Achieving a "Broad View of Health": Findings From the California Healthy Cities and Communities Evaluation

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Abstract:
Promoting a "broad view of health" is an important objective of the healthy cities movement, including recognition of the powerful role that social relations and living conditions play in the health of community members. This article presents a quantitative approach to assessing consensus and change in ideas about health determinants among local coalition members. A ranking of five determinants of health in the form of paired comparisons was included in a survey of coalition members of 20 local healthy communities projects in California. Findings revealed conflicting views among members in the planning year, with some respondents emphasizing the role of social factors and living conditions and others emphasizing the role of health care and lifestyle decisions. Data collected at the end of the funded intervention showed movement toward a broader view of health, with greater consensus on this view in select communities.

Keywords: Healthy Cities; views of health; determinants of health; evaluation

Article:
The Healthy Cities Movement and a Broad View of Health
The healthy cities movement has received considerable attention in the public health and health promotion literature since its genesis in 1986, when the World Health Organization (WHO) initiated a pilot initiative in 11 European cities. By the end of the 20th century, there were more than 1,000 participating cities throughout the world, with more than 40 cities having projects directly sponsored by the WHO (Mittelmark, 1999).

The European Regional Office of the WHO, sponsor of the first healthy cities initiative, has defined a healthy cities project as an "enterprise to change the way health is perceived, valued and acted upon" (Curtice, 1993, p. 43). The literature describing the healthy cities and communities movement makes frequent reference to operating out of a "broad view of health" (Hancock, 1997; Lee, 2000; Norris & Pittman, 2000).

This broader view of health developed first in the health promotion field, which views the health of populations and communities as resulting from a complex interplay among four broad categories of factors: lifestyle and behavioral choices, the physical and social environments in which people live, biologic and genetic factors, and health-system factors. Hence, a *broad view of health* incorporates an understanding of the significant role of social determinants in the health and health-related lifestyles and behaviors of populations. Although the importance of the health care system is acknowledged, it is considered to represent a relatively minor role in determining the health of populations (Evans & Stoddart, 1990; Lalonde, 1974; McGinnis & Foege, 1993).

Responding to decades of limited success in personal behavioral change, strategies for addressing the health problems of populations have expanded beyond individual lifestyle approaches to address the broader

determinants of health, especially health-promoting environments (Stokols, 1992). The WHO-initiated healthy cities projects best represent this new thinking. This movement elevates the importance of the social, political, and economic context in understanding the health of populations and emphasizes strategies leading to social and political change (Hancock & Duhl, 1986; Robertson & Minkler, 1994). The approach embraces community and individual empowerment as a key health promotion strategy and advocates broad community participation in defining health problems and in recommending strategies to address those problems (Robertson & Minkler, 1994). The premise is that with a shared vision, based on a broad view of health, community coalitions will be more likely to adopt strategies that will effect change in the social and environmental determinants of health (Conner, Tanjasiri, Davidson, Dempsey, & Robles, 1999). Such strategies might target organizational or interorganizational policies and practices, public policies, community practices and norms, and physical environmental conditions. Coalitions that lack this broad view of health are more likely to focus their strategies on individual, family, or peer-group attitudes and behavior change. Thus, a broad understanding of health is viewed as necessary for developing and implementing an ecological approach to health promotion, one that appreciates root causes of complex health problems, engages multiple sectors, and targets multiple levels of change.

Assessing Healthy Cities Processes and Outcomes
Known in the United States as "healthy cities and communities" or simply "healthy communities," the movement received considerable attention throughout the 1990s, including special issues of journals devoted to the topic (*Public Health Reports*, vol. 115, nos. 2 and 3, 2000; *National Civic Review*, vol. 86, no. 2, 1997). However, attention to the American branch of this movement has waned in recent years. Reflecting on this, Wolff (2003) noted important challenges to building an American healthy communities movement. One factor he considers is the lack of adherence, in practice, to the core components of the model (e.g., defining health broadly, engaging diverse citizen participation, focus on systems change). Without examining adherence to these core components, he suggests, we cannot say that we have adequately tested the healthy communities model.

One of the core components of the healthy communities model, a broad view of health, is not uniformly defined and operationalized in healthy communities efforts in the United States (Wolff, 2003). American healthy communities efforts are challenged by systems and ideologies that emphasize the individual, leading to diminished emphases on social and environmental factors. An ideology that honors individuals and the market more than community and issues of social justice, combined with a strong emphasis on the role of traditional epidemiology in public health, leads to a greater emphasis on individual behavior-change approaches. As defined by the Ottawa Charter and incorporated into the WHO-sponsored Healthy Cities initiative, a broad view of health is "a radically different way of approaching health from the traditional individualistic, remedial medical services system that dominates America" (Wolff, 2003, p. 96). Others have identified an individualistic bias toward understanding the determinants of health in the United States, and have contrasted this with the orientation held in Canada, the United Kingdom, and much of Europe (Friedman & Starfield, 2003; Kickbush, 2003; Kindig & Stoddart, 2003; Raphael, 2003). Kickbush (2003) explained some of this difference as resulting from the stronger link between public health and social reform and the greater role of government in the provision of health and social services in Europe.

Another factor in the waning interest in the healthy cities and communities movement in the United States is the scarcity of scholarly papers presenting evaluation designs and results from domestic programs. One exception describing a comprehensive evaluation design in a U.S. program was published in *Health Education & Behavior* (Kegler, Twiss, & Look, 2000). That article presents a program evaluation framework for examining changes across the social ecology of a healthy communities project, including individual, civic participation, organizational, interorganizational, and community levels. At the individual level, Kegler et al. (2000) described the types of changes that can be assessed among individual community members, most notably members of the local steering committee (hereafter referred to as "the local coalition"). The types of changes that can be expected at this level include the development of skills related to community mobi-

lization, program planning, and community empowerment. The authors go on to suggest that given the goals of the healthy cities and communities movement and the orientation toward viewing health broadly, "Members of the [coalition] must grasp and articulate the root and multi-causal nature of community health problems to ensure that issues beyond behavioral risk factors are addressed" (Kegler et al., 2000, p. 768).

Assessing "Broad View of Health" Among Members of Coalitions
In keeping with the key principle of "defining health broadly" advocated by the healthy cities movement, the authors of this article assessed how members of local healthy communities coalitions in the state of California viewed the relative importance of various determinants of health. At the coalition level, the authors examined the extent to which respondents agreed on a broad view of health and whether their views changed over time. To our knowledge, no clear or simple way of assessing a broad view of health among members of coalitions, or among coalitions as single entities, has been published. One study (Eyles et al., 2001) looked at attitudes toward the determinants of health among different stakeholder groups in Prince Edward Island, Canada, but used different measurement approaches with different groups and did not look at agreement among members of a coalition. Some qualitative work has been done, including one study that examined concepts of health held by coordinators of 13 healthy cities projects (Boonekamp, Colomer, Tomas, & Nunez, 1999) and another study that analyzed visioning and action plans of 28 communities, categorizing key performance areas as to whether or not they reflected a broad view of health (Conner et al., 1999).

This article reports a study that assessed whether members of 20 local coalitions in California shared a broad view of health by assessing their perceptions of the relative importance of various determinants of health during the first and third years of a 3-year funding cycle. Our expectation was that with increased involvement in the coalition over time, (a) individual members would increasingly view the contributions of supportive relationships and living conditions to health as greater than the more biologic or health care determinants, (b) groups would show greater consensus over time, and (c) groups would broaden their view of health over time.

METHOD
California Healthy Cities and Communities
The California Healthy Cities and Communities (CHCC) Program was a multisite effort initiated by the Center for Civic Partnerships and funded by the California Endowment (Twiss, Duma, Look, Shaffer, & Watkins, 2000). Twenty communities received funding, representing all of the major regions of the state and including a range of population densities from very low to very high. Local sponsoring organizations receiving the funds ranged from city governments to grassroots community-based organizations. Community coalitions were funded for a 3-year cycle of programmatic activities beginning with a planning year, followed by 2 years of implementation activities.

Data Collection Methods
The CHCC evaluation was organized using a conceptual framework developed collaboratively with local coordinators of the California Health Cities Program, the state's initial model directed at fostering city government-led initiatives (Kegler et al., 2000). The framework synthesized the coordinators' insights into changes that occurred in their communities with the academic literature on community capacity, social ecology, and community change. The framework was organized into five levels: individual-level changes, changes in civic participation, organizational-level changes, interorganizational changes, and community-level changes. Qualitative and quantitative data were collected from all 20 grantee sites to provide as comprehensive a picture as possible of the process and outcomes involved in each local project. The evaluation team relied on existing documents and also developed original data collection tools, including a self-administered mail survey for members of local coalitions, an extensive interview protocol administered to staff coordinators and key leaders, and a focus group protocol. This article discusses the assessment of one specific outcome—understandings of a broad view of health via the self-administered mail survey of

coalition members at two points in time. To assess this construct, a ranking activity was included as a part of the 12-page, 29-item questionnaire.

The initial survey was issued directly to active members of the coalitions in each grantee community at the end of their planning year using membership lists provided by the grantees. Both individual respondents and grantees were guaranteed confidentiality in published reports. Postcard reminders were sent 2 weeks after the initial mailing, and a second survey was sent to nonrespondents about 1 month after the first mailing. Seven to 8 weeks after the first mailing, a minimum of five attempts were made to contact nonrespondents by telephone to encourage return of the survey. A total of 330 out of 469 planning year (hereafter referred to as "Year 1") surveys were returned for a response rate of 70.4%. The same process was followed for surveys administered at the end of the implementation period (hereafter referred to as "Year 3"). A total of 243 out of 350 Year 3 surveys were returned for a response rate of 69.4%.

Given the lack of existing measures or scales, we created a simple approach to assess the perspectives of coalition members, and each coalition as a whole, on the relative importance of various determinants of health. Items included as determinants of health were identified through the literature on the healthy cities movement and health promotion.

To assess whether members held a broad view of health, we asked respondents to rank, in order of importance, five items generally accepted as having varying degrees of influence on the health of individuals: genetics/heredity, quality health care, lifestyle decisions, supportive relationships, and living conditions. Our thinking was that a broad view of health would give greater importance to living conditions and supportive relationships than lifestyle, quality health care, and genetics/heredity. Thus, we defined a broad view of health as the ranking of living conditions and supportive relationships as most important and quality health care and genetics/heredity as least important.

To avoid some of the difficulties with rank-order questions, we asked respondents to sequentially select one out of each pair of items as the *relatively more important* influence on health (e.g., lifestyle decisions vs. genetics/hereditary). Using the software ANTHROPAC (Borgatti, 1992), each of the five items was randomly paired with each of the other four items within the question until all combinations of items were included. The resulting paired comparison activity included 10 pairs of items within a single question on the Year 1 and Year 3 surveys of coalition members.

We wanted to see whether members of local coalitions had a shared view of health that was broadly defined in terms of the importance of social determinants of health (reflecting a higher ranking on supportive relationships and living conditions compared to the other items). By examining responses to the survey at two points in time, we are able to look at changes in the rank order of determinants of health and to determine whether greater consensus regarding determinants of health developed during the life of the project.

Analysis of Paired Comparison Data
Data were analyzed for the total sample of respondents (pooled data) and for each community (community-specific data). Two types of analyses were conducted for each of these levels: (a) a crude assessment of the aggregate rank order of the items and (b) an analysis of the degree of consensus with the rank-ordered solution. Chi-square tests were used to detect differences in frequencies of responses to each pair of items from Year 1 to Year 3. Comparison of the rank order data from the two survey data sets was used to determine (a) if there was greater consensus over time and (b) if the consensus tended to lean toward a broader view of health.

Thirty-six records (10.9%) from the Year 1 survey and 27 records (11.1%) from the Year 3 survey were eliminated from the analysis because of missing data. The final sample included 294 records from the Year 1

survey and 216 records from the Year 3 survey. The number of records included per community ranged from a low of 5 to a high of 28 for Year 1 (mean 14.7), and from a low of 4 to a high of 23 for Year 3 (mean 10.8). Some of the variability in sample size was due to the varying sizes of the coalitions.

FINDINGS
Analysis of Pooled Data
Table 1 shows the frequency distributions for items selected as *more important* for each pair in the paired comparison activity by survey year. The number of times an item was selected as *most important* appears in parenthesis, followed by the percentage of responses represented by that number. The analysis showed that "genetics/heredity" was the only determinant never considered more important than its match by a majority of respondents. "Lifestyle decisions," on the other hand, was always ranked more important than its match by a majority of respondents. To determine an aggregate rank order of the five items, the number of times an item was selected as more important than its match was summed for each of the items. Importing the paired comparison data into the software ANTHROPAC, we were able to create an interval scale for each item using a standard normal distribution to compute a z score, as described by Torgerson (1959). Table 2 shows the composite rank order of the paired comparison items across all of the respondents for both years. "Lifestyle decisions" ranked significantly ahead of all items, and the three determinants in the middle of the scale ranked quite close to one another.

Table 1. Frequencies for Paired Comparison Question: "Determinants of Health"

Which Is a More Important Influence on Health?	Year 1 (N = 294)		Year 3 (N = 216)	
	n	*%*	*n*	*%*
Quality health care	223	75.9	167	77.3
Genetics/heredity	71	24.1	49	22.7
Quality health care[a]	166	56.5	105	48.6
Supportive relationships[a]	128	43.5	111	51.4
Quality health care	158	53.7	116	53.7
Living conditions	136	46.3	100	46.3
Quality health care[a]	115	39.1	68	31.5
Lifestyle decisions[a]	179	60.9	148	68.5
Lifestyle decisions	251	85.4	178	82.4
Genetics/heredity	43	14.6	38	17.6
Lifestyle decisions	216	73.5	169	78.2
Living conditions	78	26.5	47	21.8
Lifestyle decisions	198	53.1	151	69.9
Supportive relationships	96	32.7	65	30.1
Living conditions	248	84.4	178	82.4
Genetics/heredity	46	15.6	38	17.6
Living conditions	138	46.9	86	39.8
Supportive relationships	156	53.1	130	60.2
Genetics/heredity[a]	97	33.0	55	25.5
Supportive relationships[a]	197	67.0	161	74.5

a. Change from Year 1 to Year 3, $p < .10$ (all in direction of broader view).

Consensus analysis was used to determine whether there was sufficient agreement among respondents in the sample to suggest that the resulting rank order of determinants represented a shared vision of the relative importance of the five broad determinants of health. Table 3 shows the results of the consensus analysis for the pooled respondent data. In both years, the ratio of Eigenvalues for the first 2 factors was low (< 3.0),

suggesting at least a two-factor solution. The results indicate that the level of consensus was weak in both years, but it increased slightly over time.

Analysis of Community-Specific Data
Data were also analyzed for each of the 20 healthy communities projects. For 14 of the 20 coalitions (70%), the aggregate rank order of determinants placed "lifestyle decisions" as most important in both Year 1 and Year 3. When "lifestyle decisions" was not ranked most important, the top-ranked determinant was either "quality health care" or "living conditions." In all 20 of the coalitions in Year 1 and in 18 of the coalitions in Year 3, "genetics/heredity" was ranked lowest. The greatest variability in rank order was seen for the other three determinants ("quality health care," "supportive relationships," and "living conditions").

Table 2.   Composite Rank Order of Determinants of Health by Survey Year (pooled data)

Year 1 ($N = 294$)

Rank	Item	Times Selected	z Score
1	Lifestyle decisions	844	0.47
2	Quality health care	662	0.13
3	Living conditions	600	0.02
4	Supportive relationships	577	0.00
5	Genetics/heredity	257	–0.63

Year 3 ($N = 216$)

Rank	Item	Times Selected	z Score
1	Lifestyle decisions	646	0.55
2	Supportive relationships	467	0.08
3	Quality health care	456	0.06
4	Living conditions	411	–0.08
5	Genetics/heredity	180	–0.61

Table 3.   Consensus Analysis of "Determinants of Health" Data Using ANTHROPAC Eigenvalues From Consensus Analysis (pooled data)

Year 1 ($N = 294$)

Factor	Value	Percentage	Cumulative %	Ratio
1	86.170	48.2	48.2	1.597
2	56.969	30.2	78.4	1.401
3	38.533	21.6	100.0	

Year 3 ($N = 216$)

Factor	Value	Percentage	Cumulative %	Ratio
1	73.631	52.5	52.5	1.997
2	36.873	26.3	78.9	1.244
3	29.639	21.1	100.0	

NOTE: For Year 1, the average correlation among respondents = .174 and respondent reliability = .984. For Year 3, average correlation among respondents = .200 and respondent reliability = .982.

In keeping with our definition of *broad view of health*, a comparative analysis of the coalitions was conducted. Only 2 of the coalitions had an aggregate rank order that placed both "living conditions" and "supportive relationships" as the top two determinants, and this occurred only in Year 3. "Supportive relationships" was not ranked most important by any of the coalitions in either year. It was, however, selected as the second most important factor by 6 coalitions in Year 1 and 11 coalitions in Year 3. "Living

conditions" was selected as the most important factor by 3 coalitions in both years of the survey; it was ranked as the second most important factor by 5 coalitions in Year 1 and by 1 coalition in Year 3.

Table 4. Community-Level Consensus Analysis: Number of Coalitions with High, Medium, and Low Levels of Consensus

	Number of Coalitions	
Level of Consensus	Year 1	Year 3
High (Eigen ratio > 3.0)	3	7
Medium (Eigen ratio > 2.6)	2	0
Low (Eigen ration < 2.6)	15	13

We also considered how the ranking of "living conditions" and "supportive relationships" changed for each coalition over time and whether this reflected a broadening of the view of health. When both of these determinants moved up in the rank order or when one moved up and the other remained the same, we concluded that the view of health broadened. This occurred in 7 of the 20 coalitions. When one of these determinants moved up and the other moved down, we concluded that the overall view of health remained the same. This occurred in 8 of the coalitions. When one of these determinants moved down in importance and the other stayed the same, the view of health among respondents became narrower. This occurred in 5 of the coalitions. In none of the coalitions did both determinants move down in rank.

Like the results from the consensus analysis of the pooled data in Table 3, the consensus analysis of community-specific data showed little overall agreement (see Table 4). However, there was a trend over time toward more of a shared understanding of health determinants among the individual coalitions, with an increasing number of coalitions showing high consensus on the rank order (Eigen ratio > 3.0 or only a one factor solution) over time. A similar, though modest, trend was noticed with the pooled data, indicating that, both across all communities and within communities, there was an increase in a shared understanding about health and its determinants.

DISCUSSION
The analysis of data from the Year 1 survey suggest that at the end of the planning year, (a) members of coalitions saw lifestyle and health system factors as the most significant determinants of health and (b) no clear consensus existed regarding the rank order of determinants of health in either the pooled data or the community-level data. However, Year 3 survey data showed an overall movement toward a broader view of health among coalition members, with supportive relationships moving ahead of quality health care in importance. Also, a greater number of coalitions had high levels of consensus in their responses to the paired comparison questions at the end of the CHCC intervention.

Table 2 clearly shows the emphasis given to lifestyle and health system factors by respondents to the Year 1 survey. This was true whether aggregated across all communities or by specific communities. In the Year 3 survey, lifestyle and health system factors remained high in importance, but "supportive relationships" moved narrowly ahead of "quality health care," and "living conditions" was pushed down to the fourth rank.

We do not know the extent to which the reported beliefs of the respondents may have aligned themselves with what the local coalitions deemed feasible program activities or to salient contextual influences (e.g., the threatened closing of a rural hospital). Both of these could explain the comparatively low ranking of "genetics/heredity" and "living conditions" in the paired comparison analysis. Yet we believe our results reinforce what many public health scholars have found—that an individualistic and medical orientation tends to hold sway in the thinking of the general American public. Lifestyle decisions tend to be considered as

individual choices that are freely made apart from any influence of context or living conditions. These themes were evident in the present study despite the fact that many of the survey respondents were predisposed and reinforced to view social determinants of health as very influential in the health of populations based on their community's selection for funding through the CHCC program. Although this article reports only the cognitive dimension of a broad view of health, not collective actions (e.g., actual adoption and implementation of strategies addressing broad determinants of health), it reinforces how deeply embedded an individualistic and medical orientation is in our culture.

The consensus analysis of the pooled data (see Table 3) and the community-specific data (see Table 4) shows that at Year 1, there was little consensus on the rank order of the health determinants. Members of coalitions were more likely to share a perspective on the determinants of health in Year 3 than in Year 1. Furthermore, those coalitions with a high level of consensus in Year 3 also tended to be moving toward a broader view of health. Of the seven coalitions with high levels of consensus, four moved toward a broader view, two already had fairly broad views of health and remained the same, and only one community moved toward a narrower view of health. Of these seven coalitions, six placed either "living conditions" or "supportive relationships" among the top two determinants of health. This is the kind of change expected in the healthy cities and communities model and anticipated in our evaluation. It should be noted, however, that although Year 3 data showed a tendency toward a broader view of health, not all participating communities were moving in that direction.

This study had several limitations. Because study participants were individuals who chose to participate in the local healthy cities and communities initiatives, they may not have reflected the population at large in their respective communities. As a result, the findings may be limited in generalizability to those who participate in community-based, health-improvement efforts. A second limitation stems from the timing of the two surveys. The initial survey was conducted near the end of the planning process that occurred in the first year of a 3-year grant period. This meant that we could not capture change that occurred during the planning year, and we had only a 2-year time span for assessment of change. Belief systems about what factors most influence health are established in a person's mind over a lifetime and are continually reinforced by cultural and mass media messages that tend to be heavily individualistic in the United States. Therefore, assessment of change toward a broader view of health during an extremely limited time period may be unrealistic. Third, despite our efforts to minimize the difficulties associated with rank-ordered exercises, the method we employed evoked some confusion, as indicated by the fact that in both years about 11% of respondents failed to complete the definition of health items on the survey.

Furthermore, it is uncertain how accurately the responses reflected the beliefs of the respondents. Structured survey research, by its very nature, limits the choices of respondents and confines the definition of a phenomenon to the theoretical framework employed by the researchers. The definitions of terms employed by researchers, such as the meaning of "lifestyle decision," may or may not have been consistent with those in the minds of survey respondents. Preliminary analysis of action plans from the 20 participating communities showed that their activities addressed multiple levels of the social ecology and were generally consistent with a broad definition of health. This suggests that beliefs assessed through the rank-ordered exercise may not translate directly into the selection of community-improvement activities.

Two limitations related to the sample should be highlighted. Prior research has indicated that belief systems, such as those analyzed in this article, vary by respondent age, economic resources, and psychological traits (Chamberlain, 1997; Stokols, 1992). Because the survey was administered to two overlapping but significantly different samples, variations in the respondent profile between Year 1 and Year 3 may have contributed to changes detected in the pooled analysis. Last, although sample size in the pooled analysis was adequate, the limited and highly variable sample sizes of the individual communities weaken the findings in the community-level analysis.

Larger sample sizes at the community-specific or group level would improve confidence in the findings. A comparative study of the qualitative meanings that coalition members give to "a broad definition of health" and an analysis of the correspondence between these beliefs and actions undertaken in each coalition's action plan would be useful for evaluating the effect of the healthy communities intervention on this construct.

Implications for Practice
The relevance of this study applies not only to healthy-communities initiatives but also to other community-building and coalition-based interventions. For the practitioner involved in developing and maintaining broad community coalitions, this study provides some preliminary evidence that broad view of health of individual members and the level of consensus within the group can change during the life of a program. When working with a diverse membership, representing agencies as well as citizens-at-large, disparate views can become more unified on issues of importance to the mission and vision of the group. Furthermore, programs should consider ways to assess adherence to core components of the healthy communities model in their evaluation designs.

CONCLUSION
In conclusion, the CHCC Program provided an opportunity to explore perceptions of the relative influence of health determinants. The CHCC Program holds as two of its key principles a broad definition of health and a shared vision. In addition, it includes activities aimed at strengthening these principles in the design of the program. The CHCC Program believes a broad definition of health that is shared among members of a coalition will lead to interventions that promote healthy physical and social environments. Although we did not see a high degree of consensus in the rank order of the determinants of health at Year 1, greater consensus emerged in Year 3, and respondents placed a higher importance on determinants other than health-systems factors. This suggests, for those working in the field of community-based health promotion, that through the course of a local project's activities, the principle of working from a broad view of health can be strengthened.

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