Applying the RE-AIM Framework to Assess the Public Health Impact of Policy Change

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ABSTRACT

Background and Purpose: Planning and evaluation models have been developed to assess the public health impact of health promotion interventions. However, few have been applied to health policies. There is an important need for models to help design and evaluate health policies. **Methods:** *This article applies the RE-AIM (Reach, Effectiveness, Adoption, Implementation, Maintenance) planning and evaluation framework to health policies. We provide definitions and application examples for different policies.* **Results:** *As demonstrated by a case study, the RE-AIM dimensions and definitions can also apply to policies. Considerations regarding compliance and enforcement are presented to clarify the complex implementation dimension.* **Conclusions:** *The RE-AIM framework can be useful in estimating public health impact, comparing different health policies, planning policies designed for increased likelihood of success, and identifying areas for integration of policies with other health promotion strategies.*

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INTRODUCTION

The emerging field of evidence-based public health (1) encompasses individual, group, and policy-level interventions intended to have population-based impact. The social ecological framework (2,3) suggests that multilevel interventions, especially those that are policy based and focus on "upstream determinants" of health should be highly effective (4). Numerous planning and evaluation models have been used to conceptualize and evaluate the impact of public health interventions, including health impact assessment, PRECEDE-PROCEED, and RE-AIM (5–7). However, the vast majority of empirical applications of these models have been applied to behavior

change interventions at the individual and organizational levels.

To date, the most widely used methods of policy evaluation have been technology assessment (8), with an emphasis on cost per quality adjusted life year, and health impact assessment (9). Although these approaches are useful, they do not focus attention on (a) *how* bottom line impact is achieved, (b) likely barriers to successful implementation and ways a policy could be improved, or (c) the multiple outcome dimensions that are important. As stated by Schmid et al. (10), "the first priority is to develop better tools to assess the effects of policies, to guide policy development, and to prioritize policy choices (p. S25)." Specific criteria to evaluate policy impacts are needed. An important, though rarely addressed, criterion of policy evaluation should be examination of the policy's impacts on less politically influential populations.

In this article we consider how the RE-AIM framework (11,12) can be used for planning and evaluation of health policies. The framework has been applied to diverse content areas, including the planning (13) and evaluation of worksite, school, health care practice, and community-based programs (14). However, the model has not been explicitly applied to policy issues, and application of the RE-AIM concepts and definitions to policy is not immediately clear.

Health policies are defined as "those laws, regulations, formal and informal rules and understandings that are adopted on a collective basis to guide individual and collective behavior," (15,16, p. 1207), and we add that for this article's purpose, "when those laws, regulations, rules and understandings are adopted, improvements in the public's health are likely to occur." Public health policies are designed to make meaningful improvements in population-based health, often with limited resources. This is a complex, multifaceted challenge (5,6), and presently there is little agreement on the criteria necessary to conclude that a program or policy has produced a significant public health impact (17–19). Schmid et al. (10) pointed out that there are many types of policies and that policy includes both formal and informal rules. They conceptualized policy at three levels: formal written codes or regulations, written standards that guide choices, and unwritten social norms that influence behavior. They also recognized differences among policies in scale (10), ranging from international to local, or even employees of a given worksite.

Standard metrics that summarize important public health outcomes would be very helpful. Although it is possible to simply quantify the "bottom line" number of persons impacted or quality adjusted life years, it would be informative to have a more comprehensive understanding of potential effectiveness, adoption, enforcement, and compliance rates. Such an understanding could also suggest specific foci for policy improvements.

The RE-AIM framework builds on conceptual work by Rogers (20) and Green and Krueter (6) and offers a comprehensive approach to considering five dimensions important for evaluating public health impact (11,21). The framework includes the following:

Reach: The absolute number, proportion, and representativeness of individuals who are willing to participate in a given initiative, intervention, or program.
Effectiveness: The impact of an intervention on important outcomes, including potential negative effects, quality of life, and economic outcomes.
Adoption: The absolute number, proportion, and representativeness of settings (e.g., health departments) and interventionists (e.g., nurses, educators) who deliver a program.
Implementation: The interventionists' "fidelity" to the various elements of an intervention's protocol, including consistency of delivery as intended and the time and cost of the intervention.
Maintenance: The extent to which a program becomes institutionalized or part of the routine organizational practices and policies.

Table 1 provides an overview of how the five RE-AIM dimensions can apply to health policy. The table summarizes (a) key issues and (b) questions and examples related to each dimension. The purpose of this article is to discuss and illustrate application of RE-AIM for use in planning and evaluation of health policies.

APPLICATION OF RE-AIM FOR HEALTH POLICY PLANNING AND EVALUATION

To plan and evaluate policy using the RE-AIM framework, four questions should be answered:

1. Whose health is to be improved as a result of the policy? (e.g., children younger than 8 years old, all residents of a community, smokers) (15)
2. What organization or governing body is responsible for passing, or adopting, the policy?
3. Who is responsible for adhering to or complying with the policy (22)?
4. What organization, institution, or governing body is responsible for enforcing the policy?

It is also helpful to assess whether the policy is a passive measure that protects individuals automatically (e.g., policies to control toxic emissions) or a more active measure, which requires the individuals to make healthy choices (e.g., warning labels on cigarette packages) (23). Table 2 gives examples of answers to these questions for a variety of passive and active public health policies. Policy change may involve governmental legislation or regulation (e.g., federal, state, local laws) or organizational change (e.g., worksite, school policy) (15,24). Next we provide slightly modified definitions of each of the RE-AIM dimensions and discuss issues in applying each dimension to health policy.

TABLE 1
RE-AIM Perspectives on Policy Translation Issues

RE-AIM Dimension	Key Issues	Policy Issues, Questions, and Examples
Reach	How many people are impacted and are they representative—or those most at risk?	Extent that populations most exposed to environmental risks are reached
Effectiveness	Impact/risk reduction results Robustness and impact on quality of life Unanticipated consequences	How robust or consistent are outcomes? Impact on other prevention activities or environmental risks
Adoption	How many (what %) of target settings will participate—especially if voluntary? Diffusion or adoption curves for different policies	How many and which coal burning power plants will decrease emissions under Policy A?
Implementation	Cost (and different types of cost) Level of enforcement or delivery variability	What happens to adherence over time? Are some parts of a policy implemented and enforced more consistently than others? What are the economic implications of Policy A in terms of both development and outcomes?
Maintenance	Long-term effects and sustainability Re-invention and variation in policy interpretation	Policy may lose impact over time, policy may be rescinded in difficult economic times. New scientific findings may require policy revisions over time

TABLE 2
Examples of Public Health Policies

Example	Policy Characteristic	Whose Health is to Be Improved as a Result of the Policy?	Responsible for Policy Adoption	Responsible for Complying with Policy	Responsible for Enforcing Policy
Mandatory additions of sidewalks in new neighborhoods	Legislative, active	Individuals who live in the neighborhoods	Municipal government	Neighborhood planners/builders	Municipal government: Public works department
Folic acid fortification	Legislative, passive	Unborn children and individuals who eat fortified food products	Federal government	Grain industry	Federal agency (FDA)
Worksite policy to provide and supplement the price of fruit and vegetable items served in vending machines	Organizational, active	Employees who eat from vending machines	CEO and Board	Venders	Company CEO, administration at individual worksite
Worksite policy for signage promoting stair use	Organizational, active	Employees	CEO and Board	Individual worksites	Company CEO, administration at individual worksite
Statewide policy for 30 min of physical activity per day in public schools	Legislative, active	Children attending public schools	State government	Teachers	State government education department, Individual schools
Seat belt laws	Legislative, active	Vehicle passengers and drivers	State government	Vehicle passengers and drivers	State government, Law enforcement officers
Government standards on car emissions	Legislative, passive	United States residents	Federal government	Car manufacturers	Federal government (EPA)

Note. FDA = Food and Drug Administration; CEO = Chief Executive Officer.

Reach

Reach, as applied to health policy, is the absolute number, percentage, and representativeness of those affected by the policy, or those whose health is to be improved as a result of policy. Reach is affected by policy adoption, enforcement, and compliance rates. Thus, those who are planning or evaluating policy should consider these rates to estimate how the policy will influence population-level outcomes. To calculate a percentage for reach, the denominator is all those who would ideally be affected, and the numerator is those who actually are affected.

A benefit of policy change is that resulting environmental changes should impact (reach) all individuals associated with or under the jurisdiction of the policy-making body (e.g., all citizens in a state, all employees in a worksite) (24,25). Unfortunately, this is not always the case. Therefore, policy evaluations should assess the representativeness of those affected, including whether the policy is reaching those at greatest risk (12). Policy should be evaluated in terms of its potential to equally reach all individuals, versus differentially affecting those of different ages, genders, incomes, racial/ethnic backgrounds, or resource levels. Because a primary goal of public health is to decrease health disparities, it is necessary to consider policy components that broaden the reach of environmental changes resulting from policy. For example, a policy mandating sidewalks in all new housing developments will not impact many low-income individuals who cannot afford new housing. However, consideration of this potential inequity might suggest an additional policy component mandating repair of sidewalks in existing inner-city and rural communities.

Effectiveness

Effectiveness is the change in the proximal, or temporally appropriate, outcomes and any adverse impacts. For example, decreased cardiovascular disease incidence is not likely to be associated with a policy mandating sidewalk improvements in a town after only 1 year. An appropriate, more proximal, outcome at that measurement point is whether more sidewalks were repaired as a result of policy implementation (24). Later, residents' behavior changes (e.g., walking) should be assessed, followed by measurement of intermediate outcomes (e.g., blood pressure) and finally long-term outcomes (e.g., cardiovascular disease incidence), years or even decades (26), following policy implementation. Often construction of a logic model that delineates the projected temporal relationship among different outcomes is helpful in creating realistic expectations about policy effects (27).

Economic issues, including costs of policy development, implementation, and maintenance, are important policy relevant outcomes. Detailed discussion of economic analysis is beyond the scope of this article, but this is an underresearched area in need of much greater attention for both health promotion and health policy (28,29). Cost-effectiveness analyses should be conducted based on outcomes that are temporally realistic. Effectiveness is parallel to the "intelligence" function in the policy process and entails use of cost–benefit analysis to determine which policy options and goals are most critical to pursue (24).

Evaluation of policy effectiveness also includes considering potential changes in negative, unintended consequences and quality of life. For example, policymakers seeking to increase use of child car seat restraints should determine whether children are ever harmed by being strapped into a restraint. In projecting the public health effects of a federal mandate for creation and marketing of "safer" cigarettes, Tengs et al. (30) considered the potential unintended negative effect of increased tobacco use, finding that the potential negative outcome of increased smoking was outweighed by the likely result of decreased morbidity due to fewer harmful substances in cigarettes (30).

Because it may be unrealistic or unethical to test policy change interventions using randomized controlled designs, alternate forms of evidence can be used to evaluate policy change effectiveness (31,32). As Choi et al. (33) pointed out, policymakers often evaluate a policy's potential effectiveness based on evidence such as opinion surveys and anecdotes. Other forms of evidence include observational studies, parallel evidence, and expert opinion (32). For example, a quasi-experimental study demonstrated an increase in use of stairs when signs encouraging stair use were added (34), providing evidence of effectiveness for a worksite policy to use signs promoting stair use.

Adoption

Joffe and Mindell (27) noted that it is vital to assess both the potential health impacts of policy and the process of development and adoption of policy when considering policy alternatives. The RE-AIM definition of adoption is the absolute number, percentage, and representativeness of organizations, institutions, or governing bodies that pass or decide to implement a policy and includes the allocation of resources for enforcement, if applicable. Adoption refers to the *organization* or *governing body* (e.g., a legislature, a worksite) that enacts a policy rather than to the individuals impacted by the policy. Adoption is also referred to as "prescription" in the policy process, defined as "the formal approval of laws, regulations, and budget decisions" (25, p. 312). Criteria used to measure representativeness include factors such as size of the adopting organization or governing body, financial resources and staff time available, existing infrastructure, and contextual variables such as political climate and competing demands. Adoption is different than implementation, in that adoption is the *initial* decision to write, pass, and institute the policy. Adoption also includes one-time acts that an organization or

governing body must perform to set up enforcement mechanisms for the policy.

Ultimately, policy can achieve high public health impact only if adopted, implemented consistently, and maintained over time. Stokols (35) noted several barriers to policy adoption, which include (a) organizational and bureaucratic impediments to collaboration across agencies and disciplines, (b) organizational and economic interests and political controversies (e.g., tobacco companies have lobbied heavily against regulations on distribution of tobacco products), and (c) difficulties in designing sustainable policies that do not have negative consequences (35). Despite these barriers, likelihood of adoption can be increased if the potential for broad reach is demonstrated and if evidence of beneficial health outcomes as a result of the policy is provided (36). Strategically matched teams of stakeholders with compatible goals convening to discuss the potential for adoption and implementation of alternative policies also increases likelihood of policy adoption (24,33). Policy (as an innovation) is more likely to be adopted if it is economically advantageous and simple, if the policy specifies core components, if beneficial impacts are easily seen, and if policy is compatible with institutional and/or individual norms and values (37). Again, economic costs and benefits are an area in which much more work is needed. Adoption may also depend on the type of cost (e.g., personnel vs. equipment, one time vs. ongoing, fixed vs. marginal) and training costs. Creating adoption or diffusion curves for different policies may be helpful for planning and evaluation. Finally, policy adoption is more probable when there is high public support and advocacy (15,24).

Implementation

Implementation of a policy change intervention entails applying the policy as planned, adequately enforcing it, and ensuring ongoing and consistent compliance with the core components of the policy. Implementation is different than adoption, in that implementation consists of *multiple* acts that must be repeated over time to enforce or comply with the policy. For example, child vehicular safety policy implementation involves two levels: state law enforcement officers enforcing the policy by identifying guardians who are not complying with the policy's core components, and the guardian (individual-level implementing agent) complying with the policy as intended by purchasing the correct seat, putting the seat in the car, positioning the child correctly in the seat, and consistently using the child restraint. Enforcement and compliance are interdependent (38) and are intricately linked to effectiveness. For example, policies regarding clean air and water are often not adequately enforced and subsequently not complied with, and thus they are frequently not effective.

Regarding enforcement, it is critical to determine how consistently a policy is enforced, whether one core component of the policy is being enforced whereas others are not, if the policy is differentially enforced with different types of employees or citizens, and if there are adequate resources available for enforcement. To justify spending resources on enforcement, costs of enforcement must be weighed against savings of the implementing body, as well as the savings and health benefits for individuals affected by the policy. This includes opportunity costs and health benefits for the individual and to society at large. For example, teachers may lose (or perceive that they are losing) valuable teaching time on basic academics to add time for physical activity into the school day. However, benefits include children's improved ability to focus during the school day and improved health status, ultimately leading to lower individual and societal costs.

The other key aspect of policy implementation is compliance with regulations by members of the group intended to be reached or impacted by the policy. Again, the consistency of compliance implementation across population subgroups is important to assess, and it is often informative to understand the context and reasons why some segments of the population may not comply with policy directives (e.g., what types of drivers are less likely to comply with seat belt laws).

Maintenance

The RE-AIM dimension of maintenance is also evaluated at two levels: the target population reached and the organizations or legislative bodies that enacted or adopted the policy (14). The first level involves compliance with the policy and resulting individual behavior changes and health outcomes that occur over time. The second involves continued enforcement of and compliance with the policy over time. This includes long-term assessment of policy reinvention and variations in policy interpretation and impact. Some policies also need to be readopted due to sunset provisions, by which a policy expires after a defined period. Individual-level "citizen" maintenance is dependent on shifts in social norms (15), changing leadership, and evidence of effectiveness over time. It may be decades before improvements in the public's health accrue as a result of a policy intervention (26). Maintenance also involves ensuring that policy and resulting environmental changes are sustainable and have few negative impacts. Ongoing surveillance of policy enforcement, compliance, and maintenance should occur to provide evidence for continued implementation of the policy and provide impetus for development of new policy components that may be necessary to increase public health impact (24) or to adjust the policy to be more congruent with new evidence. One of the potential downsides to policies is related to inertia: Once enacted, it can be difficult and take a long time to make policy adjustments. This can result in policies that are irrelevant or even counterproductive. For example, farm bill subsidy policies, initially designed to protect

multiple small farmers from the vagaries of weather and price fluctuation, now primarily facilitate the concentration of commodity crops into a few very large farms that produce and transport a high volume of food at great environmental and potentially health-related expense.

Caveat. It is critical to evaluate differences between settings that adopt, implement, and maintain a policy versus those that do not, in terms of resources, infrastructure, and constituents' characteristics. The differences between settings could exacerbate health disparities. For example, an urban policy to build greenways may be more thoroughly adopted and implemented by cities with more affluent constituents compared to a lower income inner city or rural area, due to a relatively broader tax base, constituent advocacy, and increased resource availability. Unfortunately, early adopters of policy interventions are usually in settings that serve constituents who have the lowest risk of chronic disease. As another example, because of resource constraints, small and medium-sized blue collar workplaces may have a difficult time incorporating weight loss and physical activity policies and programs compared to larger, white collar worksites (39).

Summary of RE-AIM Dimensions and Definitions Applied to Health Policy

Ultimately, public health impact of policy hinges on adoption. The likelihood of policy adoption is increased with demonstration of strong potential for broad reach, effectiveness, feasible implementation, and longitudinal monitoring and surveillance over time. The five dimensions of RE-AIM are interdependent and should not be evaluated in isolation. As Sallis et al. (25) noted, steps in the policy process occur simultaneously and generate feedback to influence one another. To enhance scientific rigor and public health impact, and for continued development and evaluation of policy, existing and potential policies can be evaluated using RE-AIM.

ILLUSTRATIVE APPLICATION

In this case study, we use the RE-AIM framework to evaluate the Food and Drug Administration (FDA) food labeling rule 68 FR41434 that took effect January 1, 2006. This rule is designed to promote decreased trans fat consumption in the U.S. population. Table 3 illustrates application of the RE-AIM dimensions to this policy. The policy is a federal rule requiring food manufacturers to list trans fat on a separate line under saturated fat on the nutrition label. It is an active health policy and operates by changing the information environment. Intended reach is the entire literate U.S. population. The reach rate is calculated by dividing the number of persons who read the nutrition label divided by all individuals who purchase

TABLE 3

Application of RE-AIM to Recent FDA Labeling Policy

RE-AIM Dimension	*Recent FDA Policy[a] on Addition of Trans Fat to the Nutrition Label*
Reach	• Number of individuals who read nutrition labels divided by all individuals who purchase or consume U.S. food products. • Differential reach for low-literacy populations.
Effectiveness	• Short-term effectiveness: Change in sales of products with trans fats. • Long-term effectiveness: Change in consumption of trans fat, changes in food supply levels of trans fat, reduction in cholesterol and cardiovascular disease risk. • Unintended consequences: Industry replacement of trans fat with another harmful substance.
Adoption	• FDA has adopted the rule. • Core policy component includes specifying amount of trans fat in line below saturated fat on nutrition label. • Industry and public support are likely to be relatively high.
Implementation	• FDA will monitor and enforce the policy. • Relatively simple to monitor and enforce (nutrition label already exists). • Industry must comply by adding the information to the label.
Maintenance	• Individual level: Do individuals continue to look at the amount of trans fat on the nutrient label? • Do they change behavior as a result (purchase fewer food products with trans fat)? Are there lasting reductions in cholesterol and cardiovascular disease risk? Can they be partially attributed to policy? • Setting level: Does FDA continue to monitor and enforce labeling policy? Are there shifts in costs/funding to monitor and enforce the policy? Are there shifts in social norms associated with inclusion of trans fat on labels?

Note. FDA = Food and Drug Administration.
[a]FDA Rule 68 FR 41434.

and/or consume food products in the United States. In terms of representativeness, this labeling policy will differentially affect individuals who cannot read or speak English and likely those with low levels of health literacy and numeracy. Effectiveness could be evaluated initially by documenting the change in sales of products with trans fat and later by measuring change in consumption of trans fat, both overall and in different population subgroups (1 to 3 years after policy implementation).

Population-levels of trans fat consumption, LDL-cholesterol, and cardiovascular disease risk should be

measured on an ongoing basis and continue for several years after policy implementation. Existing related evidence of policy effectiveness demonstrates that although sodium is on the nutrition label, and many individuals know that sodium can increase blood pressure, many continue to eat foods high in sodium. A potential, unintended negative outcome of this policy may be that the food industry replaces trans fat with another harmful substance. Simulation models could be used to predict how labeling might induce lower trans fat consumption and subsequent LDL-cholesterol and cardiovascular disease.

In the current political climate, it seems that policies providing health-promoting changes to the information environment are more readily adopted and implemented than are health-promoting structural environmental changes. Because the FDA monitors nutrition labels, mechanisms for policy monitoring and enforcement are in place, simplifying implementation. Implementation also includes the FDA's ongoing role as the enforcing body that monitors industry compliance. Monitoring will be influenced by the FDA's future budget, commitment to enforcement, and competing priorities. In terms of maintenance, once nutrients are added to the label, they are rarely taken off. Long-term monitoring and enforcement of industry compliance (setting-level) and unintended negative consequences are needed. Social norms may change as individuals begin to avoid trans fat. Monitoring of trans fat consumption and the long-term health impact of presumed lower trans fat consumption should also occur but could be influenced by factors other than the trans fat labeling policy.

DISCUSSION

Policy change is clearly an important strategy to promote public health (10,15,16). Policies have been responsible for health-promoting improvements on multiple levels, including adjusting individual health behaviors (e.g., cigarette smoking), changing social norms, and reducing environmental and occupational risk (6). Policy change can also provide a supportive context for downstream health promotion activities. For example, the greater success of the North Karelia Project (40,41) compared to community-based cardiovascular disease risk reduction programs in the United States may be attributed, in large part, to the Finnish policies on agricultural subsidies (15).

The RE-AIM planning and evaluation framework (12,14) was always intended to apply to individually based health promotion programs, multilevel programs, and policy interventions. However, its application to date has been largely to individually-based interventions (42,43) or to organizational-level programs such as schools (44), worksites (45), or communities (46). This article suggests that, with some caveats, the RE-AIM framework and definitions can also be usefully applied to health policies.

From the RE-AIM perspective, policy interventions are generally strong compared to individually-based health promotion efforts in three areas.

1. Policies, especially those that are passive, generally have extensive *reach* and sometimes have almost universal impact.
2. Some types of policies can be *implemented* very consistently at relatively low cost and may even generate revenue (e.g., taxes on alcohol and cigarettes).
3. Once *adopted*, it may be easier to *maintain* policies and resulting environmental changes, compared to individual-based change.

As previously discussed, there are some subtleties and caveats in applying RE-AIM concepts to health policy. The first issue is that it can be difficult to assess the actual reach of policies. Although most policies are intended to apply to all individuals associated with or under the jurisdiction of a policy-making body, all may not be reached. This can be due to a variety of factors including lack of access to resources or resistance to being "controlled." Multimethod approaches can be employed to both evaluate policy reach and to understand factors related to reach. This may include quantitative, survey-based methods, coupled with qualitative methods to identify barriers to reach, and optimal policy framing to minimize resistance. Mixed-methods approaches, such as those used by the WISEWOMAN project to apply RE-AIM (47), may yield valuable insights and help to identify both mechanisms of action and differential impact of polices on health disparities.

Enforcement emerged as a critical area related to policy adoption, implementation, and subsequent impact. Simply enacting legislation or an organizational policy is unlikely to have much impact if the policy is not enforced. "Unfunded mandates," in which a policy is enacted (e.g., clean air laws) but there are vastly inadequate funds allocated for implementation and enforcement, have created impossible situations for many state and local health departments. Such mandates have the potential to create unintended adverse consequences such as poor staff morale, citizen cynicism, and loss of respect for legislators.

A third complexity is that a policy that is strong on one RE-AIM dimension may be weak on other dimensions. There is no simple answer to the corollary question of how to choose among different potential policies if some policies are higher on some RE-AIM dimensions and lower than policy alternatives on others. Newer RE-AIM metrics have been developed to integrate RE-AIM scores on two or more dimensions (12) and provide an algebraic "bottom line," which could also be applied to health policy decisions. Alternatively, it may be preferable to specify a priori which RE-AIM dimensions or outcomes are most important or valued and to give greatest weight to results on that dimension. In either case, using a framework such as RE-AIM should help to ensure that decision making is transparent and that policy impacts are being considered

from a broad and equitable perspective. Here again, given real-world constraints, cost and cost-effectiveness issues may be of particular relevance.

The RE-AIM framework can be applied to the planning (13), implementation, and evaluation (48) of public health policies, recognizing that the evaluation of policy interventions involves a cyclical process (25). Perhaps the greatest opportunity for application may be use of the RE-AIM framework by those drafting policies, comparing alternative policies, or considering policies relative to other health promotion options. Considering likely results on each of the RE-AIM dimensions can provide a level playing field for comparing alternatives. Evaluation of policy using RE-AIM can also reveal otherwise unrecognized issues, such as potential unintended consequences of policies and impact on health disparities (12).

Lessons learned from applying RE-AIM to other types of health promotion should also apply to policies. Foremost among these is the challenge of policy adoption. Decision-making bodies (e.g., legislatures or school boards) are often loath to "get ahead of public opinion" and are influenced by many factors besides health impact, including the vested interests of lobbyists and campaign contributors (49). In the process of reaching agreement on a policy, changes are often made in legislation that vastly curtail its potential reach (e.g., by limiting the scope or date of application), implementation (e.g., by making compliance voluntary or by not approving sufficient enforcement funds), or its effectiveness (e.g., by removing or modifying components likely to have the greatest impact or changing action thresholds). As with any public health strategy, cost is a critical issue. As recently addressed by RE-AIM articles in other areas (12,50), there are complexities around cost issues that should also apply to health policies—for example, what types of costs are involved (e.g., upfront vs. ongoing, infrastructure vs. personnel costs) and consideration of "who pays and who benefits." A societal cost perspective should be used, especially when evaluating policies of governmental agencies or health departments (29).

A final issue that is receiving increased attention in translation research is how programs, and in this case policies, evolve over time (51). Policy evolution may be either planned (e.g., changes to the legislation) or unplanned (e.g., slippage in enforcement over time) and can occur at any stage in the process from initial planning (e.g., an influential policymaker inserting a major change to a bill), to appropriations either initially or in later years, to interpretation of legislation by implementing bodies. For example, the administrations of different U.S. presidents have taken vastly different approaches to the degree to which environmental regulations are enforced. Policy should also be assessed at specific intervals over time to ensure that the policy is producing positive results and is consistent with current scientific findings. Such assessments could lead to policy evolution. For example, U.S. agriculture policy in the early part of the twentieth century focused on preventing starvation, whereas currently, such policies may be contributing to the obesity epidemic.

In conclusion, the RE-AIM framework can be applied productively to health policies, and we encourage such application. From the RE-AIM perspective, policies should be evaluated comprehensively and frequently over time to understand and evaluate intended and unintended impacts.

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