

Health Affairs

At the Intersection of Health, Health Care and Policy

Cite this article as:
Rajiv Bhatia and Jason Corburn
Lessons From San Francisco: Health Impact Assessments Have Advanced
Political Conditions For Improving Population Health
Health Affairs 30, no.12 (2011):2410-2418
doi: 10.1377/hlthaff.2010.1303

The online version of this article, along with updated information and services, is
available at:

<http://content.healthaffairs.org/content/30/12/2410>

**For Reprints, Links &
Permissions :**

http://content.healthaffairs.org/1340_reprints.php

Email Alertings : <http://content.healthaffairs.org/subscriptions/etoc.dtl>

To Subscribe : <https://fulfillment.healthaffairs.org>

Health Affairs is published monthly by Project HOPE at 7500 Old Georgetown Road, Suite 600, Bethesda, MD 20814-6133. Copyright © by Project HOPE - The People-to-People Health Foundation. As provided by United States copyright law (Title 17, U.S. Code), no part of may be reproduced, displayed, or transmitted in any form or by any means, electronic or mechanical, including photocopying or by information storage or retrieval systems, without prior written permission from the Publisher. All rights reserved.

Not for commercial use or unauthorized distribution

By Rajiv Bhatia and Jason Corburn

DOI: 10.1377/hlthaff.2010.1303
 HEALTH AFFAIRS 30,
 NO. 12 (2011): 2410–2418
 ©2011 Project HOPE—
 The People-to-People Health
 Foundation, Inc.

Lessons From San Francisco: Health Impact Assessments Have Advanced Political Conditions For Improving Population Health

Rajiv Bhatia (Rajiv.Bhatia@sfdph.org) is director of occupational and environmental health for the San Francisco Department of Public Health and an assistant clinical professor of medicine at the University of California, San Francisco.

Jason Corburn is an associate professor with joint appointments in the Department of City and Regional Planning and the School of Public Health at the University of California, Berkeley.

ABSTRACT Health impact assessment is a structured decision support tool used to systematically characterize the anticipated health effects, both adverse and beneficial, of societal decisions. In San Francisco, the use of health impact assessments has not only produced evidence to inform health policy decision making but has also contributed to the political conditions needed to achieve optimal population health. Health impact assessments have helped increase public awareness of the determinants of health, routine monitoring of these determinants, cooperation among institutions, health-protective laws and regulations, and organizational networks for health advocacy and accountability. Drawing on more than a decade of local experience, we identify the direct and indirect effects of the assessments on the politics of governance as well as on health. We demonstrate that health impact assessment is both an analytic tool and a process that helps build the social institutions that can improve health.

The rediscovery of the social determinants of health—including the quality of housing, schools, and neighborhoods; nutrition and food security; transportation; income and wealth; and political and social inclusion—demands attention to the structures and policies that shape these determinants and their distributions.¹ Policy actors not focused on public health or health care might not always consider how their decisions influence health determinants, which can lead to avoidable harm and health disparities and to lost opportunities to promote health.² For example, the discretionary decisions made by US transportation planners to bring interstate highways directly into the center of developed cities, commonly through low-income and minority neighborhoods, destroyed cohesive communities and increased population exposure to noise and air pollution and traffic hazards.³

A health impact assessment is a structured decision support tool used to systematically

characterize the anticipated health effects, both adverse and beneficial, of societal decisions.⁴ A health impact assessment can also provide decision makers with alternatives that can protect and promote health. Improved understanding of health effects by decision makers and stakeholders may contribute to public policy that is more protective of health. Over the past decade, the use of health impact assessments in the United States has become much more common.^{5–7}

There have long been calls to improve the health of populations through better coordination among policy sectors.² An early and influential effort was the First International Conference on Health Promotion in 1986, which produced the Ottawa Charter on Health Promotion. The charter urged policy makers in all sectors to be aware of the health consequences of their decisions and to accept their responsibilities for health.⁸ The charter also specifically called for the systematic assessment of the health impact of a rapidly changing environment—

particularly in the areas of technology, work, energy production, and urbanization.

Integrating evidence on the health effects of various policies into policy making is clearly one strategy for improving health. However, realizing this vision of population health requires achieving other political aims. These include developing public awareness of health determinants, mobilizing social organizations to demand and make use of evidence about health effects, establishing cooperation across institutions, implementing health-protective laws and regulations, and monitoring structures that keep policy makers accountable.

Proponents of health impact assessments argue that communicating timely knowledge about health effects to stakeholders and decision makers can result in health-supportive changes to policy and the designs of projects and programs. Nonetheless, compelling evidence of the effectiveness of the assessments is limited.⁹ Outside the United States, evaluations have focused on qualities of the process, such as responsiveness to decision makers, stakeholder engagement, and the validity of predictions.^{10–13} Little research has been completed that examines how the practice of health impact assessment may affect the broader political conditions for health.

San Francisco, California, has a rich tradition of being a laboratory of social and policy innovation and has developed policies and practices that have often been replicated by other jurisdictions. Over the past decade, the city has institutionalized a routine practice of health impact assessment in its Department of Public Health.¹⁴ This article describes that experience, highlighting what we call the political effects of health impact assessments.

We argue that these political effects include not only the influence of an assessment on the decision at hand, but also the framing of social issues as health policies; adding these issues to the policy agenda; building new health-focused relationships and coalitions among previously unaligned policy actors; mobilizing credible scientific evidence to support decisions; collaboratively generating alternative policies; implementing new tools to monitor the progress of policies; and contributing to greater governmental accountability.

We also explore how the particular approaches used in San Francisco's practice helped influence both policy and the longer-term politics of health policy making. These approaches reflect several discretionary choices in health impact assessment practice, including the selection of policy issues and project decisions for review; choices with regard to measures of health and analytic

methods; and how the impact assessment will identify community organizations, public agencies, and decision makers and engage them as participants in the process.

Overall, our analysis suggests that health impact assessments may do more than increase the health evidence considered by decision makers. The assessments may also affect the knowledge, focus, roles, and influence of various social interests, altering the political debate and the role of public health in government institutions.

This analysis is based on our experience in developing, implementing, and evaluating San Francisco's health impact assessment program. We do not focus here on the analytic methods, findings, or limitations of individual assessments. A summary of each assessment conducted in San Francisco, along with references to documentation, is provided in the online Appendix,¹⁵ and individual cases and methods have been described elsewhere.^{16–19} The insights presented here reflect a synthesis of regular communication and dialogue with individuals, public and private organizational stakeholders, and decision makers who participated in or used one or more health impact assessments, as well as public and other governmental documents, media reports, and personal observations.

An internal evaluation of the health impact assessment efforts in San Francisco also provided valuable findings. That exercise employed surveys and interviews of assessment participants and local government officials, transcripts of public meetings, an "ethnography" of the city's community-based organizations, and published materials and media reports.

We acknowledge that the experiences emerging from one local health agency's practice are likely to be unique, and that the insights and observations we report here are based on limited external evaluation. Nevertheless, these preliminary insights should contribute to the growing national policy discourse on the role of health impact assessments as a way of producing more health-responsive public policy.

Health Impact Assessment In San Francisco

A typical health impact assessment involves the consideration of a broad array of health effects and health determinants, the use of quantitative forecasting tools as well as qualitative evidence, an explicit concern with vulnerable populations and health equity, the engagement of decision makers and stakeholders, and transparency in process and findings.²⁰

Conceptually, a health impact assessment can generate evidence that supports or opposes a

particular decision or that suggests an alternative decision that is more favorable to health. By participating in an assessment, officials, stakeholders, and other interest groups are also exposed to opportunities to learn about, for example, dominant and competing policy objectives, decision makers' interests, the concerns of the communities involved, the limitations of available scientific methods, alternative sources of knowledge, and the operation of government institutions.

Health impact assessment adapts the structure and rationale of the National Environmental Policy Act of 1969, which requires a comprehensive review and public disclosure of the effects on the human environment of major federal actions through a process called environmental impact assessment.⁷ Both environmental impact assessments and health impact assessments follow a series of procedural steps: screening; scoping, or selecting which health effects to assess and which analytic approaches to employ in the assessment; assessing; reporting; and monitoring.

Environmental impact assessment has been successful in institutionalizing a process to manage environmental concerns within federal agency planning and decision making, and in increasing the transparency of administrative actions.²¹ The National Environmental Policy Act and related laws explicitly require the consideration of health effects in every environmental impact assessment. However, the agencies responsible for implementing these assessments typically have not considered human health effects routinely and comprehensively.^{7,17,22}

In 1999 San Francisco's Department of Public Health began to use health impact assessments as a way to respond to the environmental and social justice concerns raised by local community groups.²³ Reacting to the widespread displacement of residents and businesses resulting from the 1990s technology boom in the Bay Area, community-based organizations put pressure on the city's agencies to pay more attention to the needs of existing residents.

Organized groups of residents demanded that the Department of Public Health take regulatory action on environmental pollution, unhealthy housing, and residential and business displacement. The groups asserted that policies for economic development and land use—particularly the transformation of historically industrial land into residential areas and the new information economy—were contributing to these problems.²⁴

EARLY EXPERIENCES In the context of these economic and political changes, Tom Ammiano, a member of the San Francisco Board of Supervisors, asked the city's Department of Public

Health in 1999 to assess the health benefits of a proposed living wage ordinance. This was one of the first applications of health impact assessment in the United States.

Members of the department's staff used available epidemiological and economic data to estimate the expected health effects of an increased minimum wage for employees of city contractors and leaseholders.²⁵ The analysis found that adopting a living wage of \$11.00 per hour could result in a 4–6 percent decrease in premature death for lower-income, employed adults; reductions in limitations on their work and other activities; and increases in their children's levels of completed education. The results were reported to stakeholders and legislators via public testimony and written reports.

San Francisco adopted the living wage law, but the role and influence of the health impact assessment in the decision are unclear. The exercise did demonstrate that public health evidence could be applied in novel ways to analyze economic policy.

The experience with the living wage legislation led Department of Public Health staff members to discover and draw on the rich international practice of health impact assessment to justify the creation of a new unit within the department to conduct these studies. The department built its health impact assessment practice by raising awareness of and demand for the assessments in community-based organizations trying to shape policies for land use and economic development.²³ Subsequently, community-based organizations and public agencies began requesting the department to conduct health analyses.

In 2003 a coalition of community groups called the Mission Anti-Displacement Coalition asked the Department of Public Health to review the Trinity Plaza redevelopment plan, which proposed to demolish 360 units of rent-controlled housing and replace them with 1,400 condominiums to be sold at the market rate. In conducting an environmental review required by the California Environmental Quality Act—the state-level equivalent of the National Environmental Policy Act—the Department of City Planning had determined that the project would have no adverse human impacts. Tenants' groups strongly opposed this position.

The coalition asked the Department of Public Health to review the planning department's position and conduct a health impact assessment to evaluate the health effects of involuntary displacement. The assessment found, in qualitative terms, that the threat of eviction was having immediate impacts on residents' mental health and that displacement would probably have detrimental effects on supportive family relation-

ships, employment, housing and transportation costs, and school outcomes. The Department of Public Health communicated these findings to the Department of City Planning as an official written comment on its decision.¹⁷

Subsequent meetings of representatives of the Department of Public Health, the Department of City Planning, and the project's developer ultimately led the planning department to revise its original conclusions, identifying the displacement of residents as a potentially major impact and instructing the developer to design an alternative that did not involve displacement. The developer, already facing delays and continued community opposition, ultimately revised the project to include replacement apartments for all current tenants.

REACHING MORE PARTICIPANTS As a consequence of the Trinity Plaza health impact assessment, housing and tenants' rights organizations recognized the public health impact of similar planning decisions and encouraged the Department of Public Health to participate in them, including a proposed plan to rezone about one-third of the city. The areas involved, called the Eastern Neighborhoods, included the Mission and the South of Market Area, two predominantly low-income communities of color undergoing rapid housing and land use transformation.

The Mission Anti-Displacement Coalition and supportive staff members at the Department of City Planning proposed conducting a health impact assessment on the rezoning plans. The department's leaders rejected incorporating an assessment into the environmental impact assessment required under the California Environmental Quality Act but agreed to support an assessment conducted as an independent process. As a result, staff members of the Departments of Public Health and City Planning and community stakeholders designed and organized the Eastern Neighborhoods Community Health Impact Assessment.²⁶

THE EASTERN NEIGHBORHOODS COMMUNITY ASSESSMENT Envisioned as a participatory process with formal oversight by both community stakeholder groups and government agencies, the Eastern Neighborhoods Community assessment included collaborative processes to establish the project's goals; health targets; and research questions, measures, and data sources, as well as developing policies for a healthy city. Subgroups of assessment participants reviewed existing data from city agencies and the Census Bureau, in addition to local, state, and federal health, employment, and transportation surveys.

The Eastern Neighborhoods Community as-

essment led to public—and sometimes contentious—discussions of assumptions made in analyses, such as an assessment of whether or not park land was adequate to meet the health needs of the area's different population groups. When assessment participants identified gaps in contextual knowledge—for example, about how zoning changes might affect particular population subgroups or occupational groups—the Department of Public Health conducted research to gather the requested additional information. The deliberation over the evidence emphasized to all of the participants that the process of evidence gathering and synthesis was critical to the nature, strength, and legitimacy of the findings.

Emerging from the assessment process was an integrated system of community-level health indicators, targets for healthy development, and supportive policy and design strategies. The system was subsequently named the Healthy Development Measurement Tool. Staff members in the Departments of Public Health and City Planning used the indicators and targets iteratively to evaluate drafts of the Eastern Neighborhoods Community plans, negotiating and including policies and design changes responsive to health needs.

The new tool, made available on a public website (<http://www.thehdmtool.org>), became the standard instrument used by the Department of Public Health to review land use plans and projects in San Francisco. Using a structure and terms familiar to both planning and housing agencies, the tool provided easy access to community health data, which was useful in land use decision making.

For example, one neighborhood community organization used community health indicators as a basis to appeal the approval of another neighborhood development plan in the city, the Rincon Hill Neighborhood Plan. The community organization ultimately secured a negotiated development agreement that provided additional community benefits aimed at improving traffic safety and access to parks and at reducing displacement and segregation.

The community benefits, codified as developer requirements in the San Francisco Planning Code, included more affordable units in new residential buildings and new fees that the community could use for street improvements, community centers, or community economic development. Other urban and rural localities across the country have since adapted the health indicators and design checklists in the Healthy Development Measurement Tool to inform urban planning decisions.

BUREAUCRATIC AND TECHNICAL CHALLENGES

The adoption of health impact assessments in

San Francisco was not without both bureaucratic and technical challenges that might be expected to arise in other settings. For instance, representatives of planning and transportation agencies were frequently concerned that assessments might inadvertently support criticisms of projects and plans. On occasion, they requested that the Department of Public Health anticipate the findings and recommendations of a health impact assessment before it was conducted.

Planners strongly resisted integrating health impact assessments into the environmental impact assessment process, fearing a costly and time-consuming expansion of the environmental review process. Department of Public Health staff members managed these concerns in several ways. They limited their involvement in the environment impact assessment process, while using health impact assessments to recommend modifications to the design of land use projects and neighborhood plans. In doing this, they worked to build consensus with the Department of City Planning on feasible ways of mitigating adverse health effects and on alternative mechanisms in plans to increase consideration of and accountability for health.

Planners and developers also routinely raised concerns about the availability and validity of methods to assess health impacts. The diverse subjects of health impact assessments—policies, rules, plans, and projects concerning land use, transportation, housing, and employment—have potential effects on multiple determinants of health. Department of Public Health staff had little prior expertise in either measuring health determinants or forecasting health effects, so they had to develop these skills.

Several health impact assessments required original analytic investigations and agency commitments to develop expertise and apply scientific techniques in new ways. For example, to predict the effects of residential development on pedestrian injuries, department staff members developed a multivariate model of pedestrian-vehicle collisions that produced injuries, based on predictive factors such as traffic volume, population size, and street characteristics. The staff then used this model to forecast changes in pedestrian injuries related to planned growth and prioritize strategies to mitigate these impacts.²⁷

Over time, and in response to the analytic needs of particular decisions, the staff built capacity to measure or model several health determinants not routinely assessed in planning practice, such as the quality of the walking environment, access to food resources, and traffic noise. Department of Public Health staff learned how to apply epidemiological evidence and risk

The diverse subjects of health impact assessments have potential effects on multiple determinants of health.

assessment methods in new ways to make quantitative predictions.¹⁸

Equally important, as policy analysts, staff members learned to confront the inherent uncertainty of forecasting and respond to external criticisms of the validity of evidence. For example, city planners considered the prediction of pedestrian injuries as a function of environmental characteristics to be speculative, despite evidence supporting the causal effects of the selected predictive variables. Assessing and documenting the limitations and uncertainties of health impact assessments became a standard element in each assessment. In some cases, staff members had to conclude that the evidence was simply insufficient for them to make valid predictions.

COLLABORATING TO SUSTAIN THE USE OF ASSESSMENTS In spite of limited internal funding, the Department of Public Health sustained and expanded its practice of health impact assessments, in part, through collaborating with academic partners and private for-profit and nonprofit organizations. Since 2005 department staff members—along with faculty members from the University of California, Berkeley—have taught an interdisciplinary graduate course in health impact assessment for the university's School of Public Health and Department of City and Regional Planning. The academic partners have helped develop and evaluate health impact assessment methods, and several former students now conduct assessments professionally.

The Department of Public Health has conducted several health impact assessments in response to specific requests from interest groups. Working with People Organized for Economic and Environmental Rights—a nonprofit grassroots organization in San Francisco—the department analyzed the impact of truck routes in the city's Excelsior neighborhood on pollution, noise, and pedestrian safety, building knowl-

edge to support a community-led campaign to revise truck routes in the city.²⁸ In 2008 the Labor Project for Working Families—a nonprofit organization promoting family-friendly policies in California—recruited the department along with the nonprofit group Human Impact Partners to conduct a health impact assessment of the California Healthy Families, Healthy Workplaces Act of 2008, state legislation requiring that employees be able to earn and use a minimum number of paid sick days annually.²⁹

THE PATH TO ROUTINE COLLABORATION As the practice of health impact assessment emerged and progressed incrementally, adapting to reactions, criticisms, and opportunities, it expanded in scope and participation. Throughout this evolution, the Department of Public Health viewed the assessment not as an end in itself but rather as one strategy to achieve more equitable and healthy public policy. This underlying purpose, new analytic capacities, and improved working relationships with other city agencies created new opportunities for the department to participate in policy making. By 2008 the Department of City Planning was regularly taking advantage of the expertise of Department of Public Health staff in the review of proposed projects and land use plans.

Department of Public Health staff also worked with planners and private interest groups to address gaps in health-protective regulations and law, which were frequently identified by health impact assessments. To mitigate the effect of roadway proximity on respiratory disease and lung function, for example, the city adopted a new public health law requiring developers building new housing near busy roadways to analyze air pollution at the sites and improve ventilation systems.³⁰ Anticipating that rezoning to allow residential uses in historically industrial areas would create new conflicts because of existing noise sources led to a modernization of the city's noise code, with changes to metrics, measurement procedures, and standards.³¹

New opportunities to take leadership roles in citywide planning initiatives have allowed staff members of the Department of Public Health to leverage the resources and capacities of other city agencies for health aims. For example, the department and the Municipal Transit Authority are jointly leading long-range pedestrian safety planning to achieve a 50 percent reduction in serious and fatal pedestrian injuries by 2021. The plan will include policy, fiscal, and organizational changes to implement best practices in safety analysis, enforcement, and roadway safety engineering. Importantly, evidence and techniques developed through health impact assessments inform this planning process in the pri-

oritization of streets for safety improvements and in the evaluation of the effectiveness of alternative countermeasures.

Despite the relatively long experience with health impact assessment in San Francisco, the city has not yet established a single optimum way to institutionalize the practice in local governmental decision making. To date, the Department of Public Health has selected subjects for assessments in an ad hoc manner, based on its own evaluation of strategic opportunities to inform decisions that have both health significance and relevance to community and political interests.

Adding different ways for the department to engage with other agencies on urban policy—along with the normalization of this engagement—may reduce the need or demand for health impact assessment as a particular process or tool. In the future, the department aims to involve partner city agencies and community organizations in a dialogue to identify and screen candidates for health impact assessment.

Discussion

The experience in San Francisco suggests that health impact assessments can influence policy but that their effects are mediated in complex ways. Assessments have provided forums for organizations to learn about the links between public policy and population health and about how these links could influence policy. The assessments have also helped strengthen existing advocacy coalitions and align groups advocating for healthy policy. These by-products of health impact assessment may both increase the assessments' immediate effectiveness and have long-lasting influence on policy making.

MUTUAL LEARNING Health impact assessments in San Francisco have also offered community stakeholders and policy makers a forum in which to deliberate publicly about how projects, plans, and policies might generate health effects and which technical solutions might best protect or promote health. The assessment process has taught community and government stakeholders that knowledge about health effects and trade-offs, which might be hidden within a less inclusive analytic process, can greatly alter the course of decisions.³²

For example, in the Trinity Plaza health impact assessment, health and housing evidence seemed to alter the Department of City Planning's view of what counted as a major environmental impact. And in the assessment conducted in the Excelsior neighborhood, community advocates' engagement with epidemiologic methods linking localized air pollutants with health

outcomes led to a call for more precautionary and preventative policy alternatives. Details on all assessments are in the online Appendix.¹⁵

Equally important, health impact assessment has been a process through which the Department of Public Health has learned from stakeholders and decision makers about public policy making. For example, department staff members have mastered the elements and timing of various policy-making processes, identifying where gaps exist in regulatory processes intended to protect public health and how health determinants can be linked to the institutional responsibilities and objectives of different city agencies.

From community residents, the department has learned about the statutory health effects analysis requirements in environmental impact assessments. Through negotiations with planners and private interest groups, the department also has learned about the feasibility constraints on new health-protective development and building design rules. And through the critiques from people working in planning and transportation agencies of the analysis methods and findings of health impact assessments, the department has learned about the strengths and weaknesses of using epidemiologic evidence in policy making.

Overall, through the use of health impact assessments, the Department of Public Health has both improved its expertise in the analysis and communication of policy impacts and developed new expertise in how to engage with and influence diverse policy sectors. These learning experiences have challenged conventional norms and routines in public health that previously divorced the generation of public health evidence from political and policy processes.

SHAPING ORGANIZATIONAL NETWORKS Social organizations and networks among them are instrumental in progress in every phase of the policy process. The use of health impact assessments has required that the Department of Public Health staff communicate, engage, and negotiate with staff of several other government agencies. These developments in turn have resulted in the adoption of new collaborative objectives by agencies and in the creation of new working relationships that extended beyond the scope of the assessments.

The inclusive and meaningful stakeholder engagement in the assessments—particularly in the Eastern Neighborhoods Community assessment—created opportunities to affect private organizational networks and build trust among community-based organizations that had been skeptical of government agencies. The evaluation of the Eastern Neighborhoods Community assessment observed that many participants

who worked on housing, parks, and school district issues built new working relationships with “unlikely suspects,” such as groups working on environmental health, traffic safety, and violence prevention.

The same evaluation revealed that 86 percent of the participants in that assessment cited the process as the key contributor to a new working partnership with another nonhealth organization working on a health policy issue. Furthermore, more than 72 percent of the participants from community-based organizations, the private sector, and government agencies reported an improved relationship—including more-open communication, increased trust, and greater sharing of information—with the Department of Public Health.¹⁴

NETWORK POLITICAL POWER Policy making rarely moves neatly from problem identification through fact finding to decision making.³³ Based on the experiences described here, it would be difficult to conclude that health impact assessment by itself has ever altered policy decisions. However, the experiences do suggest that the combination of an inclusive health impact assessment process and an honest presentation of the strengths and weaknesses of evidence have increased awareness of the social determinants of health by governmental institutions and the public. They also suggest that new coalitions of governmental and nongovernmental organizations can contribute to healthy policies.

Each of the examples described here reflects multiple potential political influences on decision making. In the Rincon Hill Neighborhood Plan, a community organization used evidence and knowledge learned through its participation in an unrelated health impact assessment to justify and negotiate a more health-protective development agreement. In the case of the Trinity Plaza redevelopment, health evidence, community pressure, and a novel application of the legal requirements of the California Environmental Quality Act prevented adverse health effects that would have occurred if the redevelopment had evicted and displaced residents.

Increasing organizational networks’ knowledge about health determinants and making institutions more responsible for protecting health may contribute to additional sustained efforts to monitor accountability for health in public policy. The requirement of the California Environmental Quality Act to adequately analyze and mitigate environmental impacts on human health is one clear example, but analysis in health impact assessments also revealed weak city enforcement of several other health-protective laws, such as those limiting exposure to noise.

Conclusion

The evolution of cooperation across city agencies to promote health in San Francisco represents an important departure from normal segregated bureaucratic practices. These changes may reflect the particular approach taken to health impact assessment in San Francisco, which emphasized bridging gaps among political interests, organizations, and institutions as much as building capacity for assessment and forecasting. Such new bureaucratic norms may remain tenuous in the absence of formal structures to ensure collaboration among institutions and to sustain an organized movement to demand accountability for health.

More-systematic evaluation of how health impact assessments affect policy and population health is needed. However, our experiences suggest that those who consider using the assessments should value their political as well as their technical contributions. Making public policy more attentive to the needs of population health

will require substantial changes in the structure and operation of government institutions and in the composition and strategies of the organizational networks that influence and monitor those institutions. As we have suggested, health impact assessments can be viewed as opportunities to build new governance arrangements that can make public decisions more responsive to health in the short and the long term.

Assembling and communicating health evidence may be one of the most obvious and important roles for public health professionals and institutions. But it is effective only when it is attentive to the political and policy environments of decision making. Engagement in policy making using health impact assessments is likely to reveal other, often overlooked, opportunities to advance health objectives. Thus, the assessments should be viewed as an important contribution to the complex politics of healthy public policy making. ■

The practice of health impact assessments described in this article is the collective endeavor of numerous current and former staff members in the Program on Health Equity and

Sustainability at the San Francisco Department of Public Health. The authors acknowledge the support of Mitchell Katz, the department's former director. The content of the article

reflects the perspectives of the authors alone and not necessarily those of the Department of Public Health or the City and County of San Francisco.

NOTES

- 1 Commission on the Social Determinants of Health. Closing the gap in a generation: health equity through action on the social determinants of health. Geneva: World Health Organization; 2008.
- 2 Stalh T, Wismar M, Ollila E, Lahtinen E, Leppo K. Health in all policies: prospects and potentials. Helsinki: Ministry of Social Affairs and Health; 2006.
- 3 Sánchez TW, Stolz R, Ma JS. Moving to equity: addressing inequitable effects of transportation policies on minorities. Cambridge (MA): Harvard University Civil Rights Project; 2003.
- 4 Quigley R, den Broeder L, Furu P, Bond A, Cave B, Bos R. Health impact assessment: international best practice principles [Internet]. Fargo (ND): International Association of Impact Assessment; 2006 Sep [cited 2011 Oct 28]. (Special Publication Series No. 5). Available from: <http://www.iaia.org/publicdocuments/special-publications/SP5.pdf>
- 5 Collins J, Koplan JP. Health impact assessment: a step toward health in all policies. *JAMA*. 2009;302:315–7.
- 6 Wernham A. Health impact assessments are needed in decision making about environmental and land-use policy. *Health Aff (Millwood)*. 2011; 30(5):947–56.
- 7 Institute of Medicine. Improving health in the United States: the role of health impact assessment. Washington (DC): National Academies Press; 2011.
- 8 World Health Organization. The Ottawa Charter for Health Promotion [Internet]. Geneva: WHO; [cited 2011 Nov 16]. Available from: <http://www.who.int/healthpromotion/conferences/previous/ottawa/en/>
- 9 Wismar M, Blau J, Ernst K, Figueras J, editors. The effectiveness of health impact assessment: scope and limitations of supporting decision-making in Europe. Copenhagen: European Observatory on Health Systems and Policies; 2007.
- 10 Hays L, Kitcher C. An analysis of the benefits of a cross-sectional approach to a prospective health impact assessment of a container port development. *Environ Impact Assess Rev*. 2004;24:199–206.
- 11 Bekker MPM, Putters K, Van der Grinten TED. Exploring the relation between evidence and decision-making: a political-administrative approach to health impact assessment. *Environ Impact Assess Rev*. 2004;24:139–49.
- 12 Elliot E, Francis S. Making effective links to decision-making: key challenges for health impact assessment. *Environ Impact Assess Rev*. 2004; 25:747–57.
- 13 Parry J, Stevens A. Prospective health impact assessment: pitfalls, problems, and possible ways forward. *BMJ*. 2001;323:1177–82.
- 14 Corburn J. Toward the healthy city: people, places, and the politics of urban planning. Cambridge (MA): MIT Press, 2009.
- 15 To access the Appendix, click on the Appendix link in the box to the right of the article online.
- 16 Bhatia R. Protecting health using an environmental impact assessment: a case study of San Francisco land use decision-making. *Am J Public Health*. 2007;97:406–13.
- 17 Bhatia R, Wernham A. Integrating human health into environmental impact assessment: an unrealized opportunity for environmental health and justice. *Environ Health Perspect*. 2008;116:991–1000.
- 18 Bhatia R, Seto E. Quantitative estimation in health impact assessment: opportunities and challenges. *Environ Impact Assess Rev*. 2011; 31:301–9.
- 19 Bhatia R. Health impact assessment: a guide for practice. Oakland (CA): Human Impact Partners; 2011.
- 20 Harris-Roxas B, Harris E. Differing forms, differing purposes: a typology of health impact assessment. *Environ Impact Assess Rev*. 2011; 31:396–403.
- 21 Canter L, Clark R. NEPA effectiveness: a survey of academics. *Environ*

- Impact Assess Rev. 1997;17:313–27.
- 22 Davies K, Sadler B. Environmental assessment and human health: perspectives, approaches, and future directions. Ottawa (ON): Health Canada; 1997.
 - 23 Bhatia R. Using our voice. In: Hofrichter R, Bhatia R, editors. Tackling health inequities through public health practice: theory to action. 2nd ed. New York (NY): Oxford University Press; 2010. p. 296–323.
 - 24 Epstein E. Money changing everything in the Mission. San Francisco Chronicle. 1999 Sep 18.
 - 25 Bhatia R, Katz M. Estimation of health benefits accruing from a living wage ordinance. Am J Public Health. 2001;91(9):1398–402.
 - 26 Farhang L, Bhatia R, Comerford-Scully C, Corburn J, Gaydos M, Malekfzali S. Creating tools for healthy development: case study of San Francisco's Eastern Neighborhoods Community health impact assessment. J Public Health Manag Pract. 2008;14:255–65.
 - 27 Weir M, Weintraub J, Humphreys EH, Seto E, Bhatia R. An area-level model of vehicle-pedestrian injury collisions with implications for land use and transportation planning. Accid Anal Prev. 2009; 41(1):137–45.
 - 28 Wier M, Sciammas C, Seto E, Bhatia R, Rivard T. Health, traffic, and environmental justice: collaborative research and community action in San Francisco, California. Am J Public Health. 2009;99(Suppl 3): S499–504.
 - 29 Bhatia R, Farhang L, Heller J, Capozza K, Melendez J, Gilhuly K, et al. A health impact assessment of the California Healthy Families, Healthy Workplaces Act of 2008. Oakland (CA): Human Impact Partners; 2008.
 - 30 San Francisco Municipal Health Code. Article 38: air quality assessment and ventilation requirement for urban infill residential developments. 2008 Dec 5.
 - 31 San Francisco Police Code. Article 29: regulation of noise. 2008 Nov 25.
 - 32 Corburn J. Street science: community knowledge and environmental health justice. Cambridge (MA): MIT Press; 2005.
 - 33 Sabatier PA, editor. Theories of the policy process. 2nd ed. Boulder (CO): Westview Press; 2007.

ABOUT THE AUTHORS: RAJIV BHATIA & JASON CORBURN



Rajiv Bhatia is director of occupational and environmental health for the San Francisco Department of Public Health.

In this month's *Health Affairs*, Rajiv Bhatia and Jason Corburn report on their examination of the use of health impact assessments in San Francisco. These structured decision-making support tools allow for characterizing the anticipated health effects of societal decisions.

The authors found that in San Francisco, the assessments have functioned as both an analytic tool and a “process,” helping increase public awareness of the determinants of health, routine monitoring of these determinants, cooperation among institutions, health-protective laws and regulations, and organizational networks for health advocacy and accountability.

Bhatia is the director of occupational and environmental health for the San Francisco Department of Public Health and an assistant clinical professor of medicine at the University of California (UC), San Francisco. He is also cofounder of the nonprofit Human Impact Partners, which works to advance the field of health impact assessment in the United States. In addition, he is a member of the National Research Council's Committee on Health Impact Assessment.

Bhatia earned his medical degree from Stanford University and a master of public health degree from UC Berkeley.



Jason Corburn is an associate professor at the University of California, Berkeley.

Corburn is an associate professor with joint appointments in the Department of City and Regional Planning and the School of Public Health at UC Berkeley. He is also a founding member of UC Berkeley's Global Metropolitan Studies initiative and a member of the Slum Health Collaborative. He serves on the board of Communities for a Better Environment.

Corburn received both a master's degree in city planning and a doctorate in urban environmental planning from the Massachusetts Institute of Technology. He completed postdoctoral work in epidemiology at Columbia University's Mailman School of Public Health.