Coalitions and Innovations in Asthma Control: Comprehensive Approach to the Management of Asthma

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University of Michigan
I have no relevant financial relationships to disclose
I will not be discussing off-label drug uses
Asthma is a multi-faceted medical problem but also a community problem and public health problem. No single intervention is going to decrease rates of asthma...We need community coalitions to have a real impact.

*Coalition Member, Long Beach Alliance for Children with Asthma (LBACA)*
More than...

200+ asthma coalitions around the US
Implicitly, community coalition means that the given coalition:

a) Serves a specific community (usually defined as sharing common location or experience) recognized by those within it as a community
b) Is purposeful and its duration is time specific
c) Exists to serve the broader community of residents
d) Is viewed by community residents as representing them
e) Reflects the diversity evident in the community
f) Addresses the problem(s) systematically and comprehensively
g) Builds community independence and capacity
## Factors Associated with Coalition Success

<table>
<thead>
<tr>
<th>Membership</th>
<th>Goals, Structure, Process</th>
<th>Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborative history</td>
<td>Shared vision</td>
<td>Strong leadership</td>
</tr>
<tr>
<td>Mutual understanding and trust</td>
<td>Attainable goals</td>
<td>Paid staff</td>
</tr>
<tr>
<td>Collaboration is in one’s interest</td>
<td>Clear roles and guidelines</td>
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<tr>
<td>Key stakeholders participate</td>
<td>Open and frequent communication</td>
<td></td>
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<tr>
<td></td>
<td>Members share a stake in process and outcomes</td>
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Note: Adapted from Mattesich, Murray-Close, & Monsey (2001).
These factors indicate that coalitions have two major and parallel tasks:

1. Maintain themselves as a cohesive and efficient organization

2. Have clear goals and the ability to mobilize allies to help achieve the goals
Leadership Actions to Engender Optimum Collaboration in Community Coalitions

- Create a flexible organizational structure
- Create a vision of what can be accomplished
- Foster trust and nurture relationships
- Create “space” for open dialogue
- Acknowledge and address concerns regarding power and control
- Value and build diversity
- Gauge readiness of members for action
- Engage in strong and intentional facilitation of tasks and processes
- Maintain a sense of energy
- Be patient

SOURCE: Adapted from Doctor (2005)
Allies Against Asthma

*(Initially Supported by RWJF)*

- **ALIANZA**: Puerto Rico
- **CINCH**: Hampton Roads Virginia
- **DC Asthma**: Washington DC
- **Fight Asthma**: Milwaukee, Wisconsin
- **King County Asthma Forum**: Seattle, Washington
- **Long Beach Alliance**: Long Beach, California
- **Philadelphia Allies**: Philadelphia, Pennsylvania
The Allies Against Asthma Coalition Model: Development and potential impact of community health coalitions

Organizational Membership of Allies Against Asthma Coalitions
2002-2004

- Health Care Provider: 25%
- Local Government: 16%
- Managed Care Organizations: 7%
- Community-Day Care: 2%
- Community-Based Organizations: 9%
- Academic Institution: 4%
- Business: 12%
- Medicaid/Insurance: 9%
- Community-Advocacy Group: 7%
- Community-Parent Group: 1%
- Other: 7%
### Strengths of Membership

- Diversity of member skills and/or talents
- Asthma recognized as important issue
- Broad representation from many sectors
- Highly motivated and committed individuals
- Collaboration and lack of inter-organizational conflict
- High level of individual expertise
- Core of strong leaders

### Challenges of Membership

- Achieving ethnic and racial diversity
- Obtaining support and participation of specific groups (e.g., families of children with asthma, grassroots organizations, and managed care organizations)
- Balancing needs of professionals and grassroots groups and/or members
- Maintaining members’ involvement and interest, especially during planning
- Managing conflict because of diverse interests, values, and approaches
- Sustaining participation over a large geographic area, while implementing activities in prioritized communities
- Recruiting leaders
I think a really important point when you are talking about coalitions is the ability to involve the whole coalition in every part of the process, keep members informed, get feedback and actively think about pieces of the project, I think, this kind of process was very important and led to our success.

Coalition member, Philadelphia Allies Against Asthma
Allies Activities

- Raise community awareness
- Expand and enhance asthma surveillance
- Engage schools
- Enhance provider skills
- Enhance child and parent asthma education
- Initiate Care Coordination
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It soon became clear to Allies coalition members that to institutionalize and sustain improvements in asthma care and education their attention had to shift from sole focus on programs and activities to attend to needed **organizational, health systems** and **fiscal policy changes**.
System and policy change can refer to a single organization, be across several organizations, can affect city-wide practices or reach beyond to regions or the state and national levels.

All these levels of influence affect the care and support people with asthma get.
Again two parallel lines of coalition focus:

1. Demonstrating improvements in practice

2. Sustaining changes through policy and systems change
1) Interviews with a cohort of 1477 parents of Allies children and comparison group children to ascertain changes in children’s symptoms and family quality of life.

2) Tracking over 5 years and documentation of 284 Allies member organizations to ascertain policy and symptom changes achieved by the coalitions over the life of the Initiative.

3) Assess health care use outcomes using a CMS national data set.
## Change in Children’s Symptom Days and Nights

### Symptom Days and Nights (N=542)

<table>
<thead>
<tr>
<th></th>
<th>Adjusted Comparison Group Mean&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Adjusted Intervention Group Mean&lt;sup&gt;a&lt;/sup&gt;</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>During the daytime in the last 14 d, how many days did the child have asthma symptoms?</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>4.35</td>
<td>4.78</td>
<td>.292</td>
</tr>
<tr>
<td>Follow-up&lt;sup&gt;b&lt;/sup&gt;</td>
<td>3.91</td>
<td>3.03</td>
<td>.008</td>
</tr>
<tr>
<td><strong>During the nighttime in the last 14 d, how many nights did the child have asthma symptoms?</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>4.67</td>
<td>4.25</td>
<td>.283</td>
</tr>
<tr>
<td>Follow-up</td>
<td>3.41</td>
<td>2.35</td>
<td>.004</td>
</tr>
<tr>
<td><strong>During the nighttime in the last 12 mo, how many nights did the child have asthma symptoms?</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>68.93</td>
<td>74.73</td>
<td>.571</td>
</tr>
<tr>
<td>Follow-up</td>
<td>81.45</td>
<td>55.17</td>
<td>.003</td>
</tr>
</tbody>
</table>

- At follow-up, the Allies children had experienced significantly fewer daytime symptoms than did comparison children over the preceding 2 weeks. (p=0.008)

- Nighttime symptoms over the preceding 2 weeks, and over the preceding 1 year were significantly less frequent among Allies children than among comparison children. (p=0.004, 0.003)

- After adjustment for race/ethnicity, age, gender, and community site, the Allies children had almost 2 times the odds of the comparison group of moving from some symptoms at baseline to none at follow-up. (OR=1.9; 95% CI=1.17, 2.96)

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The sample size for the comparison group was n=224; for the intervention group, n=318.

<sup>a</sup> Adjusted for race/ethnicity, gender, site, and age group.

<sup>b</sup> Follow-up symptom days were also controlled for baseline value.
The Allies parents, significantly more so than the comparison group parents, felt less helpless or frightened when confronted by a symptom episode and less angry about their child's asthma. These results suggest a greater sense of emotional control in the face of asthma management among Allies parents.

<table>
<thead>
<tr>
<th>Question</th>
<th>Mean Score Change</th>
<th>P^b</th>
</tr>
</thead>
<tbody>
<tr>
<td>How often did you feel helpless or frightened when your child experienced cough, wheeze, or breathlessness?</td>
<td>.014</td>
<td></td>
</tr>
<tr>
<td>Comparison Group</td>
<td>0.30</td>
<td></td>
</tr>
<tr>
<td>Intervention Group</td>
<td>0.75</td>
<td></td>
</tr>
<tr>
<td>How often did you feel angry that your child has asthma?</td>
<td>.011</td>
<td></td>
</tr>
<tr>
<td>Comparison Group</td>
<td>0.16</td>
<td></td>
</tr>
<tr>
<td>Intervention Group</td>
<td>0.57</td>
<td></td>
</tr>
</tbody>
</table>

Note. The sample size for the comparison group was n=224; for the intervention group, n=318. Quality-of-life items were scored on a 7-point Likert scale, with higher numbers indicating better quality of life.

^aMean change in item score adjustment for size, gender, age, group, race/ethnicity, and baseline value.

^bFor difference between intervention and comparison groups.
<table>
<thead>
<tr>
<th>Improvement Domain</th>
<th>No. of Changes</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical practice</td>
<td>25 (11 policy and 14 systems)</td>
<td>Training for nurses and respiratory therapists providing asthma management education to patients was institutionalized through the creation and continued funding of an asthma coordinator position in the children’s hospital (Milwaukee, WI). Asthma is one of the disease focus tracks that health facilities can select from the state-supported agenda of clinical learning collaboratives (Washington State).</td>
</tr>
<tr>
<td>Coordination/standardization</td>
<td>25 (10 policy and 15 systems)</td>
<td>Community health workers provide asthma care coordination that includes interaction with clinicians, schools, and legal aid and environmental agencies (Long Beach, CA). Telephone-based community-wide care coordination system that assess individual family needs, provides support, and refers families to clinical and community services was established (Philadelphia, PA).</td>
</tr>
<tr>
<td>Environmental conditions</td>
<td>18 (10 policy and 8 systems)</td>
<td>City councils in 4 cities enacted ordinances banning smoking in restaurants (Hampton Roads, VA). Legislation was passed that prohibits idling of diesel trucks in neighborhoods (Long Beach, CA).</td>
</tr>
<tr>
<td>Efforts to improve asthma management by families</td>
<td>4 (1 policy and 3 systems)</td>
<td>“Asthma Days” management education was adopted and continuously offered by a large number of community clinics/practices (Hampton Roads, VA). “Awesome Asthma School Days” management education was institutionalized with support from the children’s hospital (Milwaukee, WI).</td>
</tr>
<tr>
<td>Other improvements</td>
<td>17 (13 policy and 4 systems)</td>
<td>Legislation was passed that protects a child’s right to take asthma medication at school (Puerto Rico).</td>
</tr>
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</table>
Perhaps the most important question to ask about coalitions is:

Does the health of children with asthma improve across the communities where coalitions do their work?
What was the Community-Wide Impact of Allies?

Methods:
Comparison communities identified for 6 allies communities –zip code match on key variables

CMS data for five years analyzed: N=26,836

<table>
<thead>
<tr>
<th>Year</th>
<th>Adjusted OR(^a) (95% CI)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>1.185 (1.073, 1.308)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>2003</td>
<td>1.014 (0.892, 1.153)</td>
<td>.83</td>
</tr>
<tr>
<td>2004</td>
<td>0.842 (0.721, 0.985)</td>
<td>.031</td>
</tr>
<tr>
<td>2005</td>
<td>1.345 (1.154, 1.567)</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>2006</td>
<td>1.405 (1.075, 1.836)</td>
<td>.013</td>
</tr>
</tbody>
</table>

\(^a\)Models adjusted for age, group, gender, race/ethnicity, site, and for 2003-2006, baseline value.

*Note: CI=Confidence interval; ED=emergency department; OR=odds ratio. Allies Against Asthma initiative took place Hampton Roads, VA; Washington, DC; Milwaukee, WI; King County/Seattle, WA; Long Beach, CA; and Philadelphia, PA. Comparison cities were Roanoke City, VA; Jacksonville, FL; Everett, Lacey, Olympia, and Tacoma, WA; National City and San Bernardino, CA; Baltimore, MD; Lorain, OH; Muskegon, Detroit, and Flint, MI; and Fort Wayne and Indianapolis, IN.*
In almost all years, comparison children had higher odds than Allies children for asthma related hospitalization, ED visits, and urgent care visits.
### Comparison of having a significant asthma event over the entire study period from 2002-2006

<table>
<thead>
<tr>
<th></th>
<th>Hazard ratio* (95% confidence interval)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hospitalization, ED visit, or Urgent care visit</strong></td>
<td><strong>Comparison</strong> (n=14,475) vs. <strong>Intervention</strong> (n=12,361)</td>
<td></td>
</tr>
<tr>
<td><strong>Without enrollment gap†</strong></td>
<td>1.066 (1.013, 1.122)</td>
<td>0.0136</td>
</tr>
<tr>
<td><strong>With enrollment gap</strong></td>
<td>1.065 (1.012, 1.121)</td>
<td>0.0153</td>
</tr>
</tbody>
</table>

*Models adjusted for age group, gender, race/ethnicity, site, and baseline value.
†‘Without enrollment gap’ only included those with continuous enrollment at least one year post- baseline. ‘With enrollment gap’ included those that had gaps in enrollment and assumed no event occurred in the gap time.

**Hazard ratio for an asthma event over five years:**

6% to 7% greater (P<.01 and P<.02)

for comparison group children vs. Allies children
Differences (benefits from Allies) were greater in the last two assessment years when results of coalitions’ work had the longest time to take hold and reach more children.
<table>
<thead>
<tr>
<th>Domain</th>
<th>ACA Provisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insurance Coverage</td>
<td><strong>Essential Health Benefit Packages</strong>: EHBs must include preventive, wellness and chronic disease management and education services including for conditions like asthma.</td>
</tr>
<tr>
<td></td>
<td><strong>Community Health Teams to Support the Patient Centered Medical Homes</strong>: State agencies may receive grants to create patient-centered medical home teams. Members of these teams may be (but are not limited to) physicians and other clinicians, as well as community health workers.</td>
</tr>
<tr>
<td></td>
<td><strong>Patient Navigator Programs</strong>: ACA reauthorized patient navigator programs and encourages employing community health workers as patient navigators. All state health insurance exchanges are required to establish patient navigator programs as well.</td>
</tr>
<tr>
<td></td>
<td><strong>Medication management in treatment of chronic disease</strong>: A program to support medication management services by local health providers was created by ACA. Medication management services will help manage chronic disease, reduce medical errors, and improve patient adherence to therapies while reducing acute care costs and reducing hospital readmissions.</td>
</tr>
<tr>
<td>Environmental conditions</td>
<td><strong>Community Transformation Grants</strong>: Grants to state/local government and community-based organizations to create healthier communities (including school environments). Statute identifies nutrition, physical activity, tobacco use and chronic disease prevention as primary target areas.</td>
</tr>
<tr>
<td>Domain</td>
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</tr>
<tr>
<td>------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Efforts to improve asthma management by families</td>
<td><strong>Incentives for Medicaid Beneficiaries:</strong> grants are available to state Medicaid programs to create evidence-based prevention programs to improve health outcomes and encourage the adoption of healthy behaviors (e.g. tobacco cessation and prevention of chronic disease).</td>
</tr>
<tr>
<td>Clinical Practice</td>
<td><strong>Primary Care Extension Program:</strong> will train and educate currently practicing primary care providers on preventive medicine, chronic disease management, health behavior, and evidence-based treatment. Local agencies would serve as extension agents, helping to implement strategies to link community members with patient-centered medical homes (not currently funded). <strong>Grants to Promote the Community Health Workforce:</strong> can be awarded to health clinics, health departments, CHCs, or hospitals that use community health workers to promote health in underserved communities (not currently funded).</td>
</tr>
<tr>
<td>Schools</td>
<td><strong>School-based Health Centers (SBHC):</strong> additional funding in ACA expands and upgrades SBHCs. SBHCs increase access to health care and help students and their families manage asthma.</td>
</tr>
</tbody>
</table>
Number of health outcomes, policy and system changes achieved (n=254) per site, by type of partners: Allies Against Asthma, 7 US locations, 2002-2006.
Coalition membership in the most successful coalitions became more strategic with fewer peripheral members and more allies pulled in for their capacity to deliver for strategic purposes at strategic times.
Mobilizing diverse stakeholders, being strategic, engaging consumers, focusing on policy and system change can generate significant improvements in health care delivery and support services, supportive policy, children's symptoms, quality of life, health care use and costs.
The Center for Managing Chronic Disease

managingchronicdisease.org

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