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# Health Impact Assessment

## A Step Toward Health in All Policies

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**F**OR THE PAST 4 DECADES, THE ENVIRONMENTAL impact statement (EIS) process has been used to assess the environmental effects of major projects and policies that involve federal funds, such as designing highways, altering waterways, extracting resources on federal lands, and setting Corporate Average Fuel Economy standards. Created under the National Environmental Policy Act of 1969, EISs do not determine policy but rather ensure that stakeholders have full information about unintended environmental impacts before reaching a decision.<sup>1</sup> By evaluating alternative proposals and their relative risks and benefits, an EIS helps decision makers choose options that promote favorable outcomes and mitigate adverse environmental consequences.

A natural extension of this work is the use of health impact assessment (HIA) to examine the effects that a policy, program, or project may have on the health of a population. An HIA is defined as “a combination of procedures, methods and tools that systematically judges the potential, and sometimes unintended, effects of a policy, plan, programme or project on the health of a population and the distribution of those effects within the population. HIA identifies appropriate actions to manage those effects.”<sup>2</sup> Most health professionals are probably more familiar with EISs and their intent and usage than with HIAs. Yet there has been a movement to adopt HIAs in public policy settings and legislation and in a recently emerging health policy literature that describes and advocates for this process. HIAs offer great potential for promoting health by encouraging decisions that protect and enhance health and health equity.<sup>3,4</sup>

There is increasing recognition that many contemporary health issues are profoundly influenced by factors outside the traditional realm of health and health care. Factors such as literacy, poverty, employment, and racism contribute to disparities in life expectancy as well as to health-related quality of life. Concerns about how to address these factors have led to a focus on “health in all policies,” in which policies in social sectors such as trans-

portation, housing, employment, and agriculture ideally would contribute to health and health equity. An HIA offers a vehicle to make these health effects explicit. Unfortunately, the evaluation of health effects in policy making has been slow to take hold.

The United States lags behind many European nations, Canada, and other countries in the use of HIAs.<sup>4,5</sup> This situation is somewhat surprising, given that US environmental policy explicitly requires the examination of health effects as part of the National Environmental Policy Act. Although most EISs in the United States incorporate little about health effects, experience in California and Alaska has demonstrated that a wide range of health effects can be successfully integrated into the EIS process.<sup>3</sup>

Beyond increasing attention to health outcomes within EISs, the potential applications of HIAs are clearly evident. For example, although air pollution and injury prevention are often considered in major transportation projects, the influence of road design on physical activity and obesity is not. An HIA that recommends the addition of pedestrian and bicycle facilities (“complete streets”) to a transportation plan would contribute to a built environment that promotes the public’s health.

The agriculture sector seeks to maximize productivity, meet consumer demand, and sustain livelihoods. From a health perspective, agricultural policy determines food quantity, quality, and prices that directly affect consumption patterns and therefore affect health.<sup>6</sup> HIAs could be used to examine the health effects of proposed agricultural policies, such as ones that enhance production of energy-dense, nutrient-poor foods that contribute to the increasing obesity epidemic. HIAs of proposed zoning plans, which would contribute to decreased density of fast-food and liquor stores or increased density of restaurants and full-service grocery stores, especially in low-income areas, could result in changes that better promote health.

In education, a timely HIA might have reduced the inadvertent effects of the No Child Left Behind legislation on physical education programs and health curricula by pro-

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See also pp 317 and 320.

viding alternate scenarios for achieving the desired educational outcomes while simultaneously promoting health. A prospective HIA of proposed sites for local schools could recommend locating new schools at sites that have low levels of noise and air pollution and that have features that encourage children to walk or bicycle to school (including the construction of safer street crossings near schools).

In commerce, an HIA of proposed domestic and international trade policies affecting the price and availability of tobacco could recommend policy modifications to reduce tobacco use and its adverse health consequences. HIAs could thus help national policymakers consider the relative costs, benefits, and risks of tobacco as an agricultural product and export crop and as a toxic risk factor for poor health outcomes and increased health care costs.

Although the potential applications are expansive, increasing evidence of the effects of HIAs on decision-making makes this strategy compelling.<sup>3-5</sup> The TABLE highlights selected HIAs in the United States and outcomes associated with those efforts. HIAs can make an important contribution to social equity and the elimination of health disparities, especially when community input is incorporated into the planning, conduct, and communications processes of HIAs.<sup>3</sup>

Several pieces of current federal legislation have important implications for health. The Food, Conservation, and Energy Act of 2008 (Pub L No. 110-224, also known as the 2008 US Farm Bill)<sup>7</sup> was enacted in June 2008 and addresses crop subsidies that influence food prices, nutrition programs such as the Supplemental Nutrition Assistance Program (formerly known as the federal Food Stamp Program), and food accessibility. The transporta-

tion bill to be considered for reauthorization in this congressional session addresses support for roads and their design, bicycle paths, and public transportation—all of which are integrally involved with physical activity and injury prevention. The Child Nutrition and WIC Reauthorization Act of 2004, set to expire in September 2009, deals with the school breakfast and national school lunch programs, the summer food service program, the child and adult care food program, and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC).<sup>8</sup> HIAs are urgently needed to examine these bills for their likely effects on health.

Health is determined not only by genetics and personal choices but also by policies and environmental factors. Public health and medicine need to engage more proactively in policy decisions, and HIAs provide a great vehicle for doing so. In addition, greater awareness and use of HIAs could be achieved if legislators, funders, donors, and foundations would incorporate HIAs in the planning of projects they support. For example, the World Bank requires HIAs as part of their large development efforts,<sup>9</sup> and bills encouraging or requiring the use of HIAs have been introduced at the federal level as well as in a number of states.<sup>10</sup> The challenge ahead is to increase the demand for the routine use of HIAs, both within and outside the EIS process, and to increase the capacity of health professionals and others to conduct HIAs. To promote this goal, the Robert Wood Johnson Foundation, with the Pew Charitable Trusts, will launch a national initiative in fall 2009 to demonstrate the value of HIAs as a tool to provide policymakers with the information they need to make decisions that improve health.

**Table.** Selected Examples of Health Impact Assessments (HIAs) and Their Subsequent Outcomes in the United States<sup>a</sup>

HIA	Location and Date	Subsequent Outcomes
Living wage ordinance	San Francisco, CA, 1999	HIA contributed to the passage of local living wage and minimum wage ordinances and to funding for the creation of the San Francisco Department of Public Health HIA program
Trinity Plaza housing redevelopment	San Francisco, CA, 2003	HIA findings led city officials to require the developer to include a no-displacement alternative, which prevented the displacement of all existing low-income residents as well as more routine participation of the city health department in the local environmental review process
Northeast National Petroleum Reserve oil and gas leasing program	Alaska, 2007	In part because of an HIA, the Bureau of Land Management subsequently withdrew from leasing some of the land for which oil and gas development would have adversely affected the health of native populations and instituted new pollution monitoring and controls; on a larger scale, multiple federal agencies are now accepting health considerations in the federal environmental impact statement process both within Alaska and in other regions
Lowry Corridor redevelopment	Minneapolis, MN, 2007	HIA recommendations helped the project manager obtain pedestrian and bicycle improvements for this low-income urban corridor
Taylor Energy Center coal-fired power plant	Florida, 2007	The development authority accepted HIA recommendations about hiring minorities and providing health benefits; the project was later cancelled because of climate change concerns
BeltLine transit, trails, and parks project	Atlanta, GA, 2007	The project funding advisory committee approved using HIAs as a factor in selecting proposals for specific components of this \$2.8 billion project
City of Decatur Community Transportation Plan	Decatur, GA, 2007	The city accepted the HIA recommendations to make infrastructure improvements and hired a community health planner to work on active living issues across departments

<sup>a</sup>Adapted from Dannenberg et al.<sup>4</sup> A database of HIAs completed in the United States, including periodic updates, is available from the UCLA Health Impact Assessment Clearinghouse Learning and Information Center.<sup>11</sup> A database of HIAs completed in Europe and elsewhere is available from the Association of Public Health Observatories.<sup>12</sup>

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# Integrating Clinical Care and Community Health

## Delivering Health

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**H**EALTH CARE AND PUBLIC HEALTH PROFESSIONALS IN the United States can look at their achievements over the last century with pride. Increasing the life span of Americans by almost one-third of a year each year over an entire century is an enormous and unprecedented accomplishment. The virtual elimination of many childhood illnesses, control of cardiovascular disease and stroke, effective treatment of pneumonia, and reductions in infant mortality exemplify the remarkable progress made. Along with changes in the social and physical determinants of health, these improvements are often attributed either to application of better medical knowledge or to public health actions, but have really required both.

Public health professionals generally think about how to improve health at a population level, whereas clinicians generally address the needs of individuals. These streams converge in systems of clinical care and are also embodied in population health principles of measurement, system change, and accountability. For example, safe and effective immu-

nizations require timely delivery. School immunization requirements, outreach programs, up-to-date schedules, reminder systems, financial incentives, and education made it possible for clinicians to ensure those vaccines were delivered. Employers and others took delivery of influenza vaccination to work sites and community locations. Registries were created, immunization rates were tracked, and feedback was provided.

As strategies for controlling tobacco, hypertension, and hyperlipidemia emerged, clinicians collaborated with public health officials on education programs; screening; pharmaceutical management; and tobacco prevention, cessation programs, and policies to reduce use. New initiatives in urban planning and mass transit that encourage walking and biking complement school and employer-based programs to enhance physical activity.

Although much progress has been made, tobacco, physical inactivity, poor diet, alcohol, and substance use remain the highest ranked causes of death today. Microbial agents, toxins, motor vehicle crashes, firearm injuries, and harmful sexual behaviors also continue to take an unnecessary

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