Articles should deal with topics applicable to the broad field of program evaluation. Articles may focus on evaluation methods, theory, practice, or findings. In all cases, implications for practicing evaluators should be clearly identified. Examples of contributions include, but are not limited to, reviews of new developments in evaluation, descriptions of a current evaluation study, critical reviews of some area of evaluation practice, and presentations of important new techniques. Manuscripts should follow APA format for references and style. Length per se is not a criterion in evaluating submissions.

Evaluating the Legacy of Community Health Initiatives

A Conceptual Framework and Example From the California Wellness Foundation's Health Improvement Initiative

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Abstract: Community health initiatives typically involve time-limited funding from foundation or government grants to support their initial activities. But if there are to be lasting improvements in health outcomes, initiative activities must be sustained over a relatively long period of time. Despite the importance of sustaining work begun under health initiatives, there have been few attempts to track sustainability after the period of funding has ended. This article provides a framework for

evaluating the legacy of community health initiatives and illustrates its use with the legacy evaluation from The California Wellness Foundation's Health Improvement Initiative (HII). The HII was largely successful in sustaining its core elements of collaborative partnerships, community-level systems changes, direct services, and population health measurement. The authors discuss differences in evaluation design and data collection between the funded-period and legacy evaluations; these differences may justify a distinct methodological approach.

There has been a growing number of grant-funded initiatives designed to promote comprehensive, community-level approaches to health promotion. The earliest initiatives tended to focus on specific diseases or health problems, such as the Stanford Five-City Project, which attempted to reduce risk factors for cardiovascular disease (Farquar et al., 1990); the Community Intervention Trial for Smoking Cessation (COMMIT Research Group, 1995); and the Community Based Health Promotion Grants Program in the West, which focused on drug use, teen pregnancy, smoking, and nutrition (Wagner et al., 2000). More recent efforts have taken a broader approach, including the Healthy Cities and Communities movement (Center for Civic Partnerships, 2000; Wallerstein, 1999), which views most dimensions of life in a community, including economic conditions, housing, and education, as either reflecting community health or serving as potential building blocks for community health improvement.

All of these community-level initiatives share several common characteristics, including a population-level focus on geographic communities, comprehensive multilevel interventions, and a long-term perspective on health outcome improvement. Initiatives sharing these characteristics are referred to here collectively as "community health initiatives." Community coalitions often play a central role in community health initiatives, but intervention activities also can be created and maintained by individual organizations or foundations.

One additional common characteristic shared by all grant-funded community health initiatives is the need for the sustainability of activities beyond the initial period of grant funding if there is to be a lasting community-level health impact. As a result, the question of sustainability has received significant attention in both planning and evaluating interventions. Nearly every major intervention intended to strengthen communities emphasizes sustainability in its program announcements and evaluation objectives. Sustainability can be broadly defined as the continuation of community health or quality-of-life benefits over time (Shediac-Rizkallah & Bone, 1998). Within this broad definition, there are a number of specific categories of activities that may be sustained. That is, there are multiple dimensions of sustainability, including the following:

- Programs and services: the continuation of specific programs and activities begun under the period of initiative funding (Claquin, 1989; Thompson, Lichtenstein, Corbett, Nettekoven, & Feng, 2000). This can occur by retaining a program either in a newly created organization or within existing organizations (Bracht et al., 1994; Goodman, McLeroy, Steckler, & Hoyle, 1993).
- Formal partnerships: the continuation of coalitions created during the funded period, with varying degrees of formalization.
- Policies: leaving an imprint on decisions by public decision makers and agencies (Altman, 1995).
- Systems changes: changes in the way organizations interact and work together, for example, improved provider referral networks.

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- Environmental changes: enhancements to a community's physical and social environment that may result in changes in behaviors and health outcomes (e.g., walking trails to promote physical activity).
- Other community capacities: the survival of skills and capabilities acquired by individuals and groups within a community, with special emphasis on skills and capabilities required for collaboration (Goodman, Wandersman, Chinman, Imm, & Morrissey, 1996).

Despite the importance of the sustainability of intervention activities on ultimate outcomes, few studies have tracked intervention activities past the end of the initial funded period. A study in Canada monitored the sustainability of 189 health promotion interventions for which external support had, in many cases, concluded (O'Loughlin, Renaud, Richard, Gomez, & Paradis, 1998). Smaller scale U.S. studies looked at factors associated with sustainability in screening and risk reduction programs (Shediac-Rizkallah & Bone, 1998) and in the Community Intervention Trial for Smoking Cessation (Thompson et al., 2000). A few studies have attempted to determine precursors to sustainability during an initiative but have not yet tracked activities after funding (e.g., Shortell et al., 2002, and Alexander et al., 2003, for the Community Care Network Initiative).

Several authors have proposed reasons for the relative absence of evaluation using the direct observation of long-term sustainability. Frumkin (2002) and David (2002) suggested that foundations and other grant-making agencies favor the allocation of their resources to new ventures as opposed to programs perceived as "old." This is true even though there is widespread understanding that community-based programs require extended periods of time to produce their hoped-for outcomes (Green, 1997; Norris, 2001).

Despite the importance of and interest in the sustainability of health initiatives, we could not find a systematic evaluation framework designed specifically for partnership-driven efforts targeting whole communities with a range of activities, including systems change and policy advocacy. Also, as noted above, there have been few attempts to actually track sustainability after the period of funding has ended. This article is designed to provide a framework for evaluating the legacy of community health initiatives and illustrate its use with the legacy evaluation from The California Wellness Foundation's (TCWF) Health Improvement Initiative (HII).
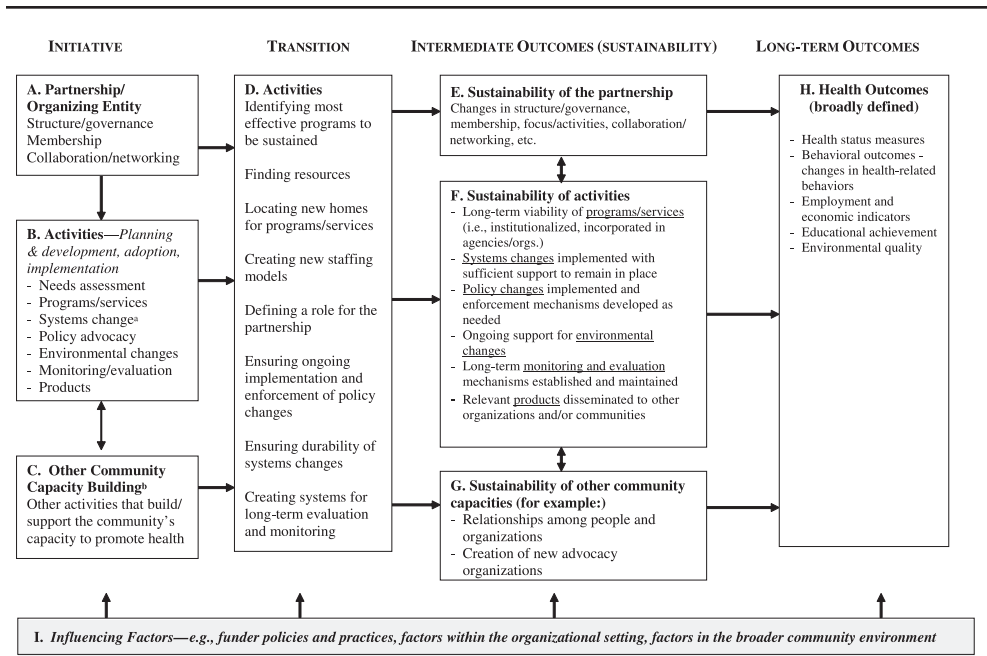
Conceptual Framework for Initiative Legacy Evaluation

Figure 1 provides a conceptual framework that illustrates the process of transition to sustainability in a community health initiative. The framework is intended to serve two purposes: (a) as a logic model to show the key steps in the transition of a partnership and its activities to postinitiative status and (b) as a template for evaluating the legacy of an initiative, highlighting key evaluation questions and guiding data collection.

The key components of the initiative during the period of grant funding are shown in boxes A, B, and C. The partnership or entity that is responsible for planning and carrying out health improvement activities is shown in box A. This entity is most often a broad-based community partnership representing the major stakeholders related to the issues that are being addressed, although it is sometimes a more narrowly based, staff-driven organization. The "activities" box (B) illustrates the range of potential partnership activities, including providing direct health services, working to change the community environment or systems, and advocating for policy changes. Potential activities also include planning, needs assessment, and evaluation, as well as the development of materials or products to support health improvement.

Almost all activities of a partnership contribute in some way to a community's capacity to promote health, for example, changes that improve the way organizations work together (sys-

Figure 1
Conceptual Model for Evaluating the Sustainability of Community Health Initiatives

INITIATIVE — TRANSITION — INTERMEDIATE OUTCOMES (SUSTAINABILITY) — LONG-TERM OUTCOMES

A. Partnership/ Organizing Entity
Structure/governance
Membership
Collaboration/networking

B. Activities—*Planning & development, adoption, implementation*
- Needs assessment
- Programs/services
- Systems change[a]
- Policy advocacy
- Environmental changes
- Monitoring/evaluation
- Products

C. Other Community Capacity Building[b]
Other activities that build/ support the community's capacity to promote health

D. Activities
Identifying most effective programs to be sustained

Finding resources

Locating new homes for programs/services

Creating new staffing models

Defining a role for the partnership

Ensuring ongoing implementation and enforcement of policy changes

Ensuring durability of systems changes

Creating systems for long-term evaluation and monitoring

E. Sustainability of the partnership
Changes in structure/governance, membership, focus/activities, collaboration/ networking, etc.

F. Sustainability of activities
- Long-term viability of programs/services (i.e., institutionalized, incorporated in agencies/orgs.)
- Systems changes implemented with sufficient support to remain in place
- Policy changes implemented and enforcement mechanisms developed as needed
- Ongoing support for environmental changes
- Long-term monitoring and evaluation mechanisms established and maintained
- Relevant products disseminated to other organizations and/or communities

G. Sustainability of other community capacities (for example:)
- Relationships among people and organizations
- Creation of new advocacy organizations

H. Health Outcomes (broadly defined)
- Health status measures
- Behavioral outcomes - changes in health-related behaviors
- Employment and economic indicators
- Educational achievement
- Environmental quality

I. *Influencing Factors—e.g., funder policies and practices, factors within the organizational setting, factors in the broader community environment*

a. For example, integrated services, data sharing or integrated data systems, results-based budgeting.
b. For example, health literacy, resident leadership training, organizational development.

tems change), increase understanding, and build relationships and skills. Other types of community capacity building less directly related to the partnership or its activities also may occur. Box C represents these community efforts, for example, providing leadership training for community residents.

The "transition" column (box D) provides examples of activities carried out by community health initiatives to sustain their efforts. These include identifying programs to be sustained, finding resources, creating new models of staffing, defining a role for the partnership, and devising ways of ensuring continuation of policy and systems changes. These processes must begin early during the grant-funded period if they are to succeed (Kreuter, Lezin, & Young, 2000).

The next set of boxes to the right (E, F, and G) illustrate the intermediate outcomes of sustainability efforts: the elements of the initiative that are to be sustained, including the partnership (or other organizing entity), major activities (grouped by the categories noted in the introduction), and other capacity-building work. Each element can be sustained in whole or in part, with the same structure as during the initiative or with a modified structure. The scope of the activities can be less, the same, or greater than during the period of initiative funding. Box E represents the sustainability of the formal partnership (if one exists), including any changes to its structure, membership, and focus. Other major activities are shown in box F, including programs and services; systems, policy, and environmental changes; and long-term monitoring mechanisms and dissemination products. The sustainability of other capacity-building efforts is shown in box G, including as examples informal relationships among people and organizations and new advocacy organizations that may have resulted from the initiative.

The long-term continuation of key initiative activities is expected to improve a range of health outcomes, shown in box H. These include health outcomes more narrowly defined (e.g., health status measures) as well as broader measures of community health (e.g., employment and economic indicators). Community contextual factors, including resources, funders' policies, and organizational setting, are represented in box I.

Example:
HII Legacy Evaluation

This section describes an effort by TCWF to assess the legacy of one of its major community health initiatives, the HII. The example illustrates the use of the conceptual framework outlined in the previous section to guide the evaluation design, data collection, and analysis of an initiative's legacy.

TCWF launched the HII in 1996 to identify successful models of collaboration, foster the use of population health measurement tools, inform policy decisions, improve resource allocation, and stimulate the formation of new integrated systems of action and service. TCWF invested $20 million in this 5-year effort that included a planning year (1996 to 1997) and 4 years of implementation (1997 to 2001). The core of the initiative was the Cohort 1 Health Partnership Program: nine community coalitions (health partnerships) received 5 years of funding ($135,000 1-year planning grants, $865,000 total for 4 years of implementation) to plan and implement health improvements in four ways: by building a formal coalition (health partnership), providing direct preventive health services, changing systems, and measuring population health. The results reported here are for these nine Cohort 1 communities. During the initiative, four additional partnerships received grants to pursue population health improvements over a 3-year period (Cohort 2), and another two partnerships received 18 months of intensive technical assistance and capacity-building support (Cohort 3).

The HII offered several important features: the commitment of extensive resources, the availability of technical assistance, an investment in a planning phase, and flexibility stemming from a central conceptual model. The HII had a significant impact at both the community level and statewide (Cheadle et al., 2005), including building community-level partnerships, providing a large number of health and social services, drawing attention to the issues of population health and broader determinants of health through statewide data gathering and dissemination, and increasing the capacity of individuals and organizations to plan and carry out community-level health improvement activities.

From the outset, the HII looked ahead to sustainability by seeking lasting changes in health systems. Putting an evaluation in place to specifically explore the initiative's postfunding legacy reflects TCWF's commitment to assessing and understanding the long-term impact of its initiatives. The success of the HII legacy evaluation in providing information about sustainability has led the foundation to fund a second legacy evaluation of the HII as well as similar evaluations of two other large-scale, multisite initiatives.

Evaluation Design and Methods

The Evaluation Team at the Group Health Community Foundation served as the HII's evaluator for both the funded period and the postinitiative legacy. The legacy evaluation's goals were to provide a summary of major initiative outcomes, identify and update lessons learned during the course of the HII, document how often and in what areas partnership activities were sus-

tained, and identify factors associated with the postinitiative sustainability of community efforts.

The methods used in the legacy evaluation were similar to those used in the evaluation of the 5-year funded period of the HII. The funded-period evaluation used a case-study, logic-model (Yin, 1994) approach to make inferences about the impact of each partnership on its target community. (A more detailed description of the evaluation design and methods can be found in Cheadle et al., 2003.). To assess the overall impact of the HII, results from the nine case studies were aggregated, and cross-site comparisons were made to identify factors associated with partnership success. The case studies were based on the action plans that each partnership was required to develop as a condition for funding. The key elements of the action plan for each partnership were coalition-building efforts intended to lead to both community-level systems change and the provision of direct preventive health services. Long-term health outcomes were not expected to change during the period of TCWF funding, but population health measurement systems were to be put in place to track the impact of the systems changes over time.

The HII legacy evaluation also used a comparative-case-study, logic-model approach, with the constructs in Figure 1 serving as a guide for data collection and indicator development. The evaluation examined the resources and processes of transition (box D) and assessed the partnerships and each of their major activities to see whether they were sustained, at what level, and through what mechanisms (boxes E, F, G). Factors associated with sustainability also were examined (box I). The logic model was applied to each of the four areas emphasized by TCWF: coalition (health partnership) building, systems change, direct services, and population health measurement.

Table 1 shows the major sources of data used in the legacy evaluation, along with the sampled units and type of information derived from each source. Key informants included current partnership staff members, staff members no longer employed by the partnership, and community members both inside and outside the partnership. Site visits were conducted to get a closer look at organizations and programs, attend partnership meetings, and better understand the community context. Document review focused on progress reports and other documents summarizing partnership accomplishments. The data gathered using these various sources were primarily qualitative, and standard qualitative techniques were used to analyze the texts of interviews and transcripts of site visits to identify themes.

The key evaluation questions revolved around the extent to which activities were sustained and the role the partnership (including both staff and community members) had in sustaining the activities. Site visits, interviews, and documents were used to assess the sustainability of the more formal activities (e.g., direct services, systems changes). Other capacity-building activities (e.g., enhanced relationships) were assessed through interviews. The attribution of sustainability to the partnership's efforts was accomplished by examining the transition process in detail using interviews with informants representing multiple perspectives.

An example may help illustrate how we determined the degree to which HII activities had been sustained and then attributed that sustainability to the partnership. In one community, the primary partnership activity was the creation of community resource centers in three low-income neighborhoods. The funded-period evaluation documented that the centers were created largely through the efforts of the partnership in collaboration with the local city government. Key informants were unanimous in identifying the partnership as the critical factor both in establishing the resource centers and in the provision of center programs and services during the funded period. Services provided included case management, referrals to other agencies, and space for community meetings.

The legacy evaluation determined through interviews and a site visit that the resource centers were still operating and continuing to provide referrals and space for community meetings.

Table 1
Data Sources and Methods for Health Improvement Initiative Legacy Evaluation

Data Source	Sampled Entities	Information Collected
Key informant interviews	Current staff members	Current structure/governance/membership, present status of activities and systems changes, history of transition, factors associated with successful transition, impact on community health, capacities built, lessons learned
	Staff members no longer with partnership	History of initiative, history of transition, factors associated with success, impact on community health, capacities built, lessons learned
	Community members, organizations connected with the partnership	Current status of activities and systems changes, status of relationships and collaboration, whether relationships were due to the initiative, lessons learned
	Representatives of other community-based organizations outside of the partnership	Confirmation of current status of activities and systems changes, impact on community from outside perspective
Site visits	Partnership meetings	Partnership dynamics, energy, relationships among members
	Organizations and programs	View of programs in operation, organizational settings
	Community at large	Community context
Document review	Progress reports, past evaluation reports	Description of activities and systems changes, impact, current status
	Direct service logs	Amount and type of services provided
	Other materials, media	Detailed descriptions of programs, services, policies, and systems changes

An additional center had been opened using city funds, and the centers were fully staffed. However, the case management program was not able to find other sources of funding and had been discontinued. All of the key informants contacted for the legacy evaluation credited partnership staff members with working closely with the city in building support for continuing the centers and providing testimony at city council meetings to ensure that a line item was added to the city budget to support the centers.

Because the resource centers were still operating in the existing sites and had expanded to a new location, the systems change sustainability was rated as "expansion/progress." The direct services component was rated as "reduced in scope" because the case management program had been eliminated, but other services were still being provided in the centers.

Results

The legacy evaluation findings are presented by the four main areas in which the partnerships were expected to work: coalition (health partnership) building, systems change, direct services, and population health measurement.

Coalition Building

There were two aspects to coalition building in the HII. First, communities were expected to create formal partnerships (health partnerships) and to use them as the primary vehicle for

designing and carrying out activities. Second, a wide array of more informal relationships were developed as part of the work of the partnerships. For example, many systems changes required collaboration between community organizations, only some of which were formal members of the partnerships. The legacy evaluation explored whether partnerships were still in place; how their structures, membership, and staffs had changed; and whether the focus of their work had shifted since the HII. The evaluation found a great deal of stability in the collaborative structures and governance procedures created under the HII and a high level of continuity in the partnerships' original areas of focus. One year after the end of the HII, seven of the nine partnerships had continued functioning as collaboratives, with much the same membership that they had during the HII. Of the two partnerships no longer in place, one had reorganized its activities under four separate work groups, and the other continued collaboration among some partners on a project-by-project basis.

Table 2 gives examples of partnership structure, membership, staffing, and focus, organized by whether the partnership continued under the structure established during the HII or under a new structure. Several partnerships achieved formal status as 501(c)3 organizations.

Systems Change

The broad objective of "systems change" included four specific types of changes: (a) service integration: providing comprehensive, integrated services responsive to the needs of community residents; (b) policy development: developing and implementing new policies that promote population health; (c) data integration: increasing the extent to which data are organized and shared across agencies; and (d) results-based budgeting: changing the process by which local funding decisions are made and more closely linking budgets to outcomes.

The HII communities were able to sustain virtually all of the systems change efforts begun during the period of HII funding. Of the 24 major systems changes occurring across the nine partnerships during the HII, 23 were still evident 1 year after HII funding ended, and half had made progress or expanded the scope of their activities. All 13 activities in the area of service integration and the 6 systems changes focused on policy development were sustained a year after the HII, with about half demonstrating enhancement or progress. All 3 data integration activities continued, with 2 noting significant progress following the HII. One of the 2 results-based budgeting activities was sustained.

Table 3 gives examples of systems change activities related to service integration and indicates the degree to which they were sustained. Service integration activities included new integrated health centers and coordinated services for a defined population.

Direct Services

As a condition of HII funding, all nine partnerships were required to provide health promotion and/or disease prevention services either one on one to individuals or in group settings. These activities were classified by the evaluation as high intensity (e.g., case management), medium intensity (e.g., health education classes or support groups), and low intensity (e.g., health fairs or other community events). In all, 19 major direct services were provided by the nine partnerships, accounting for 24,500 high-intensity, 43,000 medium-intensity, and 48,000 low-intensity services (duplicated count of people served) during the HII.

The legacy evaluation examined all 19 major direct services that were provided by the partnerships with the support of HII funds. Unlike coalition-building activities, the continuation of direct services depended almost entirely on whether partnerships were able to find alternate

Table 2
Examples of Health Improvement Initiative (HII) Partnerships by Status 1 Year After Funding

Governance	Membership	Staff	Focus
Partnership sustained under the structure established during the HII			
Partnership continues, although monthly community meetings have been suspended; advisory board inactive, and board is being reorganized	Some new members and expansion of the Mutual Assistance Network's involvement	Director, codirectors, coordinator, contract manager, evaluator, part-time clerical support	Less community oriented, more focus on integration of services/service delivery contractors; teen pregnancy prevention/ youth development remains key focus area
Partnership continues; subcommittees intact with addition of a health services education subcommittee	Membership stable; currently 25 voting members; monthly meetings average 33 attendees	0.5 full-time equivalent coordinator	Networking and communication, grant application support, sponsoring events; new subcommittee focus is service delivery
Partnership sustained under a new structure			
501(c)3 structured as a board of directors–led organization	Unchanged	Executive director, administrative assistant, employment specialist/case manager	Employment services with emphasis on health careers training; geographic area widened to all of West County
501(c)3 that meets monthly with a five-member governing board	Unchanged	Part-time (5 hours/week) coordinator	Resource centers and community improvement projects, collaboration around grant applications
Formal partnership structure not sustained; activities divided among four work groups		Percentage of department directors' full-time equivalents devoted to the working groups	
Partnership not sustained; Health Department collaborates with partnership members on a project-by-project basis			

Table 3
Examples of Health Improvement Initiative (HII)
Service Integration Systems Changes and Postinitiative Change and Status

HII Systems Change Accomplishment	Status/Legacy
Created an integrated service center for a local community	Expansion/progress: center taken over by the county; land purchased and construction completed in December 2002; center was scheduled to open in spring or summer 2003
Established three resource centers in the target neighborhoods, providing places for residents to get referrals and information about health/social services	Expansion/progress: resource centers have been sustained and continue to provide integrated services; seven full-time community assistants funded by the city staff the centers; in the past year, centers have received a number of new grants for services, and one new center is opening in a nearby neighborhood
Created a structure that brought together residents, community organizations, and agencies concerned with teen pregnancy and welfare reform	Expansion/progress: structure includes a cluster of organizations that established memoranda of understanding under the current Tobacco Master Settlement grant and collaborate to provide outreach and services; teen pregnancy prevention programs have grown under this structure, and some have been incorporated into specific organizations
Implemented a system linking services for underserved persons with cancer by establishing a "patient navigator" system	Expansion/progress: program taken over by a foundation and staffed by a part-time volunteer coordinator; program now able to provide services to a greater number of people
Creation of interagency teams to coordinate services for high-risk youth as part of the systems of care	No change: interagency teams operational and provide services to high-risk children/youth, although future funding is uncertain
Family health center established in a local community to provide preventive health services for women and children	No change: clinic sustained and services provided at a level comparable with that during the HII; support identified for clinic's Women, Infants, and Children (WIC) program; Health Department plans to expand WIC support using Proposition 10 funds
Established integrated services in the resource centers via relationships with the city and county	Reduced scope/activities: reduced scope of county-level integrated services being provided in the centers
Outreach network developed to provide assistance in enrolling families in state/federal subsidized health insurance programs	Reduced scope/activities: grant not received from the state to continue the outreach activities; organizations (e.g., local charity, school districts, early childhood development organization) provide outreach on their own but no longer meet as a group

Note: Status as of 1 year after funding.

funding. Five of the 19 direct services were not only sustained but expanded, and 7 were maintained with little or no change. However, for the same reason (funding or lack thereof), several partnerships reduced the scope or intensity of the services they provided after the HII. Of the 19 direct service activities, 7 were reduced in the number or type of services provided. The majority represented reductions in high-intensity services such as case management, outreach, and mentoring. Many of the services that remain in place are linked with systems changes (e.g., resource centers, integrated services, policy change), which may enhance the likelihood that they will be sustained in the future.

Table 4 gives examples of direct services and their postinitiative status. Progress and expansion included the addition of new types of services, increased hours of operation, or a greater number of locations and/or partners providing the services. Reduced scope included a reduction of the number of sites or the continuation of the program with a reduction in the types or availability of services.

Table 4
Examples of Health Improvement Initiative (HII)
Direct Services and Postinitiative Change and Status

HII Direct Services Accomplishment	Status/Legacy
With other partners, provided dental care services, education, and dental hygiene kits to 5,100 low-income residents	Expansion/progress: services continue with funding from outside sources; transitioned into a local clinic and is open 30 hours a week; mobile van to resume services in October 2002
Teen support groups, pregnancy prevention workshops, violence prevention workshops	Expansion/progress: all services sustained with support from Teen Boys & Girls Club, Planned Parenthood, a local assistance network, and Ministers Against Drugs and Violence
Literacy training, job training/search support	No change: existing neighborhood service centers continue to provide these services under different funding
HIV testing, education, counseling, and referrals	No change: project operated by HIV/HCV/AIDS Prevention Project (state funding) and coordinated through HIV/AIDS Volunteer Network; focus on high-risk population; outreach and testing services to about 100 people per month
Outreach to male partners of teen mothers	No change: program sustained but now operates in a prison setting
Tele-Health (local Web site allowing residents to get health info and health care resources over the Internet)	Reduced scope/activities: funding extended because of slow implementation, but program now reduced from seven to three sites and concluded in November 2002
Provided case management services and other direct preventive health services such as tuberculosis screening, immunizations, family planning	Reduced scope/activities: case management services discontinued because no replacement funding was found; wellness center services include regular and preventive health services, and resource centers provide a wide range of programs and services
Delivered health education on alcohol and drug prevention through minigrant program	Reduced scope/activities: minigrant program discontinued, but health education provided through Drug Free Communities grant

Note: Status as of 1 year after funding.

Population Health Measurement

The HII envisioned increases in the use of data, both for internal planning or monitoring and for communicating with the public and policy makers. Partnerships used existing data and collected some of their own, but overall, the use of data by partnerships during the HII fell short of expectations. In part, this was thought to be due to a lack of familiarity with population health data, the limited capacity of local data systems, reliance on informal and anecdotal information, a poor fit between available data (such as polling data) and specific partnership needs, and a shortage of staff members with skills in interpreting data.

The most common and visible measurement product of the partnerships was the development of community health "report cards," based largely on existing public health data. Of the four partnerships that developed report cards, three updated the reports after HII funding ended. Other ongoing population health measurement activities included the efforts of a countywide data work group, community assessments, and collaboration with others to generate data to support specific programs. Table 5 gives examples of population measurement activities, grouped by community report cards and other activities.

Table 5
Examples of Health Improvement Initiative (HII) Population
Health Measurement Activities and Postinitiative Change and Status

HII Population Health Measurement Accomplishment	Status/Legacy
Community report cards	
Updated the Quality of Life Index in 1998; a second revised edition was planned for publication in late 2001	Expansion/progress: published in late 2001 and a streamlined and updated version distributed to the broader community in fall 2002; the index continues to be a model for others
Engaged in a visioning process resulting in a community goals and indicators project and publication of a county report card	Expansion/progress: report card revised and published in fall 2001; funds allocated for it to be updated and published again in 2003
Other population health measurement activities	
Countywide data collaborative formed to promote the gathering and dissemination of population-based community data	Expansion/progress: group is very active, with support from the Health Department and another foundation-supported initiative; Web-based county data bank is under development
Established population health work group; produced collaborative community assessment	No change: continues to work with others to partner on assessments of population health; will work with the Health Department on the next countywide assessment
Established outcome evaluation plan to assess the impact of the HII on the health of county residents	Reduced scope/activities: original outcome evaluation currently "on hold"; focus now is on designing an evaluation of the use of Tobacco Master Settlement funds
Completed two neighborhood surveys and profiles of the two target communities for incorporation into local improvement plans	No current activity: no specific plans to repeat surveys at this time

Note: Status as of 1 year after funding.

Factors Associated With Sustainability

The legacy evaluation also examined factors associated with sustainability, with information obtained largely by asking key informants why their activities were or were not sustained. No universal characteristics emerged to explain the pattern of sustainability across HII partnerships. However, sustainability was most often related to the intersection of interest and resources, specifically, how effectively the partnership had prepared in advance, the degree to which commitment to the goals was firmly established among partners, how aggressively the partnership pursued grant writing or leveraging of other funding, and the extent to which partners or other organizations were willing to assimilate programs. Key informants agreed on the importance of systematically focusing attention on sustainability and beginning the effort early.

Summary of HII Legacy Findings

The HII left a significant legacy in the nine communities. Nearly all of the coalition-building, systems change, direct services, and population health measurement accomplishments of the partnerships during the HII were still evident 1 year after funding had ceased, and two thirds

Table 6
Summary of the Status of Cohort 1 Health Partnerships'
Health Improvement Initiative Accomplishments

Type of Accomplishment	Number of Accomplishments Demonstrating:				
	Expansion/ Progress	No Change	Reduced Scope/ Activity	No Current Activity	Total
Systems change	12 (50%)	7 (29%)	4 (17%)	1 (4%)	24 (100%)
Direct services	5 (26%)	7 (37%)	7 (37%)		19 (100%)
Population health measurement	5 (33%)	4 (27%)	2 (13%)	4 (27%)	15 (100%)
Total	22 (38%)	18 (31%)	13 (22%)	5 (9%)	58 (100%)

Note: Status as of 1 year after funding.

were comparable in scope or had experienced progress or expansion after the HII. As shown in Table 6, only 5 of the 58 (9%) significant accomplishments across the four areas were discontinued altogether. More than one third of the accomplishments (22 of 58, or 38%) experienced expansion after the initiative ended.

Discussion

This article outlined a conceptual framework for evaluating the legacy of community health initiatives and illustrated its use in an evaluation of TCWF's HII. The HII was largely successful in sustaining its core elements of health partnerships, community-level systems changes, direct preventive health services, and population health measurement. This section examines some of the similarities and differences between funded-period and legacy evaluations of community-based initiatives, drawing on the HII experience.

There are a number of similar challenges involved in doing legacy and funded-period evaluations that result in broadly similar evaluation approaches. All community-based initiatives pose significant evaluation challenges, even those with single predetermined health targets and limited ranges of intervention options (Koepsell et al., 1991, 1992). With community as the unit of analysis, only a small number of units can typically be included in an experimental or quasi-experimental design, and therefore, statistical power is limited. Because some form of health promotion activity is occurring in all communities, it is difficult to identify true controls. Also, it is difficult to achieve a measurable impact, because intervention activities are typically small in relation to other factors that influence the chosen health outcomes. The recent trend toward a more open-ended, community-driven approach makes evaluating community-based initiatives even more difficult. Key health outcomes to be measured are often unknown at the beginning of the initiative, complicating the establishment of baseline measures. Given that coalitions are often given wide latitude in program design and implementation, it is not feasible to plan and implement experimental community trials.

The difficulties of conducting randomized trials with community-based initiatives have led to the widespread use of a case-study, logic-model approach to evaluation, with a focus on intermediate rather than long-term outcomes (Julian, 1997; Mittelmark, Hunt, Heath, & Schmid, 1993). As noted above, a logic-model approach focusing on intermediate outcomes was adopted for both the HII funded-period and legacy evaluations. Data sources for both HII evaluations were also similar, with a reliance on key informant interviews, site visits, and document review.

Despite these similarities, the HII experience highlighted several ways in which legacy evaluation is different from other evaluations of community-based initiatives, which may justify considering legacy evaluation as a separate approach. The first two differences appear to be contradictory: that legacy outcomes are both more focused and more diffuse. A third difference is that legacy evaluation offers an opportunity to do long-term monitoring of health outcomes, which is often not feasible or realistic during the time frame of the funded period of an initiative.

Legacy outcomes are more focused in that the intermediate outcomes are for the most part discrete and identifiable community changes, rather than, for example, changes in individual-level knowledge, attitudes, and behaviors. Furthermore, there are relatively few categories of these community changes (e.g., programs, policies, new systems, environmental changes); thus, the logic model outlined in Figure 1 (particularly boxes E and F) provides a fairly complete road map for looking for sustainability outcomes. In the HII legacy evaluation, it was a relatively straightforward process to identify the accomplishments in each of these areas and then use interviews and site visits to determine whether activities were continuing and to document any expansion or reduction in their scope. In the case of the HII, the search was narrowed further by the HII's own logic model, which specified the four main areas the programs were to operate in: coalition building, direct services, systems change, and population health measurement. This reduced the number of potential dimensions in Figure 1, box F. For example, environmental change was not a priority area of the HII, so we did not need to devote time to searching for such change.

Legacy outcomes become more diffuse when searching for the impact of "other capacity-building" activities (box G in Figure 1), including relationship building, the creation of new advocacy organizations and the expansion of existing organizations, and resident leadership (and other) training. The importance of measuring these outcomes may be heightened if other more concrete programmatic and systems change activities are not sustained, leaving more intangible capacity building outcomes as the only potential initiative legacy.

Other capacity-building efforts are difficult to measure because the impact of capacities built at the personal, organizational, and community levels may not be fully apparent until the partnership or the individuals or organizations involved take on new efforts. One way to assess the magnitude of these capacity changes is to look at the future evolution of health improvement efforts in the funded community at large and assess the contribution the initiative or partnership made in these efforts. This can be a difficult task and requires follow-up at substantially longer intervals than was possible with the HII legacy evaluation. In addition, it may be difficult to attribute these types of capacity building to the initiative. For example, in the HII legacy evaluation, it was very difficult to trace the impact of new relationships and to determine whether they were really due to the HII or would have been formed anyway.

The final difference between funded-period and legacy evaluation is related to measuring long-term health outcomes, the ultimate goal of most community health improvement efforts. It is now recognized that the 3- to 5-year time frame of most initiatives is too short to expect measurable changes in health outcomes (Mittelmark et al., 1993). However, if legacy evaluations are to be conducted, it may be possible to put systems in place during the initiative to track outcomes into the future. This was the intent with the HII, for which population health measurement (including outcome tracking) was one of the four key strategic areas of the initiative. The HII experience illustrates the difficulty of doing long-term monitoring of outcomes, partly related to the difficulty of creating and managing adequate local data systems.

Even if tracking mechanisms are put in place, attributing changes in health outcomes to program activities is challenging (Koepsell et al., 1992). Some possibilities for attribution include using comparison groups (see Weitzman, Silver, & Dillman, 2002, for an example of using quantitative indicators with a comparison group in a logic-model evaluation). When good

comparison groups are not available, another possible design is a longitudinal (time-series) approach comparing the timing of any changes in health outcomes to the timing of community changes brought about by the initiative (see Francisco, Paine, & Fawcett, 1993, for an example of such a longitudinal approach).

In summary, legacy evaluations measure the long-term impact of community health initiatives and provide the information needed to inform the design of future initiatives. Assessing the long-term impact of community health initiatives should be an integral part of the initiative design, and we present one framework for conducting such evaluations. This article has outlined a structured approach to doing legacy evaluation that may assist others in organizing data collection and analysis. Because legacy evaluation methods differ in important ways from a more prospective approach, further research into legacy evaluation methods is needed. Areas for future research include developing improved and more structured methods for measuring community capacity building and assessing long-term health outcome changes resulting from an initiative.

References

Alexander, J. A., Weiner, B. J., Metzger, M. E., Shortell, S. M., Bazzoli, G. J., Hasnain-Wynia, R., et al. (2003). Sustainability of collaborative capacity in community health partnerships. *Medical Care Research and Review*, *60*, 130S-160S.

Altman, D. G. (1995). Sustaining interventions in community systems: On the relationship between researchers and communities. *Health Psychology*, *14*, 526-536.

Bracht, N., Finnegan, J. R., Jr., Rissel, C., Weisbrod, R., Gleason, J., Corbett, J., et al. (1994). Community ownership and program continuation following a health demonstration project. *Health Education Research*, *9*, 243-255.

Center for Civic Partnerships. (2000, April). *Proceedings: Enhancing Community Capacity: California Healthy Cities and Communities Annual Conference*. San Diego, CA: Center for Civic Partnership.

Cheadle, A., Beery, W. L., Greenwald, H. P., Nelson, G. D., Pearson, D., & Senter, S. (2003). Evaluating The California Wellness Foundation's Health Improvement Initiative: A logic model approach. *Health Promotion Practice*, *4*, 46-156.

Cheadle, A., Senter, S., Procello, A., Pearson, D., Nelson, G. D., Greenwald, H. P., et al. (2005) The California Wellness Foundation's Health Improvement Initiative: Evaluation findings and lessons learned. *American Journal of Health Promotion*, *19*(4), 286-296.

Claquin, P. (1989). *Sustainability of EPI: Utopia or sine qua non condition of child survival*. Arlington, VA: REACH.

COMMIT Research Group. (1995). Community Intervention Trial for Smoking Cessation (COMMIT): I. Cohort results from a four-year community intervention. *American Journal of Public Health*, *85*, 183-192.

David, T. (2002). Reflections on sustainability. *Reflections*, *3*(1). Available at http://www.tcwf.org/reflections/2002/feb/pages/introduction.htm

Farquar, J. W., Fortman, S. P., Flora, J. A., Taylor, C. B., Haskell, W. L., Williams, P. T., et al. (1990). Effects of community-wide education on cardiovascular disease risk factors: The Stanford five-city project. *Journal of the American Medical Association*, *264*, 359-365.

Francisco, V. T., Paine, A. L., & Fawcett, S. B. (1993). A methodology for monitoring and evaluating community health coalitions. *Health Education Research*, *8*, 403-416.

Frumkin, P. (2002). *Philanthropic strategies and tactics for change: A concise framework*. Washington, DC: The Aspen Institute.

Goodman, R. M., McLeroy, K. R., Steckler, A. M., & Hoyle, R. H. (1993). Development of level of institutionalization scales for health promotion programs. *Health Education Quarterly*, *20*, 161-178.

Goodman, R. M., Wandersman, A., Chinman, M., Imm, P., & Morrissey, E. (1996). An ecological assessment of community-based interventions for prevention and health promotion: Approaches to measuring community coalitions. *American Journal of Community Psychology*, *24*, 33-61.

Green, L. (1997). Community health promotion: Applying the science of evaluation to the initial sprint of a marathon. *American Journal of Preventive Medicine*, *13*, 225-243.

Julian, D. (1997). The utilization of the logic model as a system level planning and evaluation device. *Evaluation and Program Planning*, *20*, 251-257.

Koepsell, T. D., Martin, D. M., Diehr, P. K., Psaty, B. M., Wagner, E. H., Perrin, E. B., et al. (1991). Data analysis and sample size issues in evaluation of community-based health promotion and disease prevention programs: A mixed-model analysis of variance approach. *Journal of Clinical Epidemiology*, *44*, 701-713.

Koepsell, T. D., Wagner, E. H., Cheadle, A. C., Patrick, D. C., Kristal, A. R., Allan-Andrilla, C. H., et al. (1992). Selected methodological issues in evaluating community-based health promotion and disease prevention programs. *Annual Review of Public Health*, *13*, 31-57.

Kreuter, M., Lezin, N. L., & Young, L. A. (2000). Evaluating community-based mechanisms: Implications for practitioners. *Health Promotion Practice*, *1*, 49-63.

Mittelmark, M. B., Hunt, M. K., Heath, G. W., & Schmid, T. L. (1993). Realistic outcomes: Lessons from community-based research and demonstration programs for the prevention of cardiovascular diseases. *Journal of Public Health Policy*, *14*, 437-462.

Norris, T. (2001). America's communities movement: Investing in the civic landscape. *American Journal of Community Psychology*, *29*, 301-308.

O'Laughlin, J., Renaud, L., Richard, L., Gomez, L. S., & Paradis, G. (1998). Correlates of the sustainability of community-based heart health promotion interventions. *Preventive Medicine*, *27*, 707-712.

Shediac-Rizkallah, M. C., & Bone, L. R. (1998). Planning for the sustainability of community-based health programs: Conceptual frameworks and future directions for research, practice, and policy. *Health Education Research*, *13*, 87-108.

Shortell, S. M., Zukoski, A. P., Alexander, J. A., Bazzoli, G. J., Conrad, D. A., Hasnain-Wynia, R., et al. (2002). Evaluating partnerships for community health improvement: Tracking the footprints. *Journal of Health Politics, Policy, and Law*, *27*, 49-91.

Thompson, B., Lichtenstein, E., Corbett, E., Nettekoven, L., & Feng, Z. (2000). Durability of tobacco control efforts in the 22 Community Intervention Trial for Smoking Cessation (COMMIT) communities 2 years after the end of the intervention. *Health Education Research*, *5*, 353-366.

Wallerstein, N. (1999). Power between evaluator and community research relationships within New Mexico's Healthier Communities. *Social Science Medicine*, *49*, 39-53.

Wagner, E. H., Wickizer, T. M., Cheadle, A., Psaty, B. M., Koepsell, T. D., Diehr, P., et al. (2000). The Community Health Promotion Grants Program in the West II: Changes in attitudes, environments and behaviors. *Health Services Research*, *35*, 561-589.

Weitzman, B. C., Silver, D., & Dillman, K. (2002). Integrating a comparison group design into a theory of change evaluation: The case of the Urban Health Initiative. *American Journal of Evaluation*, *23*, 371-385.

Yin, R. K. (1994). *Case study research: Design and methods*. Thousand Oaks, CA: Sage.