but are not equitable because they have a greater effect on those who are already better off. Decision makers must then choose between either avoiding an increase in health disparity or having a greater total effect on health, and a good framework can provide processes that will allow them to explain to others their reasons for making that choice (FAVCBP).

### *Identify and Compare Interventions That Improve Community Well-Being*

The ultimate goal of a framework is to provide decision makers with information and questions that will guide them to choose the policies and interventions that will improve the overall well-being of their constituents. Decision makers could consider a number of potential frameworks (see Appendix C for two examples). Across these frameworks, five main questions emerge that can lead toward choosing a good prevention and wellness intervention or policy: What needs to change? What do stakeholders value? What resources are available? What are the options? Will the options work with the values and resources?

**What needs to change?** Decision makers need to be convinced that it will be worthwhile to upset the status quo with changes that promote prevention and wellness (APOP). They should be supplied with information on the current state of health and wellness, trends that

inform them of the need for prevention, the strengths and weaknesses of current interventions and policies, comparisons between different geopolitical jurisdictions, and references to more information (EOPE). They need to be convinced with this information that the problems are severe, that prevention matters, and that people urgently need to do something to change the direction of health (BEGOP, EOPE).

**What do stakeholders value?** A good decision-making framework should lead to the identification and discussion of the values of the general population, politicians and policy makers, funders, employers, and anyone else who may be affected by the proposed change. Decision makers will need to consider both the outcomes that these stakeholders value as well as the principles that guide their actions, because people may disagree on the acceptability of the means to reach even mutually agreed on ends. Often values will be conflicting between people or even within an individual, and the framework should bring them all into the open for serious consideration throughout the decision-making process (FAVCBP).

**What resources are available?** A helpful framework will also allow users to better understand the tools and environmental, cultural, political, and human assets that they can use to reach the valued outcomes. Decision makers will need to know the human, material, and financial resources that could be dedicated to implementing the policy or intervention, as well as the existing laws and programs that could be helpful or constraining. A useful framework should guide them through the processes of identifying and mapping available assets, as well as provide a summary of helpful resources.

**What are the options?** Leaders and policy makers should be able to look toward a standardized framework to identify and compare potential strategies for improving health and well-being. Policy makers should be able to quickly and easily understand interventions that have worked and new ideas that show potential (EOPE). Frameworks should illustrate all positive and negative impacts of proposed changes, their costs and cost-effectiveness, the contextual factors that influence their effectiveness (EOPE, APOP), and the likelihood that they will have lasting and sustainable effects (BEGOP).

**Will the options work with the values and resources?** Once potential options have been identified, the framework should refer decision makers back to the identified stakeholder values and resources to determine what changes are desired and feasible (FAVCBP).

Decision makers should map proposed interventions to valued outcomes and explore whether stakeholders will embrace the change and whether the change fits into their guiding principles. The framework should also offer room for consideration of how to tailor a proposed policy or intervention to meet a specific community's needs (FAVCBP).

The framework should then lead decision makers to assess whether the change can be accomplished with the available resources. It should consider whether the change is affordable (not only whether its benefits outweigh costs) and whether it fits into the existing political and legal settings. Decision makers will also need to understand how proposed interventions complement existing programs to create a larger combined effect (FAVCBP).

### *Take a Systems Approach*

A decision-making framework that takes a systems approach to solving problems will lead decision makers through an exploration of policy and intervention options that takes into account how the change might affect all aspects of human life and well-being, not just health. Decision makers should look creatively at resources that can be leveraged in other sectors, and at intervention options that lie outside the health sphere (transportation, agriculture, urban planning, housing, and so forth). Information on these interventions should be gathered using methodologies that capture complex contexts, human thought and behavior, and community trends (FAVCBP).

To accurately assess the value of community-based prevention decision makers should use a systems lens to look at the benefits and harms of projected changes in three domains: health, community well-being, and community process. Health includes “changes in the incidence and prevalence of disease, declines in mortality, and increases in health-related quality of life.” Community well-being includes “social norms, how people relate to each other and to their surroundings, and how much investment they are willing to make in themselves and in the people around them.” Elements that contribute to community well-being include employment, safety, transportation, worksites, social support, income, education, food, and health care. Community process includes “local leadership development, skill building, civic engagement or participation, community representation, and community history” (FAVCBP, pp. 4–5).

### *Always Consider Equity*

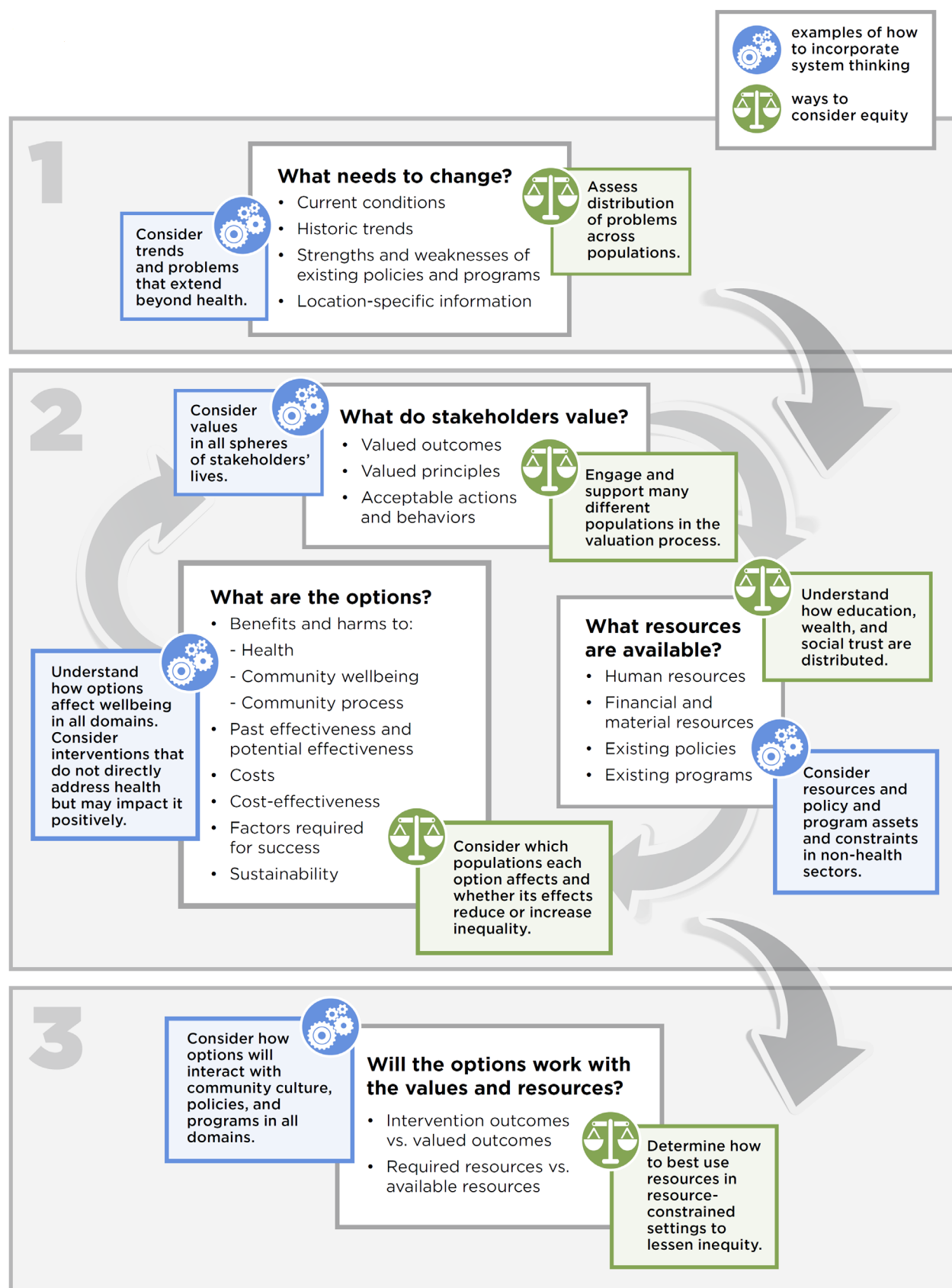
The framework should also guide the user to consider repeatedly whether the policy change or new intervention leads to reduced inequities in elements of well-being, such as education, financial wealth, social trust, access to food, and health-promoting built environments. Decision makers must look not only at how their actions affect aggregate health but also at how they affect the distribution of community well-being. If an intervention benefits an economically wealthier population more than a poorer one, it may actually increase inequality despite improving health overall (FAVCBP).

A good framework should lead decision makers to evaluate the equity of their decisions at every point in the process. The process of valuing outcomes and principles should engage stakeholders from a variety of populations, not only those who are wealthy or influential. The process of weighing and choosing a policy or program should be transparent enough to show that decisions were not merely made in response to a powerful group of people (FAVCBP).

Inclusiveness and transparency are not enough, however—when less powerful or less educated stakeholders are involved, they must be given adequate support to improve their access to evidence. Furthermore, decision-making processes need to ensure that less powerful stakeholders have an equal voice in the process; otherwise, the more powerful contributors will have a larger influence and could distort the prioritization and design of interventions (FAVCBP).

### *Integrate into Policy-Making Processes*

Good decision-making frameworks can be most useful if they are formally integrated into processes that policy makers must follow routinely. For example, grant or legislative proposals could require policy makers to submit an impact assessment based on the framework, or executive branch agencies could be required to use the framework to evaluate their programs. A framework for prevention interventions could also be made formal by giving discretionary funding only to those who use it (FAVCBP).



**FIGURE 3** Summary of a framework for choosing best policies and interventions for well-being.

NOTE: This summary figure is original to this paper. Examples of the original frameworks reviewed can be found in Appendix C.

### Examples of Relevant IOM Recommendations

#### *For the Public's Health: The Role of Measurement in Action and Accountability*

The committee recommends that the Department of Health and Human Services produce an annual report to inform policy makers, all health system sectors, and the public about important trends and disparities in social and environmental determinants that affect health.

#### *Bridging the Evidence Gap in Obesity Prevention: A Framework to Inform Decision Making*

Decision makers and those involved in generating evidence, including researchers, research funders, and publishers of research, should apply the L.E.A.D. framework (see Appendix C) as a guide in their utilization and generation of evidence to support decision making for complex, multifactorial public health challenges, including obesity prevention.

#### *An Integrated Framework for Assessing the Value of Community-Based Prevention*

The committee recommends that, to ensure transparency,

- analysts make publicly available the evidence used for valuation and provide estimates of the uncertainty of their results, and
- decision makers make publicly available the rationale for their decisions.

The committee recommends that those seeking to assign value to community-based prevention interventions take a comprehensive view that includes the benefits and harms in the three major domains of health, community well-being, and community process as well as the resource use associated with such interventions.



## Leverage Available Assets

One way to make it easier for decision makers to choose policies for prevention and health promotion is to find new ways to make use of the potential that exists within resources that are already available. Using resources more wisely will reduce the need for new systems and infrastructure and will lower the threshold for choosing to invest.

Ideally, activities, people, and funding would all be well coordinated, and all policies would be consistent with each other and well implemented. Although that ideal is not realistic, proponents of health can be strategic and creative in putting forward reasonable ways to integrate prevention and health promotion strategies alongside existing programs and infrastructure with goals and objectives that are achievable. To that end, available assets can be leveraged by improving coordination of activities, human resources, and finances within the health sector; developing implementable policies; and more effectively engaging sectors outside of health and public health.

### IMPROVE COORDINATION WITHIN THE HEALTH SECTOR

Many organizations are already implementing activities that overlap with or could easily accommodate health promotion and prevention activities. Various organizational, cultural, and financial issues, however, prevent collaboration and communication between organizations working toward prevention. The traditional organization of government agencies separates people into siloed groups according to service delivery, which makes it difficult for health agencies to interact with others who could play a vital part in health promotion (USHIP, FPH:IHF).

Even within organizations, there is sometimes little coordination between programs. Within the CDC, for example, many parallel programs are not integrated and seldom interact (FPH:IHF). This results in missed opportunities for programs to build on each other's expertise, prevent duplication of work and funding, and coordinate activities and funding for maximum effectiveness.

#### *Integrate Prevention into Practices Within the Health Sector*

Many opportunities exist within the health sector for introducing prevention without a large new investment of resources. For example, prevention resources could go toward training and incentivizing clinical practices to integrate prevention-focused questioning and screening into their patient visits. An effort to identify best practices for the integration of public health and primary care would yield additional opportunities to leverage existing assets, as would better linkages between primary care providers and their local health departments (PPSCH).

These opportunities can also be bidirectional and mutually beneficial. Not only can the primary care system potentially help implement more prevention and health promotion activities, but public health expertise can also be used to strengthen individual care. For example, public health techniques can be used to look more systematically at the effectiveness of the clinical care delivery system in creating health. Public health data capacity and analytic skills could also assist the clinical care system by evaluating whether services are used with appropriate frequency and are leading to positive changes (FPH:IHF).

To achieve this goal, greater efforts are needed to develop a workforce with the necessary knowledge and skills for this integration. There is a need for training grants and teaching tools that can prepare the next generation of professionals for more integrated clinical and public health functions in practice, focusing, for example, on cultural outreach, health education, and nutrition (PPSCH, CVD). Current programs that offer opportunities to expand training in prevention and health promotion include graduate medical education, the CDC's Epidemic Intelligence Service, and HRSA's primary care training programs (PPSCH).

### *Facilitate Communication Across Organizational Silos*

To align goals and priorities and to facilitate coordinated implementation of activities, organizations will have to develop strategies for enhanced communication with each other. One way in which organizations could do this is through sharing physical office spaces and facilitating staff exchanges. HRSA, for example, places two of its Home Visiting Program staff at each of its ten regional HHS offices to foster ground-level collaboration.

Organizations can also plan for periodic exchanges through meetings and workshops. For example, the Division of Heart Disease and Stroke Prevention of the CDC leads monthly Cardiovascular Health Collaboration meetings that gather representatives from other CDC centers to discuss issues related to cardiovascular health (PPSCH).

Communication can also be enhanced through procedural requirements that develop relationships. For example, HRSA's Home Visiting Program is required at the federal level to cooperate with the Administration for Children and Families, the Department of Education, the Department of Justice, and the Assistant Secretary of Policy and Evaluation at HHS. At the state level, applying for a grant requires sign-off by the state's child welfare agency, the State Advisory Council on Early Childhood Education and Care, the Child Care and Development Fund, and other agencies. Although sign-off does not necessarily indicate aligned leadership, it does at least promote awareness of activities between agencies and opens the door for potential relationship building. At the local level, the Home Visiting Program requires communities to do needs assessments, which helps to forge relationships in the neighborhood. Through this process, program implementers get in touch with health care providers, community-based organizations, and other stakeholders. Increased communication among these groups will increase the likelihood that future policies related to the program are developed to be specific, strong, and feasible within existing regulatory environments (PPSCH).

### *Align Goals of Overlapping Organizations*

Various organizations and government sectors working on prevention initiatives should clearly articulate their goals and then align leadership, guidance, and objectives to ensure that they are working toward the same goals. Leaders can work together on coordinated agenda setting, policy formulation, facilitation of various stakeholders, and advocacy. This can also help ensure that proposed changes will fit, if possible, into the existing policy environment (CVD).

Jointly developed, shared guidance among, for example, HHS, HRSA, the CDC, and the Centers for Medicare & Medicaid Services (CMS) would ensure that all agencies agree on a core set of best practices on making preventive services accessible to Medicaid beneficiaries, share knowledge of nontraditional settings in which to find preventive services, and share an understanding of how impact will be measured (PCPH). They could then plan activities that align with the guidance and as a result would be more likely to be complementary.

One way to begin unifying prevention and health promotion programs is by focusing on overlapping risk and protective factors and the goals necessary to address them (CVD). This coordination through a focus on risk factors has been successful for partnerships such as the Noncommunicable Disease Alliance, which brings together the World Heart Federation, the International Diabetes Federation, the Union for International Cancer Control, and the International Union against Tuberculosis and Lung Disease (CVD).

### *Coordinate Financial Resources and Funding Mechanisms*

Given the inevitable reality that people and organizations rely on funding for their work, supporters of prevention and health promotion can garner greater support from decision makers if they present feasible strategies to leverage financial resources more efficiently.

Currently, public health funding originates in congressional appropriations to both HHS and the USDA. Once money reaches HHS, various agencies (including the CDC, HRSA, and the Substance Abuse and Mental Health Services Administration) are in charge of directing funds to state and local public health departments (FPH:IHF).

By the time funding has reached the local level, it is likely to have passed through many sources. The National Association of County and City Health Officials' *2010 Profile of Local Health Departments* estimates



that 26 percent of revenue for local public health departments comes from local government, 21 percent is directly from the state, and 14 percent comes from federal funds that pass through the state. Twenty-nine percent of local public health department funding is composed of direct federal funding, Medicare and Medicaid reimbursement, fees, and other sources (FPH:IHF).

Different agencies and levels of government have their own distinct requirements for use of and reporting on funds. There is no single group in charge of accountability, and there is no agreement on a minimum package of services that funders ensure in all states and localities (FPH:IHF).

Because of these parallel and uncoordinated funding streams, local health departments must manage several hundred budgets. As a result, these organizations often undergo piecemeal development and do not have the resources to develop comprehensive programs composed of complementary and optimal activities (FPH:IHF).

In addition, local health departments sometimes receive funding for activities that are already being covered by state health departments or vice versa. Even within federal funding, different grants for health departments sometimes overlap. For example, the CDC's Race and Ethnic Approach to Community Health program and the Community Transformation Grants program often overlap without coordination (FPH:IHF).

To maximize use of financial resources for prevention, public health funding streams should be better coordinated. Opportunities to do so effectively may come from models in other areas of government, such as the coordination and collaboration that occurred among different levels of government at the peak of bioterrorism funding (FPH:IHF).

### *Consider More Flexible Funding Mechanisms*

In addition to being better coordinated, funding could be made more flexible to allow for more effective use of resources toward health promotion. Currently, much of public health funding is categorical and often competitive, and recipients are required to use it for specific designated purposes. This leads to the creation of programmatic silos, which often have overlapping activities and services that are inefficient and duplicative. This approach is embraced by many because it protects resources that go toward issues that might otherwise be neglected. Nevertheless, it also prevents efficiency in developing holistic health promotion interventions.

With more flexible funding, organizations would be able to cover more of their programmatic needs. The compartmentalized funding that prevails now often leaves health departments with little money for communications, information systems, policy analysis, and infrastructure strengthening (FPH:IHF).

Flexible funding streams could encourage a greater focus on the social determinants of health, which would greatly benefit prevention activities. The categorical funding that is used currently gives public health departments little incentive to include efforts to gather, analyze, and disseminate information on zoning, housing, transportation, and other community factors that affect well-being.

New funding mechanisms could attempt to promote development of transdisciplinary teams that address needs that cut across sectors and organizations. New types of financial incentives could drive the formation of groups that work on bringing knowledge from all sectors (agriculture, health, education, transportation, and so forth) together for better advocacy, research, and policy making (FPH:IHF). As discussed in more detail later, engaging these other sectors is another important strategy for increasing the uptake and implementation of prevention and health promotion.

## **DEVELOP IMPLEMENTABLE POLICIES**

Prevention and health promotion supporters and policy shapers should consider how to get the most out of the policies they promote by ensuring that the policies are able to be fully and effectively implemented. The following discussion addresses several considerations for making policies most effective.

In the ideal policy environment, there would be consistency across laws, policies, and processes, and policies would include mechanisms to ensure proper implementation. Because this consistency is difficult to achieve, proponents of health promotion and prevention can help leaders determine ways to implement strategically within the current policy environment. For example, they could develop innovative solutions when there are inconsistencies among existing policies that are difficult to remedy, such as when local or state decision makers cannot change a federal policy or the health sector cannot control the policies of another sector.

### *Ensure That Funding Allocation Is Consistent with Policies*

Policies are not effective when they are not backed by the funding necessary for their proper implementation and enforcement. Policy makers and proponents of health promotion should be sure that their efforts to enact policy changes include a realistic assessment of where resources can be found for proper implementation and enforcement and that those responsible for resource allocation are also engaged in the process of garnering support for the policy. One example of when this did not happen is when Congress directed the Division for Heart Disease and Stroke Prevention to address sodium reduction in the American diet without giving them any funding to do so (PPSCH).

### *Be Specific About Implementation, Enforcement, and Monitoring Mechanisms*

Weak laws that mention prevention activities but do not provide specific requirements on how to implement them are often destined to be ineffective. For example, in 2012, 98 percent of states mentioned elementary, middle, and high school physical education in a state-level law. Few of these states, however, have strong laws that address requirements for physical education that meet national recommendations on the amount of time students should exercise per week (ESB). These weak laws provide little pressure or incentive for a school to increase the amount of time set aside for physical activity.

Even when policy requirements are more specific, they are often not adequately enforced. For example, school schedules may allot for the required number of minutes of physical activity, but the amount of time that students are actually exercising within these periods is not documented. Students often miss their physical education periods for assemblies, disciplinary action, or other activities because schools are not held accountable for enforcing policies related to physical activity (ESB).

More consideration should be given to assessing the opportunities and mechanisms for implementation and enforcement. This effort will require clearly identifying important actors and their specific roles. It will also require collaboration among federal, state, and local agencies, especially in areas where regulatory authority is vested in one level of government but where enforcement capacity exists in another level (FPH:LP). Policies should also prescribe a plan for monitoring its mandated activities at implementation and oversight levels to ensure that they are being implemented thoroughly and correctly.

### *Allocate Resources Toward Training and Guidelines on Implementation for Practitioners*

Policies should include plans for how to train and deliver guidance to the practitioners who are expected to deliver wellness programs and adhere to new mandates. These practitioners (teachers, employers, clinicians, community health workers, social workers, and so forth) are often already busy and performing their work within processes and routines that are familiar to them. Policies that require changes in these habits will need to ensure that practitioners have the support necessary to become comfortable with and willing to adopt new practices (CVD, ESB).

### *Consider How to Create Incentives for State and Local Governments, Practitioners, and Employers to Meet Policy Goals*

Prevention policies may be more effective if they include provisions for providing incentives at various levels for the promotion of related activities. For example, the ACA established a program through which the HHS secretary will give grants to states that encourage Medicaid beneficiaries to use preventive services. These grant incentives may lead to greater efforts from these states to increase the population's participation in programs that lead to smoking cessation, weight loss, diabetes prevention, and lower cholesterol and blood pressure (PPSCH).

Practitioners, employers, and other stakeholders who are responsible for implementing policies should also be offered incentives to adhere to regulations and support other initiatives to increase wellness. These incentives could range from monetary incentives to merely making the healthy action the easiest option (CVD, LWCI).

## MORE EFFECTIVELY ENGAGE OTHER SECTORS

As described previously, many of the determinants and opportunities for intervention in the area of prevention and health promotion lie outside of the health sector. Communities have successfully collaborated across sectors on issues of mutual interest to support health objectives, such as design and infrastructure features of cities and suburbs and coordination with agricultural policies. For example, in San Francisco the departments of public health and housing worked collaboratively to transform living conditions in public housing sites.

The efforts of the North Karelia province in Finland provide another example of successful cross-sectoral work for health promotion. The efforts there led to reductions in stroke and coronary heart disease of 75–80 percent. Health improved in this region because government, farmers, health professionals, food companies, and local nongovernmental organizations worked together for decades to support healthier diets, reduce smoking, and promote risk factor–reducing medications when needed (CVD).

### *Health in All Policies*

A Health in All Policies (HiAP) approach is a widely recommended policy strategy that aims to integrate health considerations into decisions in all relevant sectors to address the determinants of health (PPSCH, FPH:IHF). A federal government HiAP approach would set national health performance targets and coordinate its policies (including in areas not limited to health) to benefit population health. One example of such an approach is the Department of Housing and Urban Development–Department of Transportation–Environmental Protection Agency Partnership for Sustainable Communities initiative (FPH:LP, FPH:IHF).

An HiAP approach can be supported by health impact assessments, which are procedures and methods that examine the potential effects of policies, programs, or projects on the health of a population. These assessments have been used to measure the effects of an after-school program in Los Angeles on socioeconomic factors, the impact of housing rental voucher programs in Massachusetts on housing affordability and neighborhood environment, and the impact of community redevelopment projects on physical activity (PPSCH, PCPH).

Because other sectors are critical to achieving health aims, their strong support will be vital in ensuring that pro-prevention policies and activities will be embraced and well implemented. Health is also not the only important aspect of public policy that decision makers are considering, so decision makers may more readily support prevention activities that multiple sectors are endorsing together.

### *All Policies in Health*

Proponents of prevention and health promotion need to keep in mind that other sectors might find it difficult or burdensome to embrace health aims and integrate prevention and health promotion approaches. Just as the health sector might find it challenging if asked to integrate programs to achieve education or economic development aims when time and human and financial resources are already stretched thin, other sectors driven by their own specific pressures might reasonably resist difficult demands from the health sector.

It will not be enough to simply demand that other sectors expand their scope and take on partial responsibility for improving population health. Rather, it will be important to acknowledge and understand each other's driving forces, seek out shared values and objectives, and objectively identify where proposed actions and expected outcomes will be in the interest of each collaborating stakeholder as well as where policies in one sector might introduce negative outcomes in another. This effort may require leaving behind an absolutist argument in favor of a realistic willingness to assess which aspects of a proposed policy are fundamental and which might be negotiable from the perspective of the public health and health sectors (CVD).

The health sector can be more proactive in meeting other sectors where their priorities already lie and working together to develop activities and policies that reach both the prevention goals and the priority goals of other sectors. In this way, the demand for health in all policies can be accompanied by a willingness to also consider all policies in health.

### Examples of Relevant IOM Recommendations

#### *For the Public's Health: Investing in a Healthier Future*

To ensure better use of funds needed to support the functioning of public health departments, the committee recommends that (a) the Department of Health and Human Services (and other departments or agencies as appropriate) enable greater state and local flexibility in the use of grant funds to achieve state and local population health goals; (b) Congress adopt legislative changes, where necessary, to allow the Department of Health and Human Services and other agencies, such as the U.S. Department of Agriculture, the necessary funding authorities to provide that flexibility; and (c) federal agencies design and implement funding opportunities in ways that incentivize coordination among public health system stakeholders.

#### *For the Public's Health: Revitalizing Law and Policy to Meet New Challenges*

The committee recommends that states and the federal government develop and employ an HiAP approach to consider the health effects—both positive and negative—of major legislation, regulations, and other policies that could potentially have a meaningful impact on the public's health.

#### *Primary Care and Public Health: Exploring Integration to Improve Population Health*

To link staff, funds, and data at the regional, state, and local levels, HRSA and the CDC should:

- identify opportunities to coordinate funding streams in selected programs and convene joint staff groups to develop grants, requests for proposals, and metrics for evaluation; create opportunities for staff to build relationships with each other and local stakeholders by taking full advantage of opportunities to work through the 10 regional HHS offices, state primary care offices and association organizations, state and local health departments, and other mechanisms; and
- recognize the need for and commit to developing a trained workforce that can create information systems and make them efficient for the end user.

To develop the workforce needed to support the integration of primary care and public health:

- HRSA and the CDC should work with CMS to identify regulatory options for graduate medical education funding that give priority to provider training in primary care and public health settings and specifically support programs that integrate primary care practice with public health.
- HRSA and the CDC should explore whether the training component of the Epidemic Intelligence Service and the strategic placement of assignees in state and local health departments offer additional opportunities to contribute to the integration of primary care and public health by assisting community health programs supported by HRSA in the use of data for improving community health. Any opportunities identified should be utilized. HRSA should create specific Title VII and VIII criteria or preferences related to curriculum development and clinical experiences that favor the integration of primary care and public health.
- HRSA and the CDC should create all possible linkages among HRSA's primary care training programs (Title VII and VIII), its public health and preventive medicine training programs, and the CDC's public health workforce programs.
- HRSA and the CDC should work together to develop training grants and teaching tools that can prepare the next generation of health professionals for more integrated clinical and public health functions in practice. These tools, which should include a focus on cultural outreach, health education, and nutrition, can be used in the training programs supported by HRSA and the CDC, as well as distributed more broadly.

*Promoting Cardiovascular Health in the Developing World: A Critical Challenge to Achieve Global Health*

Include chronic diseases in health systems strengthening—current and future efforts to strengthen health systems and health care delivery should include developing and evaluating approaches to build local workforce capacity and to implement services for cardiovascular disease that are integrated with primary health care services, management of chronic infectious diseases, and maternal and child health.



## Conclusion

In just the past decade, the IOM alone has made hundreds of recommendations in dozens of reports related to chronic disease prevention and health promotion. Many other science and health organizations have contributed similar messages, all converging on a call for decision makers to increase attention, effort, and resources aimed toward prevention and health promotion. These recommendations have been based on an abundance of evidence, even while some specific information and knowledge gaps remain.

Decision makers in the public and private sectors have heard and acted on some of these recommendations, but not at the rate and intensity needed to address adequately the pressing health challenges facing the population. Gathering the information, articulating a compelling rationale, and issuing recommendations have not been enough to provoke change, and a large gap still exists between what experts and advocates recommend and what decision makers are actually doing to prioritize health.

It is clear in the public health community that instigating healthy behavior change in individuals will require more than providing information, increasing understanding and awareness, and making exhortations. Instead, individuals are increasingly seen in the context of a social and ecological model in which individual knowledge and choices are just one part of the layers of influences and determinants that affect health. This model acknowledges that even when individuals know what the right choices are, they do not always make them. As a result, there has been increasing recognition that some of the best opportunities for improving individual and population health are interventions that address factors in the social networks, communities, neighborhoods, and broader environment to help make the healthiest choice the easiest, or even the default, choice for individuals.

Similarly, decision makers operate in a complex social and ecological policy environment. Although providing information and persuading individuals about the benefits of making political and programmatic choices might be necessary, it is not sufficient to advance significantly the uptake of the many sound recommendations that have been made to improve the country's health.

To move forward, proponents of chronic disease prevention and health promotion also need to thoughtfully address the motivations and external pressures faced by decision makers. There is much that proponents (including advocates, public health and health policy professionals, researchers, and others who already support prevention and health promotion) can do to provide the support, information, tools, and conversations that will make it easier for decision makers to lean toward healthful decisions for their constituents.

Advocates of chronic disease prevention and health promotion can listen more so they can better understand and carefully consider the needs of decision makers when choosing the types of research to conduct or the interventions to propose. They can generate and coordinate the data that will be most useful to decision makers, and they can determine what is most useful by asking rather than assuming. They can provide tools that will make it easier for decision makers to understand a choice's positive and negative impacts on the wide range of factors that they and their constituents value.

Decision makers will be more likely to lean toward prevention and health promotion approaches if the system in which they are working makes it easy and acceptable for them to do this. Coordinating efforts within and outside the health sector, making efficient use of resources, and minimizing the burden of new infrastructure can help achieve this.

Decision makers have access to many recommendations that advise them on what to do to advance prevention and health promotion strategies. This paper has highlighted some opportunities to fill in the missing link by focusing on ways to facilitate the uptake and implementation of those recommendations, that is, to make prevention not just the right choice, but the easy choice.





## Appendix A

### Descriptions of Reviewed IOM Reports

APOP	<i>Accelerating Progress in Obesity Prevention: Solving the Weight of the Nation</i> (2012)
BEGOP	<i>Bridging the Evidence Gap in Obesity Prevention: A Framework to Inform Decision Making</i> (2010)
CVD	<i>Promoting Cardiovascular Health in the Developing World: A Critical Challenge to Achieve Global Health</i> (2010)
EOP	<i>Evaluation of PEPFAR</i> (2013)
EOPE	<i>Evaluating Obesity Prevention Efforts: A Plan for Measuring Progress</i> (2013)
ESB	<i>Educating the Student Body: Taking Physical Activity and Physical Education to School</i> (2013)
FPH:IHF	<i>For the Public's Health: Investing in a Healthier Future</i> (2012)
FPH:LP	<i>For the Public's Health: Revitalizing Law and Policy to Meet New Challenges</i> (2011)
FPH:MA	<i>For the Public's Health: The Role of Measurement in Action and Accountability</i> (2011)
FAVCBP	<i>An Integrated Framework for Assessing the Value of Community-Based Prevention</i> (2012)
LWCI	<i>Living Well with Chronic Illness: A Call for Public Health Action</i> (2012)
PCPH	<i>Primary Care and Public Health: Exploring Integration to Improve Population Health</i> (2012)
PPSCH	<i>A Population-Based Policy and Systems Change Approach to Prevent and Control Hypertension</i> (2010)
TQMPH	<i>Toward Quality Measures for Population Health and the Leading Health Indicators</i> (2013)
USHIP	<i>U.S. Health in International Perspective: Shorter Lives, Poorer Health</i> (2013)

#### *Accelerating Progress in Obesity Prevention: Solving the Weight of the Nation* (2012)

Committee on Accelerating Progress in Obesity Prevention; Food and Nutrition Board (FNB); Institute of Medicine (IOM)

One-third of adults are now obese, and children's obesity rates have climbed from 5 to 17 percent in the past 30 years. The causes of the nation's obesity epidemic are multifactorial, having much more to do with the absence of sidewalks and the limited availability of healthy and affordable foods than a lack of personal responsibility. The broad societal changes that are needed to prevent obesity will inevitably affect activity and eating environments and settings for all ages. Many aspects of the obesity problem have been identified and discussed; however, there has not been complete agreement on what needs to be done to accelerate progress.

APOP reviews previous studies and their recommendations and presents five key recommendations to accelerate meaningful change on a societal level during the next decade. The report suggests recommendations and strategies that, independently, can accelerate progress, but urges a systems approach of many strategies working in concert to maximize progress in accelerating obesity prevention.

The recommendations in APOP include major reforms in access to and opportunities for physical activity; widespread reductions in the availability of unhealthy foods and beverages and increases in access to healthier options at affordable, competitive prices; an overhaul of the messages that surround Americans through marketing and education with respect to physical activity and food consumption; expansion of the obesity prevention support structure provided by health care providers, insurers, and employers; and the use of schools as a major national focal point for obesity prevention. The report calls on all individuals, organizations, agencies, and sectors that do or can influence physical activity and nutrition environments to assess and begin to act on their potential roles as leaders in obesity prevention.

*An Integrated Framework for Assessing the Value of Community-Based Prevention (2012)*

Committee on Valuing Community-Based, Non-Clinical Prevention Programs; Board on Population Health and Public Health Practice (BPH); Institute of Medicine (IOM)

During the past century the major causes of morbidity and mortality in the United States have shifted from those related to communicable diseases to those due to chronic diseases. Just as the major causes of morbidity and mortality have changed, so too has the understanding of health and what makes people healthy or ill. Research has documented the importance of the social determinants of health (for example, socioeconomic status and education) that affect health both directly and through their impact on other health determinants such as risk factors. Targeting interventions toward the conditions associated with today's challenges to living a healthy life requires an increased emphasis on the factors that affect the current cause of morbidity and mortality, factors such as the social determinants of health. Many community-based prevention interventions target such conditions.

Community-based prevention interventions offer three distinct strengths. First, because the intervention is implemented population-wide, it is inclusive and not dependent on access to a health care system. Second, by directing strategies at an entire population, an intervention can reach individuals at all levels of risk. And finally, some lifestyle and behavioral risk factors are shaped by conditions not under an individual's control. For example, encouraging an individual to eat healthy food when none is accessible undermines the potential for successful behavioral change. Community-based prevention interventions can be designed to affect environmental and social conditions that are out of the reach of clinical services.

Four foundations—the California Endowment, the de Beaumont Foundation, the W. K. Kellogg Foundation, and the Robert Wood Johnson Foundation—asked the IOM to convene an expert committee to develop a framework for assessing the value of community-based, nonclinical prevention policies and wellness strategies, especially those targeting the prevention of long-term chronic diseases. The charge to the committee was to define community-based, nonclinical prevention policy and wellness strategies; define the value for community-based, nonclinical prevention policies and wellness strategies; and analyze current frameworks used to assess the value of community-based, nonclinical prevention policies and wellness strategies, including the methodologies and measures used and the short- and long-term impacts of such prevention policy and wellness strategies on health care spending and public health. FAVCBP summarizes the committee's findings.

*Bridging the Evidence Gap in Obesity Prevention: A Framework to Inform Decision Making (2010)*

Shiriki K. Kumanyika, Lynn Parker, and Leslie J. Sim, Editors; Committee on an Evidence Framework for Obesity Prevention Decision Making; Food and Nutrition Board (FNB); Institute of Medicine (IOM)

To battle the obesity epidemic in America, health care professionals and policy makers need relevant, useful data on the effectiveness of obesity prevention policies and programs. BEGOP identifies a new approach to decision making and research on obesity prevention by using a systems perspective to gain a broader understanding of the context of obesity and the many factors that influence it.

*Educating the Student Body: Taking Physical Activity and Physical Education to School (2013)*

Harold W. Kohl III and Heather D. Cook, Editors; Committee on Physical Activity and Physical Education in the School Environment; Food and Nutrition Board (FNB); Institute of Medicine (IOM)

Physical inactivity is a key determinant of health across the life span. A lack of activity increases the risk of heart disease, colon and breast cancer, diabetes mellitus, hypertension, osteoporosis, anxiety and depression, and others diseases. Emerging literature has suggested that in terms of mortality, the global population health burden of physical inactivity approaches that of cigarette smoking. The prevalence and substantial disease risk associated with physical inactivity has been described as a pandemic.

The prevalence, health impact, and evidence of changeability all have resulted in calls for action to increase physical activity across the life span. In response to the need to find ways to make physical activity a health priority for youth, the IOM's Committee on Physical Activity and Physical Education in the School Environment was formed. Its purpose was to review the current status of physical activity and physical education in the school environment, including before, during, and after school, and examine the influences of physical activity and physical education on the short- and long-term physical, cognitive and brain, and psychosocial health and development of children and adolescents.

ESB makes recommendations about approaches for strengthening and improving programs and policies for physical activity and physical education in the school environment. This report lays out a set of principles to guide its work on these tasks. These principles include recognizing the benefits of instilling lifelong physical activity habits in children; the value of using systems thinking in improving physical activity and physical education in the school environment; the recognition of current disparities in opportunities and the need to achieve equity in physical activity and physical education; the importance of considering all types of school environments; and the need to take into consideration the diversity of students as recommendations are developed.

This report will be of interest to local and national policy makers, school officials, teachers and the education community, researchers, professional organizations, and parents interested in physical activity, physical education, and health for school-aged children and adolescents.

### *Evaluating Obesity Prevention Efforts: A Plan for Measuring Progress (2013)*

Committee on Evaluating Progress of Obesity Prevention Efforts; Food and Nutrition Board (FNB); Institute of Medicine (IOM)

Obesity poses one of the greatest public health challenges of the 21st century, creating serious health, economic, and social consequences for individuals and society. Despite acceleration in efforts to characterize, comprehend, and act on this problem, including implementation of preventive interventions, further understanding is needed on the progress and effectiveness of these interventions.

EOPE develops a concise and actionable plan for measuring the nation's progress in obesity prevention efforts—specifically, the success of policy and environmental strategies recommended in the 2012 IOM report *Accelerating Progress in Obesity Prevention: Solving the Weight of the Nation*. This book offers a framework that will provide guidance for systematic and routine planning, implementation, and evaluation of the advancement of obesity prevention efforts. This framework is for specific use with the goals and strategies from the 2012 report and can be used to assess the progress made in every community and throughout the country, with the ultimate goal of reducing the obesity epidemic. It offers potentially valuable guidance in improving the quality and effect of the actions being implemented.

The recommendations of EOPE focus on efforts to increase the likelihood that actions taken to prevent obesity will be evaluated, that their progress in accelerating the prevention of obesity will be monitored, and that the most promising practices will be widely disseminated.

### *Evaluation of PEPFAR (2013)*

Committee on the Outcome and Impact Evaluation of Global HIV/AIDS Programs Implemented Under the Lantos-Hyde Act of 2008; Board on Global Health (BGH); Board on Children, Youth, and Families (BOCYF); Institute of Medicine (IOM); Division of Behavioral and Social Sciences and Education (DBASSE); National Research Council (NRC)

The U.S. government supports programs to combat global HIV/AIDS through an initiative that is known as the President's Emergency Plan for AIDS Relief (PEPFAR). This initiative was originally authorized in the U.S. Leadership Against HIV/AIDS, Tuberculosis, and Malaria Act of 2003 and focused on an emergency response to the HIV/AIDS pandemic to deliver life-saving care and treatment in low- and middle-income countries with the highest burdens of disease. It was subsequently reauthorized in the Tom Lantos and Henry J.

Hyde U.S. Global Leadership Against HIV/AIDS, Tuberculosis, and Malaria Reauthorization Act of 2008 (the Lantos-Hyde Act).

EOP makes recommendations for improving the U.S. government's bilateral programs as part of the U.S. response to global HIV/AIDS. The overall aim of this evaluation is to track and anticipate the evolution of the U.S. response to global HIV to inform the ability of the U.S. government to address key issues under consideration at the time of the report release.

*For the Public's Health: Investing in a Healthier Future (2012)*

Committee on Public Health Strategies to Improve Health; Board on Population Health and Public Health Practice (BPH); Institute of Medicine (IOM)

FPH:IHF, the final book in the For the Public's Health series, assesses the financial challenges facing the governmental public health infrastructure. The book provides recommendations about what is needed for stable and sustainable funding and for its optimal use by public health agencies.

Building on the other two volumes in the series, this book makes the argument that adequate and sustainable funding for public health is necessary to enable public health departments across the country to inform and mobilize action on the determinants of health, to play other key roles in protecting and promoting health, and to prepare for a range of potential threats to population health.

The final book in the For the Public's Health series will be useful to federal, state, and local governments; public health agencies; clinical care organizations; and community-based organizations.

*For the Public's Health: Revitalizing Law and Policy to Meet New Challenges (2011)*

Committee on Public Health Strategies to Improve Health; Board on Population Health and Public Health Practice (BPH); Institute of Medicine (IOM)

The Robert Wood Johnson Foundation asked the IOM to examine three topics in relation to public health: measurement, the law, and funding. The IOM prepared a three-book series—one book on each topic—that contain actionable recommendations for public health agencies and other stakeholders that have roles in the health of the U.S. population.

FPH:LP is the second in the For the Public's Health series and reflects on legal and public policy reform on three levels: first, laws that establish the structure, duties, and authorities of public health departments; second, the use of legal and policy tools to improve the public's health; and third, the health effects of laws and policies from other sectors in and outside government.

The book recommends that states enact legislation with appropriate funding to ensure that all public health departments have the mandate and the capacity to deliver the Ten Essential Public Health Services effectively. The book also recommends that states revise their laws to require public health accreditation for state and local health departments through the Public Health Accreditation Board accreditation process. The book urges government agencies to familiarize themselves with the public health and policy interventions at their disposal that can influence behavior and, more important, change conditions—social, economic, and environmental—to improve health. Last, the IOM encourages government and private-sector stakeholders to consider health in a wide range of policies (an HiAP approach) and to evaluate the health effects and costs of major legislation.

This book, as well as the other two books in the series, is intended to inform and help federal, state, and local governments, public health agencies, clinical care organizations, the private sector, and community-based organizations.

*For the Public's Health: The Role of Measurement in Action and Accountability (2011)*

Committee on Public Health Strategies to Improve Health; Board on Population Health and Public Health Practice (BPH); Institute of Medicine (IOM)

Despite having the costliest medical care delivery system in the world, Americans are not particularly healthy. Recent international comparisons show that life expectancy in the United States ranks 49th among all nations, and infant mortality rates are higher in the United States than in many far less affluent nations. While these statistics are alarming, the bigger problem is that we do not know how to reverse this trend. Our lack of knowledge is due in large part to significant inadequacies in the health system for gathering, analyzing, and communicating health information about the population.

To inform the public health community and all other sectors that contribute to population health, FPH:MA reviews current approaches for measuring the health of individuals and communities and creates a roadmap for future development. This book, the first of three in a series, focuses on data and measurement not as ends in themselves but rather as tools to inform the myriad programs, policies, and processes developed or undertaken by governmental public health agencies and their many partners in the health system.

FPH:MA seeks to reinstate the proper and evidence-based understanding of health as not merely the result of medical or clinical care but the result of the sum of what we do as a society to create the conditions in which people can be healthy. To achieve this goal, the book suggests changes in the processes, tools, and approaches used to gather information about health outcomes and their determinants. The book also recommends developing an integrated and coordinated system in which all parties—including governmental and private-sector partners at all levels—have access to timely and meaningful data to help foster individual and community awareness and action.

### *Living Well with Chronic Illness: A Call for Public Health Action (2012)*

Committee on Living Well with Chronic Disease: Public Health Action to Reduce Disability and Improve Functioning and Quality of Life; Board on Population Health and Public Health Practice (BPH); Institute of Medicine (IOM)

In the United States, chronic diseases currently account for 70 percent of all deaths, and close to 48 million Americans report a disability related to a chronic condition. Today, about one in four Americans have multiple diseases, and the prevalence and burden of chronic disease in the elderly and racial/ethnic minorities are notably disproportionate. Chronic disease has now emerged as a major public health problem, and it threatens not only population health but also our social and economic welfare.

LWCI identifies the population-based public health actions that can help reduce disability and improve functioning and quality of life among individuals who are at risk of developing a chronic disease and those with one or more diseases. The book recommends that all major federally funded programmatic and research initiatives in health include an evaluation on health-related quality of life and functional status. Also, the book recommends increasing support for implementation research on how to disseminate effective long-term lifestyle interventions in community-based settings that improve living well with chronic disease.

LWCI uses three frameworks and considers such diseases as heart disease and stroke, diabetes, depression, and respiratory problems. The book's recommendations will inform policy makers concerned with health reform in public and private sectors and managers of community-based and public health intervention programs, private and public research funders, and patients living with one or more chronic conditions.

### *A Population-Based Policy and Systems Change Approach to Prevent and Control Hypertension (2010)*

Committee on Public Health Priorities to Reduce and Control Hypertension in the U.S. Population; Board on Population Health and Public Health Practice (BPH); Institute of Medicine (IOM)

Hypertension is one of the leading causes of death in the United States, affecting nearly one in three Americans. It is prevalent in adults and endemic in the older adult population. Hypertension is a major contributor to cardiovascular morbidity and disability. Although there is a simple test to diagnose hypertension and relatively inexpensive drugs to treat it, the disease is often undiagnosed and uncontrolled.

PPSCH identifies a small set of high-priority areas in which public health officials can focus their efforts to accelerate progress in hypertension reduction and control. It offers several recommendations that



embody a population-based approach grounded in the principles of measurement, system change, and accountability. The recommendations are designed to shift current hypertension reduction strategies from an individual-based approach to a population-based approach. They are also designed to improve the quality of care provided to individuals with hypertension and to strengthen the CDC's leadership in seeking a reduction in the sodium intake in the American diet to meet dietary guidelines.

The book is an important resource for federal public health officials and organizations, especially the CDC, as well as medical professionals and community health workers.

*Primary Care and Public Health: Exploring Integration to Improve Population Health (2012)*

Committee on Integrating Primary Care and Public Health; Board on Population Health and Public Health Practice (BPH); Institute of Medicine (IOM)

Ensuring that members of society are healthy and reaching their full potential requires the prevention of disease and injury; the promotion of health and well-being; the assurance of conditions in which people can be healthy; and the provision of timely, effective, and coordinated health care. Achieving substantial and lasting improvements in population health will require a concerted effort in all of these domains, aligned with a common goal. HRSA and the CDC requested that the IOM examine the integration of primary care and public health.

PCPH identifies the best examples of effective public health and primary care integration and the factors that promote and sustain these efforts, examines ways by which HRSA and the CDC can use provisions of the ACA to promote the integration of primary care and public health, and discusses how HRSA-supported primary care systems and state and local public health departments can effectively integrate and coordinate to improve efforts directed at disease prevention.

This report is essential for all health care centers and providers, state and local policy makers, educators, government agencies, and the public for learning how to integrate and improve population health.

*Promoting Cardiovascular Health in the Developing World: A Critical Challenge to Achieve Global Health (2010)*

Valentin Fuster and Bridget B. Kelly, Editors; Committee on Preventing the Global Epidemic of Cardiovascular Disease: Meeting the Challenges in Developing Countries; Board on Global Health (BGH) Institute of Medicine (IOM)

Cardiovascular disease, once thought to be confined primarily to industrialized nations, has emerged as a major health threat in developing countries. Cardiovascular disease now accounts for nearly 30 percent of deaths in low- and middle-income countries each year and is accompanied by significant economic repercussions. Yet most governments, global health institutions, and development agencies have largely overlooked cardiovascular disease as they have invested in health in developing countries.

Recognizing the gap between the compelling evidence of the global cardiovascular disease burden and the investment needed to prevent and control cardiovascular disease, the NHLBI turned to the IOM for advice on how to catalyze change.

In this report, the IOM recommends that the NHLBI, development agencies, nongovernmental organizations, and governments work toward two essential goals:

1. creating environments that promote heart-healthy lifestyle choices and help reduce the risk of chronic diseases, and
2. building public health infrastructure and health systems with the capacity to implement programs that will effectively detect and reduce risk and manage cardiovascular disease.

To meet these goals, the IOM recommends several steps, including improving cooperation and collaboration; implementing effective and feasible strategies; and informing efforts through research and health surveillance. Without better efforts to promote cardiovascular health, global health as a whole will be undermined.

*Toward Quality Measures for Population Health and the Leading Health Indicators (2013)*

Committee on Quality Measures for the Healthy People Leading Health Indicators; Board on Population Health and Health Practice (BPH); Institute of Medicine (IOM)

The IOM Committee on Quality Measures for the Healthy People Leading Health Indicators was charged by the Office of the Assistant Secretary for Health to identify measures of quality for the 12 Leading Health Indicator (LHI) topics and 26 LHIs in *Healthy People 2020* (HP2020), the current version of HHS's 10-year agenda for improving the nation's health.

The scope of work for this project is to use the nine aims for improvement of quality in public health (population-centered, equitable, proactive, health promoting, risk reducing, vigilant, transparent, effective, and efficient) as a framework to identify quality measures for the Healthy People LHIs. The committee reviewed existing literature on the 12 LHI topics and the 26 LHIs. Quality measures for the LHIs that are aligned with the nine aims for improvement of quality in public health will be identified. When appropriate, alignments with the six priority areas for improvement of quality in public health will be noted in the committee's report. TQMPH also addresses data reporting and analytical capacities that must be available to capture the measures and to demonstrate the value of the measures to improving population health.

TQMPH provides recommendations for how the measures can be used across sectors of the public health and health care systems. The six priority areas (also known as drivers) are population health metrics and information technology; evidence-based practices, research, and evaluation; systems thinking; sustainability and stewardship; policy; and workforce and education.

*U.S. Health in International Perspective: Shorter Lives, Poorer Health (2013)*

Steven H. Woolf and Laudan Aron, Editors; Panel on Understanding Cross-National Health Differences Among High-Income Countries; Committee on Population (CPOP); Division of Behavioral and Social Sciences and Education (DBASSE); National Research Council (NRC); Board on Population Health and Public Health Practice (BPH); Institute of Medicine (IOM)

The United States is among the wealthiest nations in the world, but it is far from the healthiest. Although life expectancy and survival rates in the United States have improved dramatically over the past century, Americans live shorter lives and experience more injuries and illnesses than people in other high-income countries. The U.S. health disadvantage cannot be attributed solely to the adverse health status of racial or ethnic minorities or poor people: even highly advantaged Americans are in worse health than their counterparts in other, "peer" countries.

In light of the new and growing evidence about the U.S. health disadvantage, NIH asked the NRC and the IOM to convene a panel of experts to study the issue. The Panel on Understanding Cross-National Health Differences Among High-Income Countries examined whether the U.S. health disadvantage exists across the life span, considered potential explanations, and assessed the larger implications of the findings.

USHIP presents detailed evidence on the issue, explores the possible explanations for the shorter and less healthy lives of Americans than those of people in comparable countries, and recommends actions by both government and nongovernment agencies and organizations to address the U.S. health disadvantage.





## Appendix B

# Examples of Chronic Disease Prevention and Health Promotion Recommendations

The following are examples of IOM recommendations on chronic disease prevention and health promotion approaches and activities. Though this paper does not focus on the specific prevention and health promotion approaches that the IOM has recommended, they are included here to illustrate the range of topics covered by the reviewed reports.

### PHYSICAL ACTIVITY

#### *Accelerating Progress in Obesity Prevention: Solving the Weight of the Nation*

Communities, transportation officials, community planners, health professionals, and governments should make promotion of physical activity a priority by substantially increasing access to places and opportunities for such activity.

Industry, educators, and governments should act quickly, aggressively, and continually on many levels to transform the environment that surrounds Americans with messages about physical activity, food, and nutrition.

#### *Educating the Student Body: Taking Physical Activity and Physical Education to School*

Because physical education is foundational for lifelong health and learning, the U.S. Department of Education should designate physical education as a core subject.

Colleges and universities and continuing education programs should provide preservice training and ongoing professional development opportunities for K–12 classroom and physical education teachers to enable them to embrace and promote physical activity across the curriculum.

Federal and state governments, school systems at all levels (state, district, and local), city governments and city planners, and parent–teacher organizations should systematically consider access to and provision of physical activity in all policy decisions related to the school environment as a contributing factor to improving academic performance, health, and development for all children.

### DIET

#### *Accelerating Progress in Obesity Prevention: Solving the Weight of the Nation*

Governments and decision makers in the business community/private sector should make a concerted effort to reduce unhealthy food and beverage options and substantially increase healthier food and beverage options at affordable, competitive prices.

Industry, educators, and governments should act quickly, aggressively, and continually on many levels to transform the environment that surrounds Americans with messages about physical activity, food, and nutrition.

*A Population-Based Policy and Systems Change Approach to Prevent and Control Hypertension*

The committee recommends that all state and local public health jurisdictions immediately begin to consider developing a portfolio of dietary sodium reduction strategies that make the most sense for early action in their jurisdictions.

The committee recommends that the Division for Heart Disease and Stroke Prevention take an active leadership role in convening other partners in federal, state, and local government and industry to advocate for and implement strategies to reduce sodium in the American diet to meet dietary guidelines, which are currently less than 2,300 mg/day (equivalent to 100 mmol/day) for the general population and 1,500 mg/day (equivalent to 70 mmol/day) for blacks, middle-aged and older adults, and individuals with hypertension.

*Promoting Cardiovascular Health in the Developing World: A Critical Challenge to Achieve Global Health*

**Collaborate to Improve Diets:** The World Health Organization, the World Heart Federation, the International Food and Beverage Association, and the World Economic Forum, in conjunction with select leading international nongovernmental organizations and select governments from developed and developing countries, should coordinate an international effort to develop collaborative strategies to reduce dietary intake of salt, sugar, saturated fats, and *trans* fats in both adults and children. This process should include stakeholders from the public health community and multinational food corporations as well as the food services industry and retailers. This effort should include strategies that take into account local food production and sales.

## AWARENESS

*For the Public's Health: The Role of Measurement in Action and Accountability*

The committee recommends that HHS produce an annual report to inform policy makers, all health-system sectors, and the public about important trends and disparities in social and environmental determinants that affect health.

*Promoting Cardiovascular Health in the Developing World: A Critical Challenge to Achieve Global Health*

**Advocate for Chronic Diseases as a Funding Priority:** Leading international and national nongovernmental organizations and professional societies related to cardiovascular disease and other chronic diseases should work together to advocate to private foundations, charities, governmental agencies, and private donors to prioritize funding and other resources for specific initiatives to control the global epidemic of cardiovascular disease and related chronic diseases. To advocate successfully, these organizations should consider

- raising awareness about the population health and economic impact and the potential for improved outcomes with health promotion and chronic disease prevention and treatment initiatives,
- advocating for health promotion and chronic disease prevention policies at national and sub-national levels of government,
- engaging the media about policy priorities related to chronic disease control, and
- highlighting the importance of translating research into effective individual- and population-level interventions.

**Report on Global Progress:** The World Health Organization should produce and present to the World Health Assembly a biannual World Heart Health Report within the existing framework of reporting mechanisms for

its Action Plan for the Global Strategy for the Prevention and Control of Noncommunicable Diseases. The goal of this report should be to provide objective data to track progress in the global effort against cardiovascular disease and to stimulate policy dialogue. These efforts should be designed not only for global monitoring but also to build capacity and support planning and evaluation at the national level in low- and middle-income countries. Financial support should come from the Global Alliance for Chronic Disease, with operational support from the CDC. The reporting process should involve national governments from high-, middle-, and low-income countries; leading international nongovernmental organizations; industry alliances; and development agencies. An initial goal of this global reporting mechanism should be to develop or select standardized indicators and methods for measurement, leveraging existing instruments where available. These would be recommended to countries, health systems, and prevention programs to maximize the global comparability of the data they collect.

#### *U.S. Health in International Perspective: Shorter Lives, Poorer Health*

The philanthropy and advocacy communities should organize a comprehensive media and outreach campaign to inform the general public about the U.S. health disadvantage and to stimulate a national discussion about its implications for the nation.

### **GENERAL HEALTH PROMOTION PROGRAMS AND PLANS**

#### *Accelerating Progress in Obesity Prevention: Solving the Weight of the Nation*

Health care and health service providers, employers, and insurers should increase the support structure for achieving better population health and obesity prevention.

#### *Living Well with Chronic Illness: A Call for Public Health Action*

The committee recommends that federal and state policy makers develop and implement pilot incentives programs for all employers, particularly low-wage employers, small businesses, and community-based organizations, to provide health promotion programs with known effectiveness for those living with chronic illness.

The committee recommends that the secretary of HHS support the states in developing comprehensive population-based strategic plans with specific goals, objectives, actions, time frames, and resources that focus on the management of chronic illness among their residents, including community-based efforts to address the health and social needs of people living with chronic illness and experiencing disparities in health outcomes. Such strategic plans should also include steps to collaborate with community-based organizations, the health care delivery system, employers and businesses, the media, and the academic community to improve living well for all residents with chronic illness, including those experiencing disparities in health outcomes.

#### *A Population-Based Policy and Systems Change Approach to Prevent and Control Hypertension*

State and local public health jurisdictions should promote and work with community health worker initiatives to ensure that prevention and control of hypertension are included in the array of services they provide and are appropriately linked to primary care services.

The committee recommends that the Division for Heart Disease and Stroke Prevention work with state partners to leverage opportunities to ensure that existing community health worker programs include a focus on the prevention and control of hypertension. In the absence of such programs, the division should work with state partners to develop programs of community health workers who would be deployed in high-risk communities to help support healthy living strategies that include a focus on hypertension.

The committee recommends that state and local public health jurisdictions integrate hypertension prevention and control in programmatic efforts to effect system, environmental, and policy changes that will support healthy eating, active living, and obesity prevention. Existing and new programmatic efforts should be assessed to ensure they are aligned with populations most likely to be affected by hypertension, such as older populations, which are often not the target of these programs.

The committee recommends that the Division for Heart Disease and Stroke Prevention identify and work with experts grounded in population-based approaches to provide guidance and assistance in designing and executing hypertension prevention and control efforts that focus on population-based policy and system change. These experts could augment an existing advisory body or be drawn from an existing body with this expertise.

### *Primary Care and Public Health: Exploring Integration to Improve Population Health*

The secretary of HHS should work with all agencies within the department as a first step in the development of a national strategy and investment plan for the creation of a primary care and public health infrastructure strong enough and appropriately integrated to enable the agencies to play their appropriate roles in furthering the nation's population health goals.

### *Promoting Cardiovascular Health in the Developing World: A Critical Challenge to Achieve Global Health*

**Implement Policies to Promote Cardiovascular Health:** To expand current or introduce new population-wide efforts to promote cardiovascular health and to reduce risk for cardiovascular disease and related chronic diseases, national and subnational governments should adapt and implement evidence-based, effective policies based on local priorities. These policies may include laws, regulations, changes to fiscal policy, and incentives to encourage private-sector alignment. To maximize impact, policy makers should make efforts to introduce policies accompanied by sustained health communication campaigns focused on the same targets of intervention as the selected policies.

## **ACCESS TO DIAGNOSTICS, TREATMENT, AND TECHNOLOGY**

### *Promoting Cardiovascular Health in the Developing World: A Critical Challenge to Achieve Global Health*

**Collaborate to Improve Access to Cardiovascular Disease Diagnostics, Medicines, and Technologies:** National and subnational governments should lead, negotiate, and implement a plan to reduce the costs of and ensure equitable access to affordable diagnostics, essential medicines, and other preventive and treatment technologies for cardiovascular disease. This process should involve stakeholders from multilateral and bilateral development agencies; cardiovascular disease-related professional societies; public and private payers; pharmaceutical, biotechnology, medical device, and information technology companies; and experts on health care systems and financing. Deliberate attention should be given to public-private partnerships and to appropriate, rational use of these technologies.

## **INFORMATION**

### *For the Public's Health: Investing in a Healthier Future*

The committee recommends that a panel of technical experts be established through collaboration among government agencies and organizations that have pertinent expertise to develop a model chart of accounts for use by public health agencies at all levels to enable better tracking of funding related to programmatic outputs and outcomes across agencies.

*For the Public's Health: The Role of Measurement in Action and Accountability*

The committee recommends that HHS work with relevant federal, state, and local public-sector and private-sector partners and stakeholders to do the following:

- Facilitate the development of a performance measurement system that promotes accountability among governmental and private-sector organizations that have responsibilities for protecting and improving population health at local, state, and national levels. The system should include measures of the inputs contributed by those organizations (e.g., capabilities, resources, activities, and programs) and should allow tracking of impact on intermediate and population health outcomes.
- Support the implementation of the performance measurement system by doing the following:
  - Educating and securing the acceptance of the system by policy makers and partners.
  - Establishing data-collection mechanisms needed to construct accountability measures at appropriate intervals at local, state, and national levels.
  - Encouraging early adoption of the system by key government and nongovernmental public health organizations and the use of the system for performance reporting, quality improvement, planning, and policy development.
  - Assessing and developing the necessary health system capacity (e.g., personnel, training, technical resources, and organizational structures) for broader adoption of the framework, including specific strategies for steps to address nonperformance by accountable agencies and organizations.

*Living Well with Chronic Illness: A Call for Public Health Action*

The committee recommends that the secretary of HHS encourage and support pilot tests by health care systems to collect patient-level information, share deidentified data across systems, and make the data available at the local, state, and national levels in order to monitor and improve chronic illness outcomes. These data should include patient self-reported outcomes of health-related quality of life and functional status in persons with chronic illness.

*A Population-Based Policy and Systems Change Approach to Prevent and Control Hypertension*

The committee recommends that the Division for Heart Disease and Stroke Prevention give high priority to conducting research to better understand the reasons behind poor physician adherence to current Joint National Committee guidelines. Once these factors are better understood, strategies should be developed to increase the likelihood that primary providers will screen for and treat hypertension appropriately, especially in elderly patients.

**HEALTH IN ALL POLICIES***For the Public's Health: Revitalizing Law and Policy to Meet New Challenges*

The committee recommends that state and local governments

- create health councils of relevant government agencies convened under the auspices of the chief executive;
- engage multiple stakeholders in a planning process; and
- develop an ongoing, cross-sector community health improvement plan informed by an HiAP approach. Stakeholders will advise in plan development and in monitoring its implementation.

The committee recommends that states and the federal government develop and employ an HiAP approach to consider the health effects—both positive and negative—of major legislation, regulations, and other policies that could potentially have a meaningful impact on the public's health.

#### *Living Well with Chronic Illness: A Call for Public Health Action*

The committee recommends that the secretary of HHS and the CDC explore and test an HiAP approach with health impact assessments as a promising practice on a select set of major federal legislation, regulations, and policies and evaluate its impact on health-related quality of life, functional status, and relevant efficiencies over time.

### **LAW**

#### *For the Public's Health: Revitalizing Law and Policy to Meet New Challenges*

The committee recommends that states revise their laws to require public health accreditation for state and local health departments through the Public Health Accreditation Board accreditation process.

The committee recommends that every public health agency in the country have adequate access to dedicated governmental legal counsel with public health expertise.

The committee recommends that federal agencies, in collaboration with states, facilitate state and local enforcement of federal public health and safety standards, including the ability to use state or local courts or administrative bodies where appropriate. Federal, state, and local agencies should combine their resources, especially in areas where regulatory authority is vested in one level of government but where enforcement capacity exists in another level.

### **FUNDING**

#### *Evaluating Obesity Prevention Efforts: A Plan for Measuring Progress*

Evaluators, government, and private funders should incorporate taking a systems approach to evaluating obesity prevention efforts into their research-related activities through leadership, funding, and training support.

#### *A Population-Based Policy and Systems Change Approach to Prevent and Control Hypertension*

To create a better balance between primary and secondary prevention of hypertension, the committee recommends that the Division for Heart Disease and Stroke Prevention leverage its ability to shape state activities, through its grant-making and cooperative agreements, to encourage state activities to shift toward population-based prevention of hypertension.

The committee recommends that the Division for Heart Disease and Stroke Prevention develop resource accountability systems to track and measure all current and new state programs for the prevention, treatment, and control of hypertension that would allow for resources to be assessed for alignment with the population-based policy and systems strategy and for measuring the outcomes achieved.

#### *U.S. Health in International Perspective: Shorter Lives, Poorer Health*

NIH and other research funding agencies should support the development of more refined analytic methods and study designs for cross-national health research. These methods should include innovative study designs, creative uses of existing data, and novel analytical approaches to elucidate better the complex causal pathways that might explain cross-national differences in health.

NIH and other research funding agencies should commit to a coordinated portfolio of investigator-initiated and invited research devoted to understanding the factors responsible for the U.S. health disadvantage and potential solutions, including lessons that can be learned from other countries.





## Appendix C

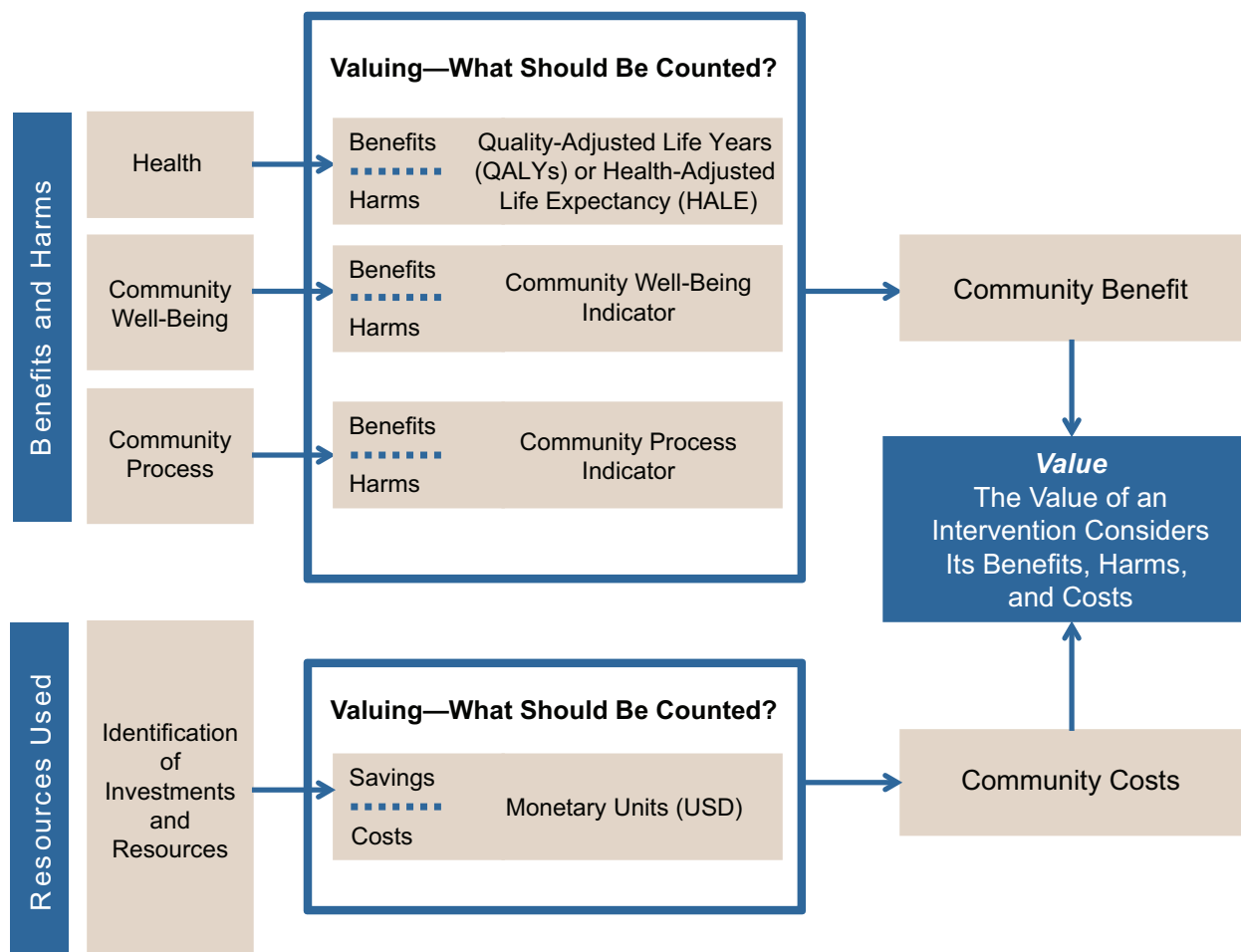
### Examples of Decision-Making Frameworks

Below are two examples of frameworks proposed in IOM reports for determining the value of prevention interventions. These frameworks and other information about the decision-making process are summarized in the “Make the Decision-Making Process Easier” section of this paper.

The committee of the report *An Integrated Framework for Assessing the Value of Community-Based Prevention* concluded that “a framework for valuing community-based prevention programs and policies should meet at least three criteria.

#### FRAMEWORK FOR VALUING

From *An Integrated Framework for Assessing the Value of Community-Based Prevention*



**FIGURE C-1** Conceptual framework for valuing community-based prevention interventions.

SOURCE: FAVCBP, p. 6.

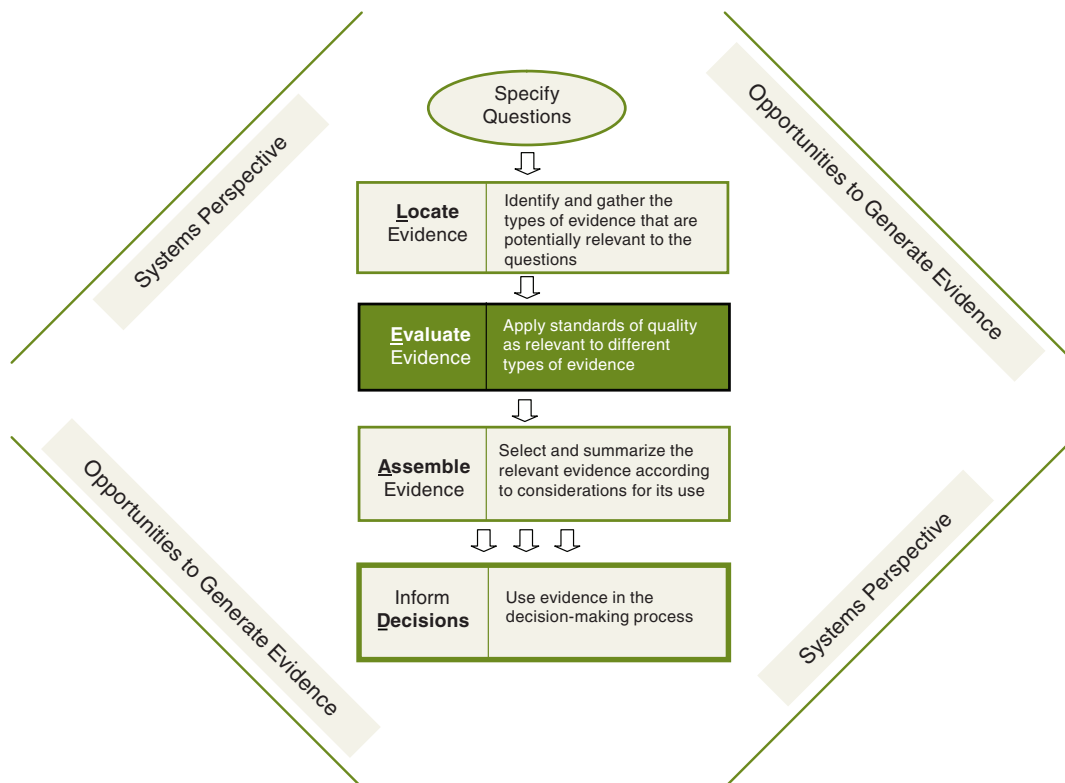
“First, the framework should account for benefits and harms in the three domains of health, community well-being, and community process. Community-based prevention can create value not only through improvements in the health of individuals but also by increasing the investment that individuals are willing and able to make in themselves, in their family and neighbors, and in their environment. Furthermore, community-based prevention involves decisions among groups of people about how to live in society, how the physical environment is built, what food is served in schools, and so on. Thus, the process by which interventions are decided upon and undertaken needs to be treated as a valued outcome. If a community decides to tell people what they can or cannot do, or what they should or should not do, the decisions need to have the legitimacy—the added value—that comes from an open and inclusive group decision-making process.

“Second, the framework should consider the resources used and compare benefits and harms with those resources. To make that comparison and to compare different interventions with each other, it is essential to know not just that some benefit is likely but also the magnitude of the benefits and of the associated costs for each intervention.

“Finally, the framework needs to be sensitive to differences among communities and to take them into account in valuing community-based prevention. In part, this reflects the reality that, because communities vary so much in their characteristics, the causal links between interventions and valued outcomes may be different for different communities.”

#### L.E.A.D. FRAMEWORK

*From Bridging the Evidence Gap in Obesity Prevention: A Framework to Inform Decision Making*



**FIGURE C-2** The L.E.A.D. framework.

SOURCE: BEGOP, p. 116.

The committee of the report *Bridging the Evidence Gap in Obesity Prevention* developed a framework that includes “concepts and approaches that are standard procedure in the development of practice guidelines. However, the committee incorporated major innovations that expand and enhance these approaches for use in policy and programmatic decision making on complex public health problems like obesity. The framework and its supporting narrative:

- explain why it is critical to use a systems perspective;
- characterize the types of questions policy makers ask;
- broaden the concept of evidence;
- reframe the definition of quality of evidence to accord with the type of evidence;
- recommend ways to consider other relevant information when evidence is limited;
- propose a template for assembling evidence; and
- highlight opportunities to generate new and relevant evidence.”

