Integrating Asthma Prevention and Control: The Roles of the Coalition

James W. Krieger, MD, MPH
Emily Bourcier, MPH, MHA
Marielena Lara, MD, MPH
Jane W. Peterson, PhD, RN
Michael P. Rosenthal, MD
Judith C. Taylor-Fishwick, MSc, AE-C
Amy R. Friedman, MPH
Laurie L. Lachance, PhD, MPH
Linda Jo Doctor, MPH

Activities addressing pediatric asthma are often fragmented. Allies coalitions promoted integration, the alignment of concurrent asthma control activities across and within sectors. Systems integration *describes activities from an organizational perspective. Activities included developing a shared vision, promoting consistency in asthma education and self-management support, improving adherence to clinical guidelines, advocating jointly for policy change, and seeking funds collaboratively.* Service integration *describes activities focused on ensuring seamless, comprehensive services through coordination within and across organizations. Activities included use of community health workers (CHWs) and nurses for care coordination, program cross-referral, and clinical quality improvement. Integration is a sustainable role for coalitions as it requires fewer resources than service delivery and results in institutionalization of system changes. Organizations that seek integration of asthma control may benefit.*

Keywords: *asthma; child; coalitions; coordination of care; integration*

Health Promotion Practice
Supplement to April 2006 Vol. 7, No. 2, 127S-138S
DOI: 10.1177/1524839906287059

When the Allies Against Asthma (Allies) coalitions began their work, local activities to control pediatric asthma were fragmented. People with asthma did not know how to access asthma management resources. Some services were unavailable while others were duplicated. Organizations serving people with asthma were often unaware of the full range of services in the community or did not have mechanisms to refer clients to them. They competed for funding and other resources. The educational materials and messages about asthma prevention and control they offered were inconsistent. Communication among medical providers, school staff, and caretakers of children with asthma was limited; sharing of patient

Editors' Note: *This article is part of a special supplement of* Health Promotion Practice *that describes the development and implementation of the Allies Against Asthma (Allies) initiative. Funded by the Robert Wood Johnson Foundation with direction and technical assistance provided by the University of Michigan School of Public Health, Allies provides support to seven community-based coalitions nationwide to develop, implement, and sustain comprehensive asthma management programs. Through Allies, each coalition received grants totaling approximately US$1.5 million to support the coalition, its targeted activities, and evaluation for 1 year of planning and 3 to 4 years of implementation. The supplement describes the first phase of the initiative, during which coalitions designed and implemented a range of activities including improved access to and quality of medical services, education, family and community support, and environmental and policy initiatives. More information about the initiative and tools and materials developed by the coalitions can be found at www.AlliesAgainstAsthma.net.*

The Authors

James W. Krieger, *MD, MPH, is the project codirector of the King County Allies Against Asthma program of the King County Asthma Forum (KCAF), clinical associate professor of Medicine and Health Sciences, and attending physician at the University of Washington; and chief of Epidemiology Planning and Evaluation at Public Health—Seattle & King County in Seattle, Washington.*

Emily Bourcier*, MPH, MHA, is the evaluation coordinator of the King County Asthma Forum (KCAF) and a program manager with the Evaluation Team at Group Health Community Foundation in Seattle, Washington.*

Marielena Lara*, MD, MPH, is the project director of Alianza Contra el Asma Pediátrica en Puerto Rico (ALIANZA) and the UCLA/RAND Program Latino Children with Asthma, UCLA Department of Pediatrics and RAND Health in Santa Monica, California.*

Jane W. Peterson*, PhD, RN, is the project director for the King County Allies Against Asthma program of the King County Asthma Forum (KCAF) and professor at Seattle University College of Nursing in Seattle, Washington.*

Michael P. Rosenthal*, MD, is cochair of Philadelphia Allies Against Asthma (PAAA), and clinical professor and vice chair of academic programs in the Department of Family and Community Medicine at the Jefferson Medical College of Thomas Jefferson University in Philadelphia, Pennsylvania.*

Judith C. Taylor-Fishwick*, MSc, AE-C, oversees the Allies Against Asthma initiative for the Consortium for Infant and Child Health (CINCH), and other community-based asthma programs, as an assistant professor of pediatrics at Eastern Virginia Medical School in Norfolk, Virginia.*

Amy R. Friedman*, MPH, is the deputy director of Allies Against Asthma and head of Dissemination and Training at the Center for Managing Chronic Disease at the University of Michigan School of Public Health in Ann Arbor, Michigan.*

Laurie L. Lachance*, PhD, MPH, is the evaluation director of Allies Against Asthma, associate of the Center for Managing Chronic Disease and an assistant research scientist in health behavior and health education at the University of Michigan in Ann Arbor, Michigan.*

Linda Jo Doctor*, MPH, is the former deputy director of Allies Against Asthma at the University of Michigan School of Public Health and a program director for health at the W.K. Kellogg Foundation in Battle Creek, Michigan.*

management information and coordination of care was the exception.

Within the medical sector, there was minimal follow-up for children visiting the emergency department (ED) for asthma exacerbations, and no coordination among ED, hospital, and primary care providers. The asthma disease management efforts of managed care organizations (MCOs) were weakly linked to local community services and providers. Approaches to asthma management varied across providers and insurers.

This fragmentation of asthma efforts led to inefficient use of resources and lost opportunities for helping families affected by asthma. As Allies coalitions assessed local asthma control efforts and implemented new services, integration of uncoordinated local asthma activities emerged as a priority. When the Allies program began, the National Program Office (NPO) conceived of integration as the development of coordinated interventions in multiple sectors to address asthma at the clinical, community, and environmental levels. This initial description of integration was abstract and did not include strategies to promote integration. As part of their ongoing work, the coalitions developed specific, locally appropriate integration mechanisms. Consideration of these mechanisms led inductively to a more refined concept of integration.

In this article, we describe the strategies the coalitions developed to promote integration, discuss barriers to implementing these strategies, and explore the characteristics of coalitions that may promote integration. Future articles will assess the impact of coalitions on integration and the value of integration for asthma control activities.

BACKGROUND

To describe the coalitions' experiences with integration, we reviewed literature from the business, medical, human services, and public health fields to develop a definition of integration in the context of asthma prevention and control. Two approaches to integration emerged from this review as particularly relevant to the work of the Allies coalitions: service integration and systems integration.

Service integration describes activities from a client perspective. It focuses on coordination of services to increase accessibility and continuity of care (Agranoff, 1991). Service integration can occur at the interorganizational level, intraorganizational level, and client level (Rosenheck et al., 1998). Examples include improving access to care, providing consistent health information, coordinating services and information flow (De Jong & Jackson, 2001; Randolph, 1995), and offering patients one-stop shopping with a holistic perspective (Abed et al., 2000; Conrad & Shortell, 1996).

Systems integration describes activities from an organizational perspective. It includes the development

of interagency partnerships within and across sectors to promote collaboration on projects and engage in systematic data-based planning to identify and fill gaps in services, improve quality and consistency of service delivery, reduce duplication and bureaucracy, coordinate fund-raising, share in infrastructure development, and pursue common policy objectives (Abed et al., 2000; De Jong & Jackson, 2001; Fleury & Mercier, 2002; Randolph, 1995; Randolph et al., 2002).

The reasons for health organizations to pursue greater integration include (a) enhancing the performance of the medical care and public health systems to improve the health and well-being of the overall population (Abed et al., 2000; Cagan, Hubinsky, Goodman, Deitcher, & Cohen, 2001), (b) furthering the organization's goals and/or interests (Cagan et al., 2001; Gamm, 1998; Provan & Milward, 1994) through programs that cannot be achieved without partnering with other organizations, (c) carrying out complex and wide-ranging operations without minimizing the benefits of small-scale interventions adapted to specific contexts and local needs (Fleury & Mercier, 2002), (d) finding allies to advocate for common issues, (e) engaging in collective learning and problem solving, (f) responding to the multiple needs of consumers (Agranoff, 1991; Fleury & Mercier, 2002), (g) accessing additional clients, (h) sharing resources rather than duplicating them, (i) thriving and being responsive to the constantly changing environment (Aikman, Andress, Goodfellow, Labelle, & Porter-O'Grady, 1998), and (j) transforming competition for resources into maximizing competitive advantage for obtaining resources.

Through consideration of the literature and discussions with Allies staff and grantees, we arrived at the following definition of *integration* applicable to the work of Allies: *Integration* is the alignment of concurrent activities across and within sectors in pursuit of a shared vision and common goals. Coalitions identified their vision and goals through a participatory planning process and defined the activities of each partner organization in realizing the common goals. Each partner sought ways to link its activities with those of other organizations and to incorporate shared approaches and strategies identified by the coalition into its own activities.

Other initiatives addressing chronic illnesses have also recognized the importance of integration. The Robert Wood Johnson Foundation's (RWJF) Improving Chronic Illness Care program employs the chronic care model (Bodenheimer, Wagner, & Grumbach, 2002) to promote intraorganizational integration. The U.S. Department of Health and Human Services' Steps to a Healthier U.S. initiative (Steps) addresses multiple chronic diseases by integrating prevention and control activities through a focus on common risk factors and strategies. The Centers for Disease Control and Prevention's (CDC) Comprehensive Cancer Control program integrates cancer control activities across categorical programs.

STRATEGIES FOR INTEGRATION

The Allies coalitions implemented service and systems integration strategies, which are summarized in Table 1. Both types of strategies can be grouped into several dimensions. The *governance* dimension refers to decision making at the coalition level; *guidelines and standardization* to implementation of a uniform and evidence-based approach to asthma management; *service delivery* to coordination of direct services to people with asthma; *data and evaluation* to coordinated approaches to data collection, management, and evaluation; and *policy and advocacy* to shared efforts to influence governmental and institutional policies that affect asthma. Service integration focused on the guidelines, service delivery, and data dimensions whereas systems integration included activities in all dimensions. The following sections describe how the coalitions implemented the strategies to address these dimensions of service and systems integration.

Service Integration

Provision of coordinated and comprehensive client services was the integration approach most commonly used by the Allies coalitions. Approaching integration from the perspective of the client was consistent with the Allies' value of placing the needs of families affected by asthma at the center of coalition work. Sites coordinated partners' existing services and developed new ones to fill gaps through implementation of activities in several integration dimensions, which we now describe.

Guidelines and Standardization

Clinical quality improvement. Medical providers recognized that within their clinics, care was often fragmented and not consistent with national asthma guidelines (National Asthma Education and Prevention Program [NAEPP], 1997). The King County Asthma Forum (KCAF) supported integration of services and adoption of a uniform approach to asthma management within and across clinics (Lara et al., 2006 [this issue]) through sponsorship of a collaborative learning process whose goal was implementation of the chronic care model (Bodenheimer et al., 2002). Through asthma management

TABLE 1
Dimensions of Integration

	Activities	
Dimension of Integration	*Service Integration*	*Systems Integration*
Governance		Participation on a coalition
		Shared vision
		Joint decision making about funding opportunities, grant applications, and resources
Guidelines and standardization	Clinical quality improvement to implement guidelines	Action plans and other consistent asthma control tools shared across agencies
		Agreement on guidelines, standards, and best evidence
		Accurate, uniform, culturally appropriate educational materials shared across agencies
		Common asthma messages
Service delivery	Centralized triage and referrals	Agreement on roles played by member organizations
	Program cross-referrals	Cross-agency coordination committees and mechanisms
	Community health workers, care coordinators, case management	Resource sharing (training, protocols, etc.)
Data and evaluation	Data sharing	Data sharing
		Disease registries
		Shared evaluation methods and resources
Policy and advocacy		Shared policy agendas
		Shared advocacy resources

training for health providers and formation of multidisciplinary teams, participating clinics made progress in developing comprehensive systems consistent with guidelines for managing asthma. In Milwaukee, an allergist provided on-site asthma education to clinic staff that emphasized team building and coordination of efforts.

Service Delivery

Community health workers (CHWs). CHWs were a core intervention at most Allies sites. CHWs are community residents who share culture with their clients, receive training in asthma management, and offer health education and support to families affected by asthma, as described in an accompanying article (Friedman et al., 2006 [this issue]). One of their important roles was linking clients with the full range of Allies' and other community asthma resources and promoting coordination of these services. They connected clients to classes, medical care, medications, home environmental inspections, social services, and housing resources. CHWs and their supervising nurses provided clinicians with visit reports and asked them for action plans, notified the child's school and after-school programs of asthma-related issues, and at some sites, contacted the pharmacist filling the child's prescriptions. Sites held case management meetings with CHWs, supervising nurses,

and others to promote creative, cross-disciplinary solutions for clients' issues and to identify opportunities for integration of services. CHWs linked clients to support in other sectors. For example, when a CHW with Long Beach Alliance for Children with Asthma (LBACA) observed unhealthy conditions in a rental home that required repairs by the owner, the family was referred to Legal Aid and a tenant-organizing group.

CHWs promoted the use of consistent approaches to asthma self-management support. After completing Physician Asthma Care Education (PACE; Clark et al., 2000) training, LBACA physicians were able to refer patients to a CHW. The CHW used a standard set of asthma resources (e.g., action plans, patient education materials) and encouraged the PACE-trained providers to use the same resources, thereby promoting a more consistent approach.

Care coordinators and case managers. Several sites employed nurses as care coordinators and case managers, as detailed in an accompanying article (Rosenthal et al., 2006 [this issue]). The coordinators systematically assessed a client's needs for education, medical care, medications, social support, housing, and other services. They made referrals and followed up with service providers and clients to ensure receipt of services. The asthma management coordinator (a public health nurse) for KCAF promoted communication and cross-referrals between CHWs and clinics. The Alianza Contra el Asma Pediátrica en Puerto Rico (the ALIANZA) stationed a nurse coordinator at the local clinic to promote implementation of the local MCO's disease management program among clinic staff and to coordinate care between the MCO and the clinic. Fight Asthma Milwaukee Allies (FAM Allies) conducted two studies to assess the effectiveness of care coordination by the local health department and by visiting nurses who provided home asthma education and case management (Gorelick, et al., in press; Schulte, Musolf, Meurer, Cohn, & Kelly, 2004).

Program cross-referral. Sites developed specific protocols to systematize cross-referrals and communication among Allies and other community asthma resources. Clinics established fax, telephone, and e-mail mechanisms to allow service providers to connect patients with CHWs, care coordinators, and case managers. To the extent possible under Health Insurance Portability and Accountability Act (HIPAA) regulations, clinics and CHWs used client lists to identify those who would benefit from asthma classes, home visits, and other services. They then assisted service providers in recruiting clients to these opportunities. Sponsors of community asthma classes and other services regularly notified clinics and CHWs of their offerings, who in turn referred clients. Instructors of asthma classes encouraged participants to use Allies and other community services. In some cases, CHWs taught the classes or attended them to recruit clients. The DC Asthma Coalition (DCAC) established three neighborhood-based multidisciplinary teams that included community health clinic and ED staff, pharmacists, school nurses, day care workers, family caseworkers, environmental specialists, and the coalition's CHWs. The teams conducted intensive needs assessments, interventions, tracking, and follow-up. Medical providers participating in the teams used community resources previously unknown or unavailable to them.

Centralized triage and referral. Development of a single contact point to access community asthma services was another service integration strategy. Philadelphia Allies Against Asthma (PAAA) implemented the most sophisticated approach through the development of its Child Asthma Link Line. The Link Line is a centralized telephone bank staffed by health educators who work with families to identify their needs and link them to the city's many asthma programs and services. Link Line staff provide follow-up support and coordination for each family over 4 months to ensure it receives services. KCAF took a less intensive approach by establishing toll-free telephone access to coalition staff (in three languages) that assessed the caller's needs for service and offered relevant referrals. With the caller's permission, staff also contacted the service providers, who then followed up with the client. In Milwaukee, the local health department social worker used a protocol to refer families to home nursing agencies.

Data

Some sites established electronic data-sharing systems to facilitate transfer of client information across providers. For example, DCAC and its partners developed a pilot data system that linked health and human service providers in a secure electronic network for real-time data sharing and case coordination. Others relied on paper-based systems, such as faxing of encounter summaries, to increase communication across providers. Care coordinators, case managers, and CHWs promoted data sharing between schools and medical providers through telephone calls and written communications.

Systems Integration

Coalitions developed activities aimed at systems integration that addressed each of the five dimensions of integration.

Governance

Developing a shared vision. All sites conducted strategic planning to identify gaps in current services and developed a community action plan. Each plan represented a shared vision among coalition partners of how best to control asthma locally. As the plans developed, opportunities for integration became apparent: logical cross-referral patterns surfaced, roles for each partner emerged, and targets for collective resource generation developed.

Funding and resources. Coalition members integrated resources for asthma control. In King County, three CHW programs shared staff training, client assessment tools, intervention protocols, educational materials, and office space. The coalitions facilitated sharing of information about funding sources among partners. They coordinated funding applications to avoid competition among members and integrated newly funded activities with existing ones. FAM Allies designated different partner agencies to lead grant writing for proposals on behalf of the coalition. Integration increased the ability of organizations to compete successfully for funding because they could position themselves as part of a larger, comprehensive community effort.

Guidelines and Standardization

Action plans. Asthma action plans are simple, visually oriented instructions for patients to follow when asthma control deteriorates (Gibson & Powell, 2004). Several sites promoted the use of a single asthma action plan by all asthma care providers (including clinicians, health educators, CHWs, and schools). These plans are available at the coalitions' and NPO Web sites (see Appendix C). The Consortium for Infant and Child Health (CINCH) developed an action plan with input from physicians, school health coordinators, and nurses, and all seven school systems in the county subsequently adopted the plan. The coalition distributed plans to parents, schools, and providers. In Philadelphia, MCOs worked collaboratively with the coalition to produce a common, 1-page asthma action plan that was approved by the state Medicaid agency for all Philadelphia providers serving Medicaid patients and is being used by the MCOs and their providers.

Clinical guidelines. Provider adherence to the NAEPP guidelines (1997) may increase the consistency and quality of asthma care, yet, all sites found marked discrepancies between guidelines and actual practice, consistent with observations reported in the literature (Halterman, Aligne, Auinger, McBride, & Szilagyi, 2000). All sites disseminated the NAEPP guidelines to medical practitioners. Many offered provider education, on-site technical assistance, and resources such as asthma registries (Lara et al., 2006) to promote guideline implementation.

Patient education resources. Many sites reviewed a large quantity of asthma materials for accuracy, appropriate literacy, cultural competence, and cost. The coalitions then distributed selected materials to clinics, schools, CHWs, and other community sites. Several sites partnered with the NPO to select the best available Spanish language resources (see Appendix C for access to the instruments used in this review).

Common asthma messages. Coalitions provided a forum for developing a set of simple asthma messages that all partners agreed to use. For example, PAAA developed a basic Asthma 101 presentation that was used by all members. FAM Allies created a community report that included messages about appropriate asthma management.

Service Delivery

Integrating service delivery at the client level required communication and coordination at the agency level. Coalitions helped agencies define their respective roles in service delivery, establish protocols for cross-referrals and coordination of care, and agree to use common resources and asthma management protocols.

Role definition. As coalitions developed plans for integrated asthma client services, duplication of some services became apparent. In some cases, the coalitions helped the organizations providing these services to define niches each would occupy and developed referral mechanisms to triage clients across organizations. For example, five projects in King County provided home visits to assess indoor environmental conditions, although each alone had capacity for a relatively small number of clients. The projects worked out eligibility criteria for each program so that each served a somewhat distinct population. FAM Allies brokered interorganizational agreements that designated the local health department as the care coordination agency. Public health staff referred patients impartially to a variety of providers using agreed-on criteria. In other cases, it was not possible to eliminate redundant services because of each agency's interest in continuing its own services.

Coordination mechanisms. Coalitions brought together programs offering asthma services in defined communities to develop linkage mechanisms. Implementing an

integrated multisector plan was easier in small communities, such as the public housing sites served by CINCH. Each service intervention was designed to link to the others offered at the public housing site. Community health workers conducted home visits and linked clients to services. Physicians serving children living in the site were invited to a PACE asthma education program. Nurses at the nearby school faxed information about the child's asthma management to medical providers. The coalition provided local faith-based organizations with sermon notes and other educational resources to promote consistent messages about asthma.

The coalitions operating in larger geographic areas with greater numbers of providers developed other systems to bring program staff together to work out the logistics of integration. This time-consuming but valuable work included determining appropriate referral criteria for each service, specifying referral mechanisms, and following up over time to ensure implementation. Some sites established work groups from multiple programs while others used more informal communication channels. Because of the time involved and lack of familiarity with working in a coordinated manner, some sites found it difficult to maintain consistent participation in the coordination process. Coalitions invested substantial resources (coalition staff time and incentives to partners) to sustain the coordination efforts.

Resource and protocol sharing. Cross-agency coordination often led to sharing of common asthma resources and protocols across programs. For example, FAM Allies found that over time, interorganizational coordination allowed the development of common educational protocols, environmental assessment tools, and evaluation data for use by health department staff, insurers, home nurses, environmental inspectors, cleaners, and evaluators. In Philadelphia, PAAA brought together several usually competitive health care institutions and the Medicaid MCOs and helped them establish common goals and efforts, leading to shared resources such as the asthma action plan described above.

Although these examples illustrate how systems integration was valuable for integrating services at the client level, we also observed that the service integration activities could lead to increased systems integration. Implementation of case management and coordination services increased interagency communication. As service providers coordinated care for clients, they found that consistency in messaging and use of the same patient education resources and practice protocols made it easier for their clients and staff to manage asthma. As they attempted to exchange clinical information on shared clients, the value of agreement on common client database definitions became apparent.

Data and Evaluation

Data sharing. Using common client databases made it easier to track asthma patients and to collect comparable data on service processes and outcomes. KCAF created an asthma module for an existing chronic disease registry, installed it at five clinics, and provided technical support. The registries now contain uniform data on 1,700 patients, including asthma severity, medications, services received, and referrals. FAM Allies developed a confidential, Web-based tracking system with information on more than 4,000 children seen at six EDs.

Shared evaluation methods. Comparable data and common evaluation methods allow for more comprehensive evaluation of community asthma programs. For example, FAM Allies pooled evaluation data from several nursing agencies and the local health department, supported core evaluators available to all partners, and developed shared evaluation measures and tools. Partners received data at lower cost than if they had conducted the evaluation independently. The CHW and clinical programs in King County adopted common asthma severity measures. Members of the KCAF Quality Improvement Collaborative agreed on four common indicators of quality of care and submitted monthly indicator reports. The ALIANZA facilitated sharing of data between a MCO, the community, and the academic partners overseeing the evaluation.

Policy and Advocacy

Shared policy agendas. Some sites made strides toward developing shared policy agendas for which coalition members agreed to advocate. In Long Beach, potential policy issues emerged from multiple stakeholders such as CHWs, PACE trainees, and families attending asthma education activities. When the coalition observed common issues emerge across stakeholders (e.g., access to spacers), it was able to implement an advocacy strategy that coordinated the influence of coalition members.

Several coalitions targeted reduction of asthma triggers through improving environmental quality. LBACA joined environmental organizations to minimize exposure to vehicle exhaust from new highway construction in residential neighborhoods. CINCH conducted a series of housing summits to increase awareness in the housing sector of the link between asthma and environmental triggers in the home (Nicholas et al., 2006 [this issue]). KCAF worked with a local public housing

authority to implement a policy to relocate residents with asthma to units less affected by moisture and mold. Its members also obtained funding and provided technical advice to the housing authority for development of new low-allergen homes for residents affected by asthma.

Other sites addressed clinical and reimbursement policies. Quality improvement efforts such as improvement collaboratives and implementation of the chronic care model led health providers to adopt clinic policies to ensure assessment of asthma severity at each provider visit and to provide free medications and devices to patients (Lara et al., 2006). Some coalitions advocated for payor reimbursement for CHW and other asthma education services. FAM Allies and its partners successfully promoted increased access to medications through modifications in Medicaid prior authorization policies.

Shared advocacy resources. Coalitions facilitated sharing of advocacy resources. Some sponsored advocacy training workshops for members. Advocacy staff (e.g., lobbyists) of member organizations promoted coalition policies.

COALITIONS AND INTEGRATION

The preceding sections on systems and service integration illustrated how coalitions facilitated integration activities. We now discuss how specific attributes of coalitions allowed the Allies coalitions to do so.

Coalition Structure and Function

Coalition structures (Butterfoss, Gilmore, et al., 2006 [this issue]; Butterfoss, Lachance, Orians, 2006 [this issue]) promoted integration activities. Steering committees and coalition staff brought together organizational decision makers, defined a vision for integration, and identified approaches for integrating activities. Individual organizations were often unaware of asthma activities beyond their own work. As members learned of each other's activities at meetings and through networking, they saw opportunities to coordinate their work. Coalition staff worked with individual organizations to suggest opportunities and mechanisms for linkage with other organizations. Coalition cross-project coordination work groups worked out the details of program integration, such as cross-referral mechanisms, use of common action plans and education materials, and responsibility for specific activities. Many coalitions had committees focused on specific sectors (e.g., schools, medical providers). These committees became a locus for developing a common approach within sectors and for pursuing cross-sector coordination.

Joint strategic planning and resource allocation is a major integration activity. Most sites held planning retreats to develop a shared vision of asthma control and develop a strategic plan to attain it. They periodically reviewed the vision and plan during the course of the Allies program. The plans tended to be comprehensive, calling for activities that exceeded coalition resources. Initially, members had differing views on which activities to prioritize. Through structured prioritization processes (e.g., nominal group process, voting) and informal discussion, agreement emerged to emphasize specific plan components. The plans specified which organization(s) would be responsible for each activity, thus reducing duplication of services. Because the plans provided an overview of activities and increased each organization's awareness of the activities of other members, plans made opportunities for integration more apparent. Through joint planning, coalition members recognized that integration requires resources, and they allocated coalition staff time to promote coordination and develop shared resources, despite initial desires to allocate most funds to programmatic activities and services. Joint planning allowed members to share resources, leading to consistent approaches to asthma management (e.g., in King County, the same CHWs educated individual clients and child care providers).

The annual Coalition Self-Assessment Survey (CSAS) provides insights into the degree to which members viewed their coalitions as successfully performing integrative functions. All Allies coalitions survey their members yearly using the CSAS. This tool quantitatively assesses the views of the membership toward a variety of factors associated with successful functioning of a coalition including benefits of participation and opinions of effectiveness. The survey is administered by local staff on-site at a general membership meeting or via U.S. mail to members who have attended at least two coalition meetings within the 12 months leading up to the survey. Included are views of all Allies coalition members. Responses did not change across survey years; thus we report data aggregated across 3 years. Surveys of coalition members showed that more than two thirds of members at each site agreed their coalition had attained a shared view of mission, priorities, and strategies and agreed their coalition had developed an action plan that described their roles and responsibilities. Fewer sites pursued policy advocacy, an activity that usually integrates the efforts of several organizations.

TABLE 2
Members' Views on Benefits of Coalition Integration Activities

	Some or Great Benefit		*Great Benefit*	
Type of Benefit	*M %*	*Range %*	*M %*	*Range %*
Developing collaborative relationships with other agencies	82.6	71-89	51.9	44-60
Helping organization move toward its goals	77.3	70-86	41.9	32-55
Getting access to priority populations	62.7	49-77	30.4	17-50
Getting support for my organization's policy issues	60.1	47-82	31.0	19-55
Getting services for our clients	57.3	46-74	31.4	23-48
Getting referrals from others	40.1	28-58	19.4	8-33
Getting funding	27.0	14-35	15.9	8-21

NOTE: Data collected from the Coalition Self-Assessment Survey (CSAS; Lachance et al., 2006).

Benefits of Integration for Coalition Members

Data from the CSAS survey (Table 2) suggest that members saw the greatest benefits of integration as the development of collaborative relationships and support for their organization attaining its goals. Coalitions were moderately successful in helping members access priority populations, obtain services for clients, and find support for their policy objectives. Coalitions appeared less valuable in helping members obtain referrals from other members and external funding. Some organizations found that integration gave them resources and technical assistance to improve the quality of their services.

Evaluating Coalition Integration Efforts

As described more fully by Lachance et al. (2006 [this issue]), additional assessment of the coalition's efforts related to integration are being captured through the Allies cross-site evaluation. In addition to CSAS data, data related to integration are being collected through two additional evaluation components: key informant interviews with coalition staff and leaders, coalition members, and community leaders from each site; and Program Reach, a Web-based tracking system for coalition activities. Key informant interviews, conducted at two points in time, will provide qualitative data regarding participant's perceptions of coalition impact, including efforts toward and successes related to integration. Program Reach will provide information about system integration and coordination activities conducted by coalitions according to systems involved and corresponding time periods.

DISCUSSION

The Allies coalitions increased integration of community asthma activities through an inductive approach emerging through experience rather than one based on a preconceived plan.

Coalitions as a Force for Integration

The characteristics of coalitions make them well suited to promoting integration. They are safe and neutral forums in which organizations can develop trusting relationships, develop shared objectives, and implement integration activities. They offer potential as a mechanism for holding organizations accountable for integrating their work with that of others.

It is not coincidental that many factors associated with successful integration are also characteristics of successful coalitions (Butterfoss & Francisco, 2004; Kegler, Steckler, McLeroy, & Malek, 1998). Both are enhanced by excellent communication, cultures of openness and creativity, articulation of a clear vision and strategy, strong relationships, and positive prior experiences. The better-established Allies coalitions demonstrated more of these characteristics and were able to achieve greater integration.

Integration as a Coalition Function

Promoting integration may be the most sustainable role for many coalitions. With far fewer resources than needed for program implementation, coalitions can facilitate networking, communication, and joint activities

among members. Coalition members, rather than the coalition itself, may be better suited for providing services. This allows coalition staff to focus more on integration, policy, and communication tasks and may increase the likelihood of sustaining services as funding sources come and go because staff and services are built into member organizations' infrastructures. For example, clinics that participated in KCAF's quality improvement efforts are continuing them with their own resources.

Barriers to Integration

The coalitions faced barriers that limited the speed and extent of their integration activities. Conceptually all partners agreed on the value of integration; however, each organization had its internal priorities. Members needed autonomy, favored certain approaches, and had varying degrees of senior leadership interest in asthma and coalition activities. Members were not always willing or able to implement components of the community asthma action plan. Political and historical rivalries countered progress. Members' need for retaining distinct identities to maintain market share and raise funds may have limited their interest in integration. The coalitions could only persuade, not direct.

A major obstacle was the challenge for members to find the time and resources needed for integration. Participation in integration activities can require anywhere from 4 to 8 hours of staff time per month per organization. Additional time is needed during more intensive periods such as protocol alignment or proposal preparation. If coalitions can offer members fiscal support in exchange for committed staff time for integration work, integration may proceed more rapidly.

The coalitions had mixed success engaging larger organizations in integration activities. Although hospitals and health plans in King County attended some coalition meetings and voiced support for coalition activities, they did not participate in integration efforts in a substantial way. In part, this was because of lack of coalition staff time to pursue the necessary relationships with these institutions, in part to institutional priorities other than asthma, and in part to institutional emphasis on the medical aspects of asthma management and lack of familiarity with community-based approaches. On the other hand, Philadelphia insurers participated in the Child Asthma Link Line. They perceived that their enrollees would be connected with care, preventing further expensive ED visits. A readiness on the part of the larger institutions to collaborate and the salience of the asthma issue in Philadelphia may also have aided coalition-initiated integration efforts.

Benefits of Integration

This article does not attempt to evaluate the effectiveness of coalitions in furthering the integration of asthma activities nor the impact of integration on asthma outcomes. Such an analysis is premature. Our initial impression is that integration enabled some organizations to expand access to priority populations, obtain funding, increase services for clients, and gain support for organizational policy positions. Members also noted that integration resulted in improved functioning of the health system, created the capacity to address problems not easily tackled by single organizations, and allowed more efficient use of resources. They ultimately became convinced that integration increased quality of life for people with asthma in their communities. The positive experience with integration has led coalition members to expand integration in their communities and beyond. Local Allies coalitions now play key roles in developing state asthma plans, which have potential to increase integration at the state level.

Capacity for Integration

The barriers to integration were overcome as coalitions and participating organizations developed the capacity to address them. Availability of substantial coalition staff time (i.e., close to one full-time equivalent) for engaging organizations in integration efforts and knowledge of integration strategies was critical. Member organizations needed to gain a mutual understanding of each other's goals and programs, develop specific integration mechanisms, and designate staff time for participation in integration activities. For example, PAAA identified participation by MCOs and hospitals as essential for ensuring coordination of service delivery and allocated staff and member time for recruitment of these organizations. At all sites, the development of a strong coalition steering committee increased awareness of integration strategies, allowed members to develop an appreciation for each other's perspectives, and provided a forum to design specific integration mechanisms. (The latter also occurred in subcommittees at several sites.) Several sites allocated resources to build integration capacity among members. For example, FAM Allies funded nurses at the local health department and home nursing agencies to provide care coordination and case management. These nurses became the "glue" that connected the range of services available to clients. KCAF funded asthma champions at clinics who facilitated linkage of clinical and community activities, leading to increased referral of patients to community health workers and asthma classes.

CONCLUSION

Integrating service delivery is easier than integrating systems. It is simpler to implement specific service delivery activities such as care coordinators or CHWs than to get organizations to change the way they do business. Maintaining the status quo is the norm. Systems change requires buy-in from organization leaders and staff, willingness to focus attention, resources to make changes, and the emergence of sufficient internal or external pressures that make the status quo more costly than change. Changes in large institutions or in government policy may have larger impacts than modifications to smaller programs, but are also more difficult to achieve. Support for change champions within organizations (e.g., funding champion time to devote to systems change activities) may be helpful. A coalition working on a single issue such as asthma was able to make relatively small and incremental changes at the systems level during a short period of time. The 3 years of activity of the Allies coalitions were too short to produce substantial systems change, but sufficient to lay a foundation for further progress.

Focusing on a small community may simplify integration compared to efforts working across multiple communities, as illustrated by the CINCH and the ALIANZA experiences working in public housing communities. Although sites with well-established and older coalitions (e.g., PAAA, FAM Allies) were successful in integration efforts encompassing larger and more complex areas, it may be advisable for less experienced coalitions to begin with a narrower focus.

Integration occurs in fits and starts. Sustained efforts by coalition staff and members are required, and resources to support these efforts are essential. Coalitions need to explicitly recognize integration as a shared goal and develop common conceptual and operational definitions of integration early in the course of their activities. It may be helpful to define expectations for participation in integration activities in subcontracts and memoranda of understanding between the coalition and partners—and for the coalition to provide participating organizations with funds to cover staff time spent on integration activities. Sites also found that targeting integration, whether by geographic area (e.g., a single public housing site) or sector (e.g., systematically linking children with ED visits to medical homes and case management), produces tangible results more rapidly than broader efforts. Several sites observed that initiating efforts with the most committed stakeholders (e.g., public health and community health center staff) and showing benefits (e.g., increased access to clients and lower costs) is helpful in engaging more skeptical partners (e.g., insurers).

A successful coalition has many of the attributes necessary for developing integrated approaches for asthma control. Organizations that desire increased integration of asthma prevention and control in their communities may benefit by approaching this goal through a local coalition.

REFERENCES

Abed, J., Reilley, B., Butler, M., Kean, T., Wong, F., & Hohman, K. (2000). Comprehensive Cancer Control Initiative of the Centers for Disease Control and Prevention: An example of participatory innovation diffusion. *Journal of Public Health Management and Practice*, *6*, 79-92.

Agranoff, R. (1991). Human services integration: Past and present challenges in public administration. *Public Administration Review*, *51*, 533-542.

Aikman, P., Andress, I., Goodfellow, C., Labelle, N., & Porter-O'Grady, T. (1998). System integration: A necessity. *Journal of Nursing Administration*, *28*, 28-34.

Bodenheimer, T., Wagner, E. H., & Grumbach, K. (2002). Improving primary care for patients with chronic illness: The chronic care model, part 2. *Journal of the American Medical Association*, *288*, 1909-1914.

Butterfoss, F. D., & Francisco, V. T. (2004). Evaluating community partnerships and coalitions with practitioners in mind. *Health Promotion Practice*, *5*, 108-114.

Butterfoss, F. D., Gilmore, L. A., Krieger, J. W., Lachance, L. L., Lara, M., Meurer, J. R., et al. (2006). From formation to action: How Allies Against Asthma coalitions are getting the job done. *Health Promotion Practice*, *7*(Suppl. 2), 34S-43S.

Butterfoss, F. D., Lachance, L. L., & Orians, C. E. (2006). Building Allies coalitions: Why formation matters. *Health Promotion Practice*, *7*(Suppl. 2), 23S-33S.

Cagan, E., Hubinsky, T., Goodman, A., Deitcher, D., & Cohen, N. (2001). Partnering with communities to improve health: The New York City Turning Point experience. *Journal of Urban Health*, *78*, 176-180.

Clark, N. M., Gong, M., Schork, M. A., Kaciroti, N., Evans, D., Roloff, D., et al. (2000). Long-term effects of asthma education for physicians on patient satisfaction and use of health services. *European Respiratory Journal*, *16*, 15-21.

Conrad, D., & Shortell, S. (1996). Integrated health systems: Promise and performance. *Frontiers of Health Services Management*, *13*, 3-40.

De Jong, I., & Jackson, C. (2001). An evaluation approach for a new paradigm. *Journal of Evaluation in Clinical Practice*, *7*, 71-79.

Fleury, M., & Mercier, C. (2002). Integrated local networks as a model for organizing mental health services. *Administration and Policy in Mental Health*, *30*, 55-73.

Friedman, A. R., Butterfoss, F. D., Krieger, J. W., Peterson, J. W., Dwyer, M., Wicklund, K., et al. (2006). Allies community health workers: Bridging the gap. *Health Promotion Practice*, *7*(Suppl. 2), 96S-107S.

Gamm, L. D. (1998). Advancing community health through community health partnerships. *Journal of Healthcare Management*, *43*, 51-66.

Gibson, P. G., & Powell, H. (2004). Written action plans for asthma: An evidence-based review of the key components. *Thorax*, *59*, 94-99.

Gorelick, M. H., Meurer, J. R., Walsh-Kelly, C., Brousseau, D. C., Grabowski, L., Cohn, J. H., et al. (in press). ED Allies: A controlled trial of two emergency department-based follow-up interventions to improve asthma outcomes in children. *Pediatrics*.

Halterman, J. S., Aligne, C. A., Auinger, P., McBride, J. T., & Szilagyi, P. G. (2000). Inadequate therapy for asthma among children in the United States. *Pediatrics*, *105*, 272-276.

Kegler, M. C., Steckler, A., McLeroy, K., & Malek, S. H. (1998). Factors that contribute to effective community health promotion coalitions: A study of 10 Project ASSIST coalitions in North Carolina. *Health Education & Behavior*, *25*, 338-353.

Lachance, L. L., Houle, C. R., Cassidy, E. F., Bourcier, E., Cohn, J. H., Orians, C. E., et al. (2006). Collaborative design and implementation of a multisite community coalition evaluation. *Health Promotion Practice*, *7*(Suppl. 2), 44S-55S.

Lara, M., Cabana, M. D., Houle, C. R., Krieger, J. W., Lachance, L. L., Meurer, J. R., et al. (2006). Improving quality of care and promoting health care system change: The role of community-based coalitions. *Health Promotion Practice*, *7*(Suppl. 2), 87S-95S.

National Asthma Education and Prevention Program. (1997). *Expert panel report II: Guidelines for the diagnosis and management of asthma* (NIH Publication No. 02-4051). Bethesda, MD: National Institutes of Health, National Heart, Lung, and Blood Institute.

Nicholas, E. A., Dwyer, M., Murphy, A., Taylor-Fishwick, J. C., Cohn, J. H., Kelly, C. S., et al. (2006). Coalition-based approaches for addressing environmental issues in childhood asthma. *Health Promotion Practice*, *7*(Suppl. 2), 108S-116S.

Provan, K., & Milward, B. (1994). Integration of community-based services for the severely mentally ill and the structure of public funding: A comparison of four systems. *Journal of Health Politics, Policy, and Law*, *19*, 865-894.

Randolph, F. (1995). Improving service systems through systems integration: The ACCESS Program. *American Rehabilitation*, *21*, 36-37.

Randolph, F., Blasinksky, M., Morrissey, J., Rosenheck, R., Cocozza, J., & Goldman, H. (2002). Overview of the Access Program. *Psychiatric Services*, *53*, 945-948.

Rosenheck, R., Morrissey, J., Lam, J., Calloway, M., Johnsen, M., Goldman, H., et al. (1998). Service system integration, access to services, and housing outcomes in a program for homeless persons with severe mental illness. *American Journal of Public Health*, *88*, 1610-1615.

Rosenthal, M. P., Butterfoss, F. D., Doctor, L. J., Gilmore, L. A., Krieger, J. W., Meurer, J. R., et al. (2006). The coalition process at work: Building care coordination models to control chronic disease. *Health Promotion Practice*, *7*(Suppl. 2), 117S-126S.

Schulte, A., Musolf, J., Meurer, J. R., Cohn, J. H., & Kelly, K. J. (2004). Pediatric asthma case management: A review of evidence and an experimental study design. *Journal of Pediatric Nursing*, *19*, 304-310.