
Evaluating community coalition characteristics and functioning: a summary of measurement tools

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Abstract

Community coalitions and partnerships are frequently used to promote community health; however, little research to evaluate measurement tools for assessing their effectiveness has been reported. This summary identified measurement tools for coalition or partnership characteristics and functioning. The largest numbers of measures were identified for assessing individual and group characteristics, with impact and outcome measures being the least numerous. Published measures often lacked information regarding validity and reliability, with internal consistency reliability being the most commonly reported statistic. Some measures were well defined, but others lacked conceptual clarity. Valid and reliable tools that can be applied across multiple coalitions are necessary in order to achieve a better understanding of the associations among factors influencing optimal coalition functioning and community health impacts and outcomes.

Introduction

Coalitions and community partnerships provide a means of pooling the abilities, expertise and resources of numerous stakeholders to positively

affect community health. Because of this rich potential, coalitions are frequently chosen for participatory, community-based research and grass-roots initiatives to promote health (Goodman *et al.*, 1996; Goodman, 1998; Israel *et al.*, 1998; Roussos and Fawcett, 2000; Green *et al.*, 2001). There is, however, a lack of systematic empirical research evaluating the functioning and effectiveness of coalitions and partnerships—information that is necessary for ensuring success and justifying long-term funding (Florin and Wandersman, 1990; Butterfoss *et al.*, 1993; Florin *et al.*, 1993; Roussos and Fawcett, 2000; Berkowitz, 2001).

Stages of coalition development

There is a dearth of empirical information regarding the formation and development of coalitions (Francisco *et al.*, 1993). There are several frameworks for conceptualizing coalition functioning, including collaboration, empowerment, community capacity/competence, citizen participation and community development (Francisco *et al.*, 1996; Kegler *et al.*, 2000). Conceptualizing coalition functioning in terms of stages of development may be particularly useful for evaluation in that a coalition's functioning and factors important to its functioning may evolve through stages of development or readiness (Butterfoss *et al.*, 1993; Florin *et al.*, 1993; Nezlek and Galano, 1993; Goodman *et al.*, 1996). The stages of development have been described by Florin *et al.* (Florin *et al.*, 1993) as initial mobilization, establishing organizational structure, building capacity for action, planning for action, implementation, refinement and institutionalization.

Advancement in the creation of a specific theory of coalition functioning is evident in the recent

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work of Butterfoss and Kegler (Butterfoss and Kegler, 2002) who developed the Community Coalition Action Theory, which incorporates stages of development with several key processes and concepts, including community development, citizen participation, interorganizational relationships and group processes. With community developmental processes and concepts formally integrated with the stages of coalition development, this theory has the potential to describe a wide range of coalition structures and processes. While the Community Coalition Action Theory introduces a comprehensive framework of coalition development and functioning along the stages of development (formation, maintenance and institutionalization), Florin *et al.*'s (Florin *et al.*, 1993) stages represent a more detailed conceptualization, which is more instructive for evaluation, particularly for iterative processes of partnership functioning and evaluation. Evaluation research is necessary to determine how processes and outcomes may differ across various coalition functions, structures and developmental sequences. For example, a small, grassroots coalition formed to be a catalyst for change or to address a crisis may progress through the stages of development differently than might be expected of a larger community-based coalition formed to address community health and resources on an ongoing basis (Butterfoss and Kegler, 2002).

Evaluation of coalition or partnership process, functioning and impact

The difficulty in evaluating coalitions for health outcomes lies in the complexity and scope of participatory and social ecological approaches, which often characterize community partnerships for health promotion. Some evaluation tasks might be relatively straightforward, such as the use of formative and process evaluation; longer-term impact and outcome evaluation; context and secular trend analysis; adequate evaluation design (maintaining a comparison group); and systematic measurement of policy, organizational, and physical and social environmental indicators. However, other evaluation tasks pose more complex problems, such as tracking the evolution of the coalition

or partnership, comparing results across coalitions or communities and assessing multiple interventions with multiple levels of influence (Goodman *et al.*, 1996; Goodman, 1998; Gabriel, 2000; Kegler *et al.*, 2000; Roussos and Fawcett, 2000; Butterfoss *et al.*, 2001; Green *et al.*, 2001). Furthermore, measures are needed to assess stages of development, and the wide range of process, impacts and outcomes related to coalition functioning (Francisco *et al.*, 1993). Because of the complexity of community development and coalition building, triangulation of data collection has been suggested to help avoid bias inherent in any one type of methodology and to enhance validity (Goodman *et al.*, 1996). Use and integration of both qualitative and quantitative data is recommended to provide a comprehensive assessment and understanding of coalition development, function and impact (Francisco *et al.*, 1996; Goodman *et al.*, 1996; Goodman, 1998; Israel *et al.*, 1998).

The purpose of this summary was to identify published measurement tools for assessing coalition or partnership functioning, and to report the available evidence for validity and reliability of each. Work in progress but not yet published on either a website or in a journal was not included. This summary provides an inventory for researchers and practitioners in search of measurement tools. Discussion of the complexity and breadth of the evaluation of community partnerships is beyond the scope of this paper. In-depth discussions of evaluation methods, and other issues relevant to coalitions and partnerships, are available elsewhere (Windsor *et al.*, 1994; Fetterman *et al.*, 1996; Baker and Teaser-Polk, 1998; Goodman, 1998; Goodman *et al.*, 1998; Israel *et al.*, 1998; Green and Kreuter, 1999; Gabriel *et al.*, 2000; Kreuter *et al.*, 2000; Roussos and Fawcett *et al.*, 2000).

Numerous definitions have been suggested for coalitions, partnerships and collaboratives [see (Butterfoss *et al.*, 1993; Green *et al.*, 2001; Himmelman *et al.*, 2001) for examples of definitions and discussion of differences in these types of groups]. The measurement tools in this summary may apply to each of these groups with varying degrees of fit and, therefore, no distinction among

Table I. *Factors of coalition functioning identified in the literature*

<i>Member characteristics and perceptions</i>	<i>Organizational or group processes</i>
member benefits	conflict resolution
member participation	decision making
member satisfaction and commitment	clear mission
member skills and training	quality of action plan
representativeness of members	formalized roles and procedures
member recruitment	technical assistance
member expectations	resources available
ownership	
<i>Organizational or group characteristics and climate</i>	<i>Impacts and outcomes</i>
community context and readiness	linkages to other groups/ community
group relationships/ collaboration	policy advocacy/change empowerment/social capital
communication	community capacity
strong leadership	institutionalization

these groups was made for inclusion of the tools in this summary.

Some factors suggested to be important to coalition and partnership effectiveness are listed in Table I. Many of these factors have been derived from experience in working with coalitions, but have not been empirically tested (Butterfoss *et al.*, 1993). [For detailed discussions of these constructs, see (Butterfoss *et al.*, 1993; Florin *et al.*, 1993; Israel *et al.*, 1998; Kegler *et al.*, 2000; Roussos and Fawcett, 2000; Wolff, 2001).] While many of these constructs have been defined, there remains a lack of conceptual precision or consensus in the literature.

Methods

A review of the research literature was conducted through *Medline*, *PsychInfo* and *Sociological Abstracts* with the following terms: community, coalition, partnership, collaboration, measurement, scale, evaluation, reliability and validity. The Internet was also searched, through the Google

search engine, to identify tools and reports using the same search terms as the literature search. Measures were included in this summary if they provided at least a conceptual definition of the construct measured. Twenty-six articles or reports were identified, representing 146 measurement scales/indexes. Information on validity and reliability that was reported in the original article/report is provided in this summary where available.

Although frameworks for stages of coalition development have been proposed for assessing coalitions, few evaluation studies have explicitly used this type of framework; therefore, for the purpose of organizing the summary tables, five general categories (which are not necessarily mutually exclusive) were used to group measurement tools: (1) Member Characteristics and Perceptions, (2) Organizational or Group Characteristics, (3) Organizational or Group Processes and Climate, (4) General Coalition Function or Scales Bridging Multiple Constructs, and (5) Impacts and Outcomes. Within each of these broad categories, subheadings group together sets of similar constructs. For each of these groupings, measures are ordered by increasing number of total items.

The five general categories used above for organizational purposes in this paper roughly correspond to the stages of coalition development that Florin *et al.* (Florin *et al.*, 1993) described as being *initial mobilization*, *establishing an organizational structure*, *building capacity for action*, *planning for action*, *implementation*, *refinement* and *institutionalization*. *Initial mobilization* involves recruitment of participants whose Member Characteristics and Perceptions provide the coalition with skills, experience and community representation that guide and enable the partnership's activities. *Establishing an organizational structure*, *building capacity for action* and *planning for action* are supported by Organizational or Group Characteristics of leadership, staff, and formalized structures and procedures. *Implementation*, *refinement* and *institutionalization* are supported by Organizational or Group Processes and Climate, which enable members to work together to accomplish goals, Impacts and Outcomes.

Results

Tables II–VI provide a summary of measures in each category including the conceptual definition, number of items, available information on validity and reliability, and the reference. Coalition members and/or staff were the respondents unless otherwise noted. Few papers explicitly stated that validation measures were included in their study. Because of the general lack of a guiding theoretical framework in much of the literature, it was not always possible to determine whether the authors' intent was validation, a report of 'causal' associations between coalition functioning and various outcomes or an exploration of cross-sectional correlates. Because of this uncertainty, Tables II–VI report only explicitly stated validation information. Further information about correlations with other variables is provided in a more extensive set of tables, which have been posted on the Internet (<http://prevention.sph.sc.edu/>; under Reports and Tools).

Individual and group characteristics had the largest numbers of measures, with impact and outcome measures being the least numerous. Generally, there were gaps in the reporting of validity and reliability, with most measures reporting only internal consistency reliability. Table II presents measures of Member Characteristics and Perceptions. There were a total of 59 measures, with the most measures for member participation (15 measures), member satisfaction (seven measures) and member benefits to participation (seven measures). Thirty-three of these measures (56%) reported at least one type of validity or reliability. Twenty-seven measures of Organizational or Group Characteristics were identified (Table III). Most of the measures were related to leadership (nine measures) and staff performance (eight measures). Fifty-nine percent ($n = 16$) of these measures reported some type of validity or reliability. Table IV includes 32 measures of Organizational or Group Processes and Climate, with the most measures for action plan quality (seven measures), and group relationships, communication and resources (four measures each). Forty-four percent ($n = 14$) of these measures

had some type of validity or reliability data available. In Table V, there are 10 general measures of coalition functioning, with the most measures of collaboration (four measures) and of general functioning (four measures). Three of these measures (30%) reported some validity or reliability. Measures of Impacts and Outcomes are presented in Table VI. There were 20 measures, with the most measures for community linkages (eight measures) and capacity/empowerment (six measures). Fifty-five percent ($n = 11$) of these measures had some type of validity or reliability.

Some authors reported varying conceptual definitions of similarly named variables and a few measures included several different constructs in one measure (e.g. a measure of 'member participation' including single items assessing commitment and/or diversity of membership). While some constructs have been well defined, others lack clarity.

In terms of inter-relationships among variables (reported in the extended tables on the Internet at <http://prevention.sph.sc.edu/>; under Reports and Tools), some authors have reported associations between coalition characteristics and functioning variables (e.g. between member participation and member communication). Far less research reports the association of coalition characteristics and functioning to impacts and outcomes; and there is little or no information describing variables by stages of coalition development.

Discussion

The literature on measurement of coalition characteristics and functioning reveals a diverse array of concepts and measures. While some published measures were clearly derived from theoretical frameworks, the literature overall is a fragmented collection of tools. There remains a need for matching theory to conceptual and operational definitions (Butterfoss *et al.*, 1993; Francisco *et al.*, 1996; Kegler *et al.*, 2000). Rigorous evaluation assumes valid and reliable measurement tools, yet relatively few published tools to measure coalition characteristics and functioning report

Table II. Summary of evaluation tools or measures for Member Characteristics and Perceptions

Construct and conceptual definition (reference)	No. of items	Validity and reliability
Representation		
<i>Sectorial representation</i> —total number of unique community sectors (Hays <i>et al.</i> , 2000)		
<i>Member diversity</i> —percentage of non-white members (Hays <i>et al.</i> , 2000)		
<i>Community representation</i> —perception that coalition is representative (Rogers <i>et al.</i> , 1993)	1 item	
Skills and experience		
<i>Experience</i> —number of years worked on issue (Rogers <i>et al.</i> , 1993)	1 item	
<i>Perceived participation competence</i> —level of generic participation skills and skills related to issue (McMillan <i>et al.</i> , 1995)	6 items	$\alpha = 0.76$
<i>Expertise</i> —abilities to address issue and manage coalition (Rogers <i>et al.</i> , 1993)	11 items	$\alpha = 0.94$ for members, $\alpha = 0.92$ for staff
<i>Member profile</i> —coalition size and list of 10 potential member skills and strengths (Kegler <i>et al.</i> , 1998)	11 items	
Participation		
<i>Level of participation</i> —classified each participant into one of five levels of participation determined by role and degree of involvement; categories included: Max leaders, Active leaders, Worker members, Active members and Nominal members (Prestby <i>et al.</i> , 1990)		
<i>Average number of members attending meetings in last year and percentage of members serving on subcommittees</i> (Florin <i>et al.</i> , 2000)		
<i>Attendance rates</i> —measure of group participation; ranked committees by attendance rates and then created high and low attendance groups using a median split (Chinman <i>et al.</i> , 1996)		
<i>Participant situation is either voluntary, paid or consultant</i> (Taylor-Powell <i>et al.</i> , 1998)	1 item	
<i>Length of group participation</i> (Taylor-Powell <i>et al.</i> , 1998)	1 item	
<i>Level of membership</i> —active or inactive and level of leadership (Taylor-Powell <i>et al.</i> , 1998)	1 item	
<i>Member participation</i> —level of activity in coalition and number of hours spent on project in average month (Kegler <i>et al.</i> , 1998)	2 items	
<i>Member and board participation</i> —commitment, diversity, adequate numbers, recruitment, orientation, drop out (Taylor-Powell <i>et al.</i> , 1998)	2 items	
<i>Involvement in the organization</i> —has involvement increased, decreased or stayed the same since beginning. Also asked about time spent working for organization in past 2 months and a checklist of nine activities (Giamartino and Wandersman, 1983)	3 items	validity of global involvement question: increased involvement positively related to time spent working in past 2 months and negatively related to reports of decreasing involvement
<i>Member participation</i> —participatory roles, number of meetings attended, number of hours spent on project outside of meetings (Butterfoss <i>et al.</i> , 1996a)	3 items	
<i>Hours of participation in average month in activities both in and out of meetings</i> (McMillan <i>et al.</i> , 1995)	4 items	
<i>Types of active roles played each year of participation</i> (Taylor-Powell <i>et al.</i> , 1998)	9 items	
<i>Kinds of participation roles</i> —general participation roles to structural leadership positions (McMillan <i>et al.</i> , 1995)	9 items	

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Table II. *Continued*

Construct and conceptual definition (reference)	No. of items	Validity and reliability
<i>Member participation</i> —members' perceptions of participation, input, cohesiveness of membership, common vision, effective use of member abilities, personal commitment to coalition (Hays <i>et al.</i> , 2000)	10 items	$\alpha = 0.87$
<i>Number of hours contributed in last year to 10 group activities</i> (Taylor-Powell <i>et al.</i> , 1998)	10 items	
<i>Member involvement and contributions</i> —activities participated in and extent of personal/organizational contributions (Rogers <i>et al.</i> , 1993)	involvement = 8 items; contributions = 7 items	
Role clarity		
<i>Role clarity</i> —role perception of members matches that of staff's about the coalition's involvement with developing the action plan, budget, and plans and objectives (Rogers <i>et al.</i> , 1993)	4 items	
<i>Operational understanding</i> —knowledge about coalition mission, structure and operations (Rogers <i>et al.</i> , 1993)	5 items	$\alpha = 0.78$ for members and $\alpha = 0.81$ for staff
Sense of ownership		
<i>Sense of ownership</i> —commitment, sense of pride and cares about future of coalition (Rogers <i>et al.</i> , 1993)	4 items	$\alpha = 0.77$ for both members and staff
<i>Organizational perceived control subscale</i> —individual perception of influence on organizational processes (Israel <i>et al.</i> , 1994)	5 items	$\alpha = 0.61$
<i>Community Ownership Scale</i> —perceived influence various constituencies have on program or group goals, processes, and structure (Flynn, 1995)	14 items	total score calculated for each constituency rated; community leader $\alpha = 0.88$, external agency $\alpha = 0.91$, local staff $\alpha = 0.72$
Sense of community		
<i>Sense of community</i> —feelings of connection, support and collective problem solving (McMillan <i>et al.</i> , 1995)	5 items	$\alpha = 0.84$
<i>Perceived severity of community problems</i> —ranked list of specific problems (McMillan <i>et al.</i> , 1995)	12 items	$\alpha = 0.89$
Expectations		
<i>Outcome efficacy</i> —confidence that coalition will affect issue (Rogers <i>et al.</i> , 1993)	1 item	
<i>Expectation</i> —likelihood of planned activities being fully implemented (Kumpfer <i>et al.</i> , 1993)	3 items	$\alpha = 0.84$
<i>Expectancies for future individual contributions</i> —likelihood of engaging in activities over the next year, personal participation, intentions to produce outcomes (McMillan <i>et al.</i> , 1995)	4 items.	$\alpha = 0.79$
<i>Expectancies for future group/organizational accomplishments</i> —likelihood of general and specific group accomplishments (McMillan <i>et al.</i> , 1995)	5 items	$\alpha = 0.85$
Perceived effectiveness		
<i>Perceived coalition effectiveness</i> —activities, fund raising, coordination, training, goal setting, communication, public relations, evaluation (Gottlieb <i>et al.</i> , 1993)	9 items	$\alpha = 0.76$
Satisfaction		
<i>Member satisfaction</i> —global satisfaction with work of coalition (Kegler <i>et al.</i> , 1998)	1 item	
<i>Member satisfaction</i> —level of satisfaction with committee's work and with the plan produced by committee (Butterfoss <i>et al.</i> , 1996a)	2 items	

Table II. Continued

Construct and conceptual definition (reference)	No. of items	Validity and reliability
<i>Satisfaction with the organization</i> —satisfaction with the progress of the organization; also asked about member enjoyment and perceptions about the strength of the organization (Giamartino and Wandersman, 1983)	3 items	validity of global satisfaction with progress supported—satisfaction with progress positively related to enjoyment of membership ($r = 0.47$) and perception that organization was getting stronger ($r = 0.72$) and negatively related to perception that organization was weaker ($r = -0.90$)
<i>Satisfaction level</i> —satisfaction with specific aspects of group function and achievement (McMillan <i>et al.</i> , 1995)	4 items	$\alpha = 0.90$
<i>Team planning</i> —member satisfaction with planning process utilized by the coalition (Kumpfer <i>et al.</i> , 1993)	4 items	$\alpha = 0.87$
<i>Satisfaction with coalition</i> —satisfaction with operations and accomplishments (Rogers <i>et al.</i> , 1993)	5 items	$\alpha = 0.91$
<i>Attitudes toward the partnership</i> —satisfaction with partnership and member involvement, concern and desire to remain a member (Cook <i>et al.</i> , 1994)	8 items	$\alpha = 0.77$
Commitment		
<i>Commitment</i> —the strength of member commitment to the coalition, caring about future (Kumpfer <i>et al.</i> , 1993)	3 items	$\alpha = 0.93$
<i>Member organization commitment</i> —endorsement of mission and efforts (Rogers <i>et al.</i> , 1993)	3 items	$\alpha = 0.76$
<i>Commitment</i> —sense of pride and commitment toward group (McMillan <i>et al.</i> , 1995)	4 items	$\alpha = 0.86$
Participation benefits		
<i>Benefits to participation</i> —personal and social benefits (McMillan <i>et al.</i> , 1995)	6 items	$\alpha = 0.84$
<i>Perceived knowledge and skill development</i> —extent to which participation in coalition has changed knowledge, beliefs and skills (McMillan <i>et al.</i> , 1995)	7 items	$\alpha = 0.91$
<i>Participatory benefits</i> —personal, social and purposive benefits (Prestby <i>et al.</i> , 1990)	9 items	overall $\alpha = 0.77$; two distinct factors: social/communal benefits (7 items, $\alpha = 0.76$) and personal benefits (2 items, $\alpha = 0.44$)
<i>Participation benefits</i> —coalition participation benefits (Rogers <i>et al.</i> , 1993)	11 items	$\alpha = 0.91$
<i>Benefits</i> —personal, social and skills (Chinman <i>et al.</i> , 1996)	14 items	$\alpha = 0.88$; principal components = one factor
<i>Member benefits</i> —material, solidarity and purposive benefits (Butterfoss <i>et al.</i> , 1996a)	14 items	$\alpha = 0.90$
<i>Impact of participation on members</i> —level of impact on skills (Taylor-Powell <i>et al.</i> , 1998)	18 items	
Participation costs		
<i>Participation costs</i> —difficulties of coalition participation (Rogers <i>et al.</i> , 1993)	5 items	$\alpha = 0.76$
<i>Participatory costs</i> —personal, social and purposive costs (Prestby <i>et al.</i> , 1990)	7 items	overall $\alpha = 0.58$; two distinct factors: social/organizational costs (3 items, $\alpha = 0.61$) and personal costs (4 items, $\alpha = 0.53$)
<i>Costs to participation</i> —personal or coalition/group difficulties (McMillan <i>et al.</i> , 1995)	7 items	$\alpha = 0.71$
<i>Costs</i> —personal, social, and barriers (Chinman <i>et al.</i> , 1996)	13 items	$\alpha = 0.78$; principal components = one factor

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Table II. *Continued*

Construct and conceptual definition (reference)	No. of items	Validity and reliability
<i>Member costs</i> —material, social and purposive costs (Butterfoss <i>et al.</i> , 1996a)	13 items	$\alpha = 0.75$
Global participation costs and benefits		
<i>Global assessment of benefits versus difficulties of participation</i> (Rogers <i>et al.</i> , 1993)	1 item	
<i>Global costs and benefits to participation</i> (Kegler <i>et al.</i> , 1998)	1 item	

Table III. *Summary of evaluation tools or measures for Organizational or Group Characteristics*

Construct and conceptual definition (reference)	No. of items	Validity and reliability
Leadership		
<i>Leader support style</i> —egalitarian, empowering style of leadership, encourages members (Kumpfer <i>et al.</i> , 1993)	3 items	$\alpha = 0.89$
<i>Leader decision style</i> —degree of adherence to democratic or authoritarian style of decision making (Kumpfer <i>et al.</i> , 1993)	3 items	$\alpha = 0.44$
<i>Leadership effectiveness</i> —decision making, group/incentive management, defined roles, democratic, meeting organization, guidance, feedback (Taylor-Powell <i>et al.</i> , 1998)	5 items	
<i>Leadership effectiveness</i> —members' perceptions of extent leader directs group toward collaborative group achievement, encourages all points of view, manages conflict (Hays <i>et al.</i> , 2000)	6 items	$\alpha = 0.92$
<i>Leadership</i> —skills to guide toward goals, effective meetings, articulating vision, nurturing commitment (Kegler <i>et al.</i> , 1998)	6 items	$\alpha = 0.86$
<i>Leadership skills</i> —leader's incentive management skills (Rogers <i>et al.</i> , 1993)	11 items	$\alpha = 0.64$
<i>Leadership role</i> —leader competence, performance, support and control (Butterfoss <i>et al.</i> , 1996)	15 items	$\alpha = 0.95$
<i>Leadership, lead agency, and staff</i> —knowledge, contributions, guidance, group management skills (Goldstein, 1997)	leadership = 16 items; lead agency = 7 items; staff = 6 items	
<i>Incentive and cost management</i> —leadership guides and provides opportunities to manage members' benefits and costs of participation; eight different scales: total incentive management, frequency of incentive management, personal incentive management, social/communal incentive management, total cost management, frequency of cost management, personal cost management, social/organizational cost management (Prestby <i>et al.</i> , 1990)	no. of items on subscales ranges 7–60 items	$\alpha = 0.24–0.64$
Staff performance		
<i>Staff time devoted to coalition</i> (Kegler <i>et al.</i> , 1998)	1 item	
<i>Capacity building</i> —transfer of knowledge and skills from staff to members, quality of preparation to be effective member (Kegler <i>et al.</i> , 1998)	1 item	
<i>Staff skill</i> —ability of staff to guide and support coalition, including ability to shift responsibility from staff to members over time (Kegler <i>et al.</i> , 1998)	7 items	$\alpha = 0.83$
<i>Personnel barriers</i> —includes staff and volunteer expertise, priorities, interest, availability, turnover (Gottlieb <i>et al.</i> , 1993)	9 items	$\alpha = 0.79$

Table III. Continued

Construct and conceptual definition (reference)	No. of items	Validity and reliability
<i>Staff-committee relationship</i> —perceptions of staff competence and performance (Butterfoss <i>et al.</i> , 1996a)	10 items	$\alpha = 0.45$
<i>Maintenance costs</i> —staff's perceptions that coalition management is difficult (Rogers <i>et al.</i> , 1993)	6 items; staff evaluated	$\alpha = 0.84$
<i>Maintenance benefits</i> —staff's perceptions that coalition is beneficial to organization (Rogers <i>et al.</i> , 1993)	9 items; staff evaluated	$\alpha = 0.94$
<i>Management capabilities</i> —effective management process and policies, efficient operation, democratic (Rogers <i>et al.</i> , 1993)	23 items	$\alpha = 0.95$
Formal organizational structure		
<i>Organizational structure</i> —two aspects: formalization and complexity; formalization score calculated by giving one point each for bylaws, written agendas and written minutes; complexity calculated from number of functioning task forces (Kegler <i>et al.</i> , 1998)		
<i>Organizational structure</i> —subcommittees, bylaws, planning mechanism, leadership stability and renewal policies (Taylor-Powell <i>et al.</i> , 1998)	5 items	
<i>Formality of coalition structure</i> —written agreement of responsibilities, fund raising, mission statement, annual goals, objectives (Gottlieb <i>et al.</i> , 1993)	6 items	
<i>Formalized rules and procedures</i> —operating systems, member orientation, mission (Rogers <i>et al.</i> , 1993)	8 items	$\alpha = 0.72$
<i>Formalization</i> —formalized rules and procedures, bylaws, meeting organization, decision-making procedures (Florin <i>et al.</i> , 2000)	11 items	
<i>Coalition structure and process</i> —bylaws, written objectives, communication/ decision-making procedures, resource allocation, training, orientation (Goldstein, 1997)	coalition structure = 9 items; coalition process = 7 items	
Task focus/meeting effectiveness		
<i>Task focus</i> —order and organization of the group, efficiency, formalization, structure [(Florin <i>et al.</i> , 2000); as developed in (McMillan <i>et al.</i> , 1995)]		
<i>Task focus of meetings</i> (Kegler <i>et al.</i> , 1998)	4 items	$\alpha = 0.85$
<i>Task focus</i> —order and organization of the group, efficiency, formalization, structure (McMillan <i>et al.</i> , 1995)	5 items	$\alpha = 0.84$
<i>Meeting Effectiveness Inventory</i> —organization, participation, leadership, decision making, conflict resolution, cohesion, productivity (Goodman <i>et al.</i> , 1996)	10 items	

validity and reliability. In addition, there is a tension between standardized tools that facilitate comparison across programs and specialized tools that fit specific program and community contexts (Goodman, 1998). While this summary does not solve these problems, it represents a starting point for advancing coalition evaluation by providing an inventory of existing tools, including any published reliability and validity information.

Selection of specific tools for any given project must be guided by the researchers' conceptual or theoretical framework, the goals and expectations within the specific community context, and the quality of the measure. An array of concepts that have been empirically associated, or are expected to be associated, with coalition functioning and/or success, appear in Table I as a rough guide. Selection of several measures within each of the

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Table IV. Summary of evaluation tools or measures for Organizational or Group Processes and Climate

Construct and conceptual definition (reference)	No. of items	Validity and reliability
<p>Stages of coalition development</p> <p><i>Stages of coalition development</i>—list of tasks accomplished by stage: formation, implementation, maintenance, institutionalization (Goldstein, 1997)</p>	<p>formation = 4 items; implementation = 4 items; maintenance = 8 items; institutionalization = 6 items</p>	
<p>Community capacity</p> <p><i>Community capacity</i>—ability of community to organize itself to solve problems, activities, preexisting networks and collaboration prior to coalition's existence (Kegler <i>et al.</i>, 1998)</p>	2 items	
<p>Organizational climate</p> <p><i>Organizational climate</i>—generated by combining four individual constructs (see rest of table for descriptions of the individual constructs): Involvement/inclusion and Task focus (see Table IV), Satisfaction level and Commitment (see Table II) (McMillan <i>et al.</i>, 1995)</p> <p><i>Organizational climate</i>—modified from the Moos Group Environment Scale, short form of GES Form R (Moos <i>et al.</i>, 1974; Butterfoss <i>et al.</i>, 1996a; Giamartino and Wandersman, 1983)</p>	40 items (10 subscales, 4 items each)	in Butterfoss <i>et al.</i> : overall $\alpha = 0.78$, cohesion ($\alpha = 0.11$), leader support ($\alpha = 0.68$), expression ($\alpha = 0.43$), independence ($\alpha = 0.17$), task orientation ($\alpha = 0.77$), self-discovery ($\alpha = 0.60$), anger and aggression ($\alpha = 0.50$), order and organization ($\alpha = 0.47$), leader control ($\alpha = 0.11$), innovation ($\alpha = 0.39$); see Moos <i>et al.</i> for psychometrics of original scale
<p>Group relationships</p> <p><i>Partnership relations</i>—identify which members most important to success and which members most often interact with, rate quality of most frequent interactions (Cook <i>et al.</i>, 1994)</p> <p><i>Group relationships</i>—trust, conflict management, team work, use of talents, recognition (Taylor-Powell <i>et al.</i>, 1998)</p> <p><i>Cohesion of the group</i> (Kegler <i>et al.</i>, 1998)</p> <p><i>Satisfaction with group</i>—feeling heard and valued, comfort, satisfaction (Taylor-Powell <i>et al.</i>, 1998)</p>	<p>3 items</p> <p>4 items</p> <p>4 items</p>	$\alpha = 0.85$
<p>Communication</p> <p><i>Communication</i>—quality of member–staff and member–member communications, frequency, productivity (Kegler <i>et al.</i>, 1998)</p> <p><i>Member communication</i>—quality of member–member communication (Rogers <i>et al.</i>, 1993)</p> <p><i>Staff–member communication</i>—quality of staff–member communication (Rogers <i>et al.</i>, 1993)</p> <p><i>Communication mechanisms</i>—use of various methods of communication (Rogers <i>et al.</i>, 1993)</p>	<p>4 items</p> <p>5 items</p> <p>5 items</p> <p>8 items</p>	<p>$\alpha = 0.87$</p> <p>$\alpha = 0.90$</p> <p>$\alpha = 0.91$</p> <p>$\alpha = 0.66$</p>

Table IV. Continued

Construct and conceptual definition (reference)	No. of items	Validity and reliability
Conflict		
<i>Conflict</i> —measure of tension in coalition caused by opinion differences, personality clashes, hidden agendas, power struggles (Kegler <i>et al.</i> , 1998)	1 item	
Decision making		
<i>Decision making</i> —extent of influence in determining certain types of coalition's actions (Kegler <i>et al.</i> , 1998)	4 items	$\alpha = 0.84$
<i>Influence in decision making</i> —influence of individuals, group, staff and leaders have in determining policies and actions of committee (Butterfoss <i>et al.</i> , 1996a)	4 items	$\alpha = 0.47$
<i>Involvement/inclusion</i> —member involvement in group processes (McMillan <i>et al.</i> , 1995)	5 items	$\alpha = 0.85$
Recruitment		
<i>Recruitment pattern</i> —evolution of coalition membership through stages of development based upon number of community sectors represented and average length of membership (Kegler <i>et al.</i> , 1998)	2 items	
<i>Recruitment subscale</i> —success in recruiting new members and steps taken to ensure representativeness (Cook <i>et al.</i> , 1994)	3 items	$\alpha = 0.78$
Action plan quality		
<i>Organizational assessment</i> —evaluation of goals and processes (Taylor-Powell <i>et al.</i> , 1998)	1 item	
<i>Plan quality</i> —clarity, effectiveness and quality of plans (Florin <i>et al.</i> , 2000)	3 items; expert panel conducted evaluation	$\alpha = 0.94$; inter-rater reliability = 0.76
<i>Plan has clear and achievable goals, mission statement, goal agreement</i> (Taylor-Powell <i>et al.</i> , 1998)	4 items	
<i>Scope</i> —number of categorically different strategies proposed in plan (Florin <i>et al.</i> , 2000)	7 major categories; expert panel conducted evaluation	inter-rater reliability (Cohen's κ) = 0.65
<i>Comprehensive, research-based planning</i> —strategies to meet goals/outcomes, plan rating (Hays <i>et al.</i> , 2000)	8 items; expert panel conducted evaluation	$\alpha = 0.70$
<i>Quality of action plan</i> —plan dimensions: measurable objectives, target population, plan related to state-level plan, plan tailored to local level, clear/defined tasks, responsibilities identified, clear timelines, comprehensive (Kegler <i>et al.</i> , 1998)	10 dimensions; expert evaluation	
<i>Plan Quality Index</i> —clear and realistic objectives and activities, scope of plan, resources in the community, overall impression of plan quality (Butterfoss <i>et al.</i> , 1996b)	18 items; trained raters	inter-rater reliability = 0.73
Implementation		
<i>Implementation</i> —progress assessment of extent of implementation of the action plan, resources generated, and capitalization of opportunities outside of plan; also measure absolute number of completed activities (Kegler <i>et al.</i> , 1998)	leadership and coordinator evaluated	
<i>Perceived activity of the coalition</i> —information about the level and type of activities for previous year, including fund raising, media coverage, number of purchases and requests for materials, distribution network, innovative methods of distribution, and number of kits distributed (Gottlieb <i>et al.</i> , 1993)		

Evaluating community coalition characteristics and functioning

Table IV. *Continued*

Construct and conceptual definition (reference)	No. of items	Validity and reliability
Resources		
<i>Resource mobilization</i> —one point assigned for each resource, sponsorship or donation generated (Kegler <i>et al.</i> , 1998)		
<i>Financial resources</i> —average annual fund allocation for issue (Rogers <i>et al.</i> , 1993)	1 item	
<i>Resource allocation satisfaction</i> —satisfaction with the use of funds in the community (Rogers <i>et al.</i> , 1993)	1 item	
<i>Fiscal resources</i> —sufficient, effectively used (Taylor-Powell <i>et al.</i> , 1998)	2 items	

Table V. *Summary of evaluation tools or measures for General Coalition Function or Scales Bridging Multiple Constructs*

Construct and conceptual definition (reference)	No. of items	Validity and reliability
Member characteristics		
<i>Members</i> —contributions, responsibilities, satisfaction, involvement and communication (Goldstein, 1997)	10 items	
Organizational climate		
<i>Organizational barriers</i> —mix of organizational climate and processes that may impede coalition functioning including: goal setting, decision making, funding, leadership, recognition, communications, structure and priorities (Gottlieb <i>et al.</i> , 1993)	19 items	$\alpha = 0.78$
Collaboration		
<i>Cooperation and networking subscale</i> —degree to which partnership has increased cooperation, networking and information exchange (Cook <i>et al.</i> , 1994)	2 items	$\alpha = 0.87$
<i>Collaboration</i> —information exchange/networking, joint planning of activities; heavier weighting of collaboration over networking items (Hays <i>et al.</i> , 2000)	6 items	$\alpha = 0.87$
<i>Internal collaborative functioning</i> —shared vision, understanding of goals and objectives, clear roles and responsibilities, decision-making procedures, conflict management, changing membership, leadership, plans, relationships/trust, internal communication, external communication, evaluation (Taylor-Powell <i>et al.</i> , 1998)	1 item each component (12 items)	
<i>Collaboration checklist</i> —collaboration functioning including: communication, sustainability, research and evaluation, political climate, resources, catalysts, policies, community history, connectedness, leadership, community development, understanding of community (Borden and Perkins, 1999)	1 item each component (12 total)	
General functioning		
<i>Self-evaluation tool</i> —Rating on five-point scale (low to high) of coalition's capacity for effective action. Goals, outcomes, leadership, commitment, communication, turf and diversity (National Network for Health, 2001)	7 items	
<i>Coalition Checklist</i> —diagnostic tool to identify gaps; Yes/No checklist across formation, building membership, member benefits, member philosophies and processes fit with coalition's, goals, commitment, leadership, role responsibilities, decision making, fund raising, managing negotiations, cultural competence [(Brown, 1984); reprinted in (Minkler, 1997)]	12 items	

Table V. *Continued*

<i>Construct</i> and conceptual definition (reference)	No. of items	Validity and reliability
<i>Group functioning</i> —effectiveness in collaboration, communication, decision making, building trust, operating procedures, planning, leadership, making linkages, securing resources, conflict resolution, recruitment, training, evaluating and building capacity (Taylor-Powell <i>et al.</i> , 1998)	26 items	
<i>Evaluation rubric</i> —rating of effectiveness as low, medium or high (descriptions provided): <i>community ownership</i> —awareness, multi-sector involvement, local focus, financial, goal consensus, broad-based representation, knowledge transfer, political landscape, community engagement, leadership; <i>organizational effectiveness</i> —collaboration, member participation and turnover, formalization, resources, communication, organizational structures, attendance, common vision/mission, conflict resolution, domination; <i>comprehensive prevention approach</i> —strategic planning process; comprehensive plan; multiple domains; age-developmental focus; research-based programs, policies, principles, IOM classification; <i>commitment to results orientation</i> —results oriented, coalition quality improvement, coalition outcome evaluation, community impact evaluation, program process evaluation, program outcome evaluation; <i>linkage relationship between coalition and communities or community programs</i> —structure/organization, participation/integration, communication (Center for Prevention Research and Development, 1999)	35 broad categories, one item each (total 35 items)	

Table VI. *Summary of evaluation tools or measures for Impacts and Outcomes*

<i>Construct</i> and conceptual definition (reference)	No. of Items	Validity and reliability
Community linkages		
<i>Community networking</i> —methods of linkage to other groups or organizations (Taylor-Powell <i>et al.</i> , 1998)	1 item	
<i>Community-committee linkage</i> —number of organizations or groups with which increased linkage had occurred (Butterfoss <i>et al.</i> , 1996a)	1 item	
<i>Non-member contact subscale</i> —how well members have cooperated, networked and exchanged information with non-members (Cook <i>et al.</i> , 1994)	2 items	$\alpha = 0.86$
<i>Personal awareness subscale</i> —degree of increased awareness of other organizations' activities and constraints, and ability to form relationships with other organizations (Cook <i>et al.</i> , 1994)	3 items	$\alpha = 0.80$
<i>Team networking</i> —organizational changes taking place through coalition action, information exchange, number of referrals (Kumpfer <i>et al.</i> , 1993)	4 items	$\alpha = 0.80$
<i>Community prevention systems impacts</i> —increased awareness, increased resources, and improved community communication (Hays <i>et al.</i> , 2000)	7 items	$\alpha = 0.91$
<i>Community-committee linkage</i> —determine the change in types of exchanges with other organizations or groups as a result of committee participation (Butterfoss <i>et al.</i> , 1996a)	7 items	$\alpha = 0.99$
<i>Inter-organizational linkages of the coalition</i> —extent of contact with various community constituencies (Florin <i>et al.</i> , 2000)	12 items	

Table VI. Continued

Construct and conceptual definition (reference)	No. of Items	Validity and reliability
Impacts		
<i>Public policy change</i> —extent strengthened policy or regulations (Hays <i>et al.</i> , 2000)	1 item	
<i>Implementation effects</i> —effects on dimensions of community life expected to influence (Florin <i>et al.</i> , 2000)	5 items; key informant rated	$\alpha = 0.87$
<i>Perceived group/organizational accomplishments</i> —extent felt had produced community effects generally, on services, proximal outcomes and distal impacts (McMillan <i>et al.</i> , 1995)	7 items	$\alpha = 0.89$
<i>Impact of group on others</i> —community involvement, community planning, group and community capacity, resources, services/programs, policy and community conditions (Taylor-Powell <i>et al.</i> , 1998)	43 items	
Organizational viability		
<i>Organizational viability</i> —two-level outcome variable: active groups continued to meet for 1 year after interviews, inactive groups did not meet during last 6 months of the year following interviews (Giamartino and Wandersman, 1983)	1 item	
Institutionalization		
<i>Level of Institutionalization</i> (of health promotion programs)—composite of the number of dimensions (extensiveness) and degrees of depth (intensiveness); <i>routinization of program production</i> —repeated deployment of program activities reflected in written plans/evaluations; <i>niche saturation of program production</i> —extent to which all program activities are written and operationalized; <i>routinization of program maintenance</i> —host organization's staff's involvement and commitment to operations; <i>niche saturation of program maintenance</i> —extent to which staff involved and committed to operations; <i>routinization of program support</i> —regular commitment of host organization's administration to program through funding, staffing and status afforded; <i>niche saturation of program support</i> —extent to which the host organization's administration committed to the program; <i>routinization of program management</i> —formal and routine application of program supervision through assignment of supervisors, development of written job descriptions and establishment of accountability through evaluation; <i>niche saturation of program management</i> —extent to which the program is formally supervised, staff has written job descriptions and program evaluation occurs (Goodman <i>et al.</i> , 1993)	15, three-part items (45 items total)	confirmatory factor analysis found 8 factors (loading ≥ 0.40): routine production (5 items; $\alpha = 0.86$), niche saturation production (5 items; $\alpha = 0.85$), routine maintenance (3 items; $\alpha = 0.65$), niche saturation maintenance (3 items; $\alpha = 0.44$), routine support (4 items; $\alpha = 0.64$), niche saturation support (4 items; $\alpha = 0.69$), routine managerial (3 items; $\alpha = 0.71$) and niche saturation managerial (3 items; $\alpha = 0.66$)
Capacity/empowerment		
<i>Psychological empowerment</i> —generated by combining five individual constructs (see rest of tables for descriptions of the individual constructs): Perceived knowledge and skill development, Perceived participation competence, Expectancies for future individual contributions, and Expectancies for future group/organizational accomplishments (Table II) and Perceived group/organizational accomplishments (Table VI) (McMillan <i>et al.</i> , 1995)		
<i>Organizational empowerment</i> —key informant ratings of group's impact on organization's policies and use of resources (McMillan <i>et al.</i> , 1995)	2 items; key informant rated	

Table VI. Continued

Construct and conceptual definition (reference)	No. of Items	Validity and reliability
<i>Organizational empowerment</i> —coalition impact on policies and regulations; impact on donations/resources generated (McMillan <i>et al.</i> , 1995)	2 items	
<i>Perceived Control Scale</i> —multiple levels of empowerment assessment: individual, organizational, community levels and overall (Israel <i>et al.</i> , 1994)	12 items	overall ($\alpha = 0.71$), individual (2 items, $\alpha = 0.66$), organizational (5 items, $\alpha = 0.61$), community (5 items, $\alpha = 0.63$)
<i>Community Residents Survey</i> —community competence (item development based upon Cottrell's dimensions of community competence) (Goepfing and Baglioni, 1985)	22 items; democratic participation style = 5 items; crime = 2 items; resource adequacy and use = 6 items; decision-making interactions = 2 items	factor analysis: oblique rotation found four distinct factors (items with factor loading ≥ 0.25 were retained); one item ('all residents may participate') loaded on two factors: democratic participation style (0.274) and resource adequacy and use (0.254); the four factors explained 35% of variance.
<i>Community competence</i> —eight dimensions of assessment of multiple skills/capacity (Eng and Parker, 1994)	41 items	participation (9 items, $\alpha = 0.68$), commitment (6 items, $\alpha = 0.71$), self-other awareness and clarity of situation (3 items, $\alpha = 0.58$), articulateness (3 items, $\alpha = 0.65$), conflict containment and accommodation (4 items, $\alpha = 0.81$), management of relations with larger society (3 items, $\alpha = 0.75$), machinery for facilitating interaction and decision making (10 items, $\alpha = 0.79$), social support (3 items, $\alpha = 0.67$)

broad categories in Table I will help address the range of factors that may influence effectiveness and provide evaluation data to be used to guide the process and refinement of coalition building.

In selecting measures to match the community context, consideration of the expectations, needs and goals of stakeholders, as well as the project's evaluation plan should be considered. In some instances, measures that are not related to the evaluation plan *per se* may hold local interest for stakeholders and are therefore worth including.

In choosing measures, a rule of thumb for minimally acceptable internal consistency reliability is 0.70 for relatively new areas of investigation (Nunnally and Bernstein, 1994). For scales that have been factor analyzed to establish construct validity, retaining items with factor loadings ≥ 0.40 is the norm (Hatcher, 1994). Validation of individual items and scales is more difficult to assess, and is less commonly reported in the research literature, but the quality of a measure increases with evidence of validity. If a measure is not valid,

reliability does not matter (Nunnally and Bernstein, 1994).

Another consideration regarding measurement properties is the population with which the measure has been used. Measures that have performed well in terms of validity or reliability in one population may not perform the same way when used with a different population or subgroup of different age, ethnicity or income. Measures should, therefore, be tested with the intended population.

The tools have been reported in the tables as individual measures under a conceptual heading. Some of these tools are part of a collection of measures that were developed within a conceptual framework and therefore may have added value when administered as a set. Readers are urged to review the original sources.

In addition to development or selection of measurement tools, there are additional conceptual issues concerning measurement of constructs related to coalition functioning. In particular, there remains a need for a better understanding of the inter-relationships among stages of development, factors influencing optimal functioning and attainment of outcomes (Butterfoss *et al.*, 1993; Kegler *et al.*, 2000), as well as how these factors may interact with different types and sizes of coalitions, partnerships or other collaboratives (Florin *et al.*, 1993). Understanding of how concepts within a framework may evolve with a coalition over time may provide information for strategies to enhance the development and sustainability of coalitions, and to help improve the ability of coalitions to influence both proximal and distal outcomes.

Before these associations can be evaluated, standardized measurement tools with documented validity and reliability are required. Typically, coalitions have a relatively small number of members compared to the sample sizes required for validity and reliability analyses. Further, evaluation of multiple programs or coalitions is hindered by the fact that certain types of coalitions may be difficult to locate for research and are widely dispersed (Berkowitz, 2001). Exploration of key coalition characteristics and aspects of coalition functioning predictive of success is possible only when adequate

sample sizes are available; thus, in addition to large-scale psychometric studies, the widespread use of select measures across many evaluation projects would facilitate generalization of results.

Given the broad array of available measurement tools and lack of conceptual consensus thus far in the research literature, users of this summary are advised to take the following approach to their evaluation of coalition functioning. (1) Identify an overarching framework, theory or combination of theories. Although there are several theories that may be relevant, one promising theory that provides a comprehensive framework for evaluation and understanding coalition functioning is Butterfoss and Kegler's (Butterfoss and Kegler, 2002) Community Coalition Action Theory, which may be enhanced with consideration of a more detailed conceptualization of stages of coalition development [e.g. (Florin *et al.* (1993))]. Measurement tools in the tables could be matched to the theoretical constructs of the Community Coalition Action Theory to address, or at least partially address, evaluation of each construct. For example, the construct of *coalition membership* could be addressed by measures of commitment and representation in Table II. The construct of *leadership and staffing* could be addressed by measures of leadership and staff performance in Table III. *Coalition operations and processes* could be addressed by measures of skills and experience and participation benefits and costs from Table II, and measures of communication, conflict management, decision making and group relationships from Table IV. [See (Butterfoss and Kegler, 2002) for definitions of the theory's constructs.] (2) Identify specific evaluation objectives based on project needs, community context and various stakeholders' expectations for evaluation. Consider the following: scope of the project, the available resources, delimiting the pool of concepts to be measured, use of qualitative and quantitative methods, and stages of coalition development. (3) Identify measurement tools with adequate validity and reliability, and/or create and validate new tools if time and resources allow.

In clinical research, consensus panels have been formed to review the literature, summarize the

current state of knowledge, make recommendations for future research and practice [e.g. (National Institutes of Health and National Heart, Lung and Blood Institute, 1998)], and suggest or develop core measures for use across clinical trials [e.g. (Peeples *et al.*, 2001; Siegal *et al.*, 2001)]. Such a consensus panel that includes discussion of measurement tools within the broader context of coalition building, maintenance and institutionalization would be useful in the development of a definitive consensus document that communities and researchers could use as a platform for developing effective local partnerships. These efforts may result in the development of a foundation of data upon which comparisons between partnerships could be made, provide guidance for increasing effectiveness and sustainability, and provide impetus for increased funding of successful coalitions or partnerships. In the meanwhile, this guide will provide researchers and practitioners a starting point to locate existing measurement tools.

Acknowledgements

The authors thank Delores Pluto for website technical assistance. This article was supported in part by Cooperative Agreement Number U48/CCU409664 from the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention.

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Received on January 2, 2003; accepted on September 2, 2003