# Embedding interventions in delivery systems as an effective strategy for expanding reach of arthritis-appropriate community-based interventions: Results of a cross-site evaluation

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## Goals of the Cross-Site Evaluation

The Arthritis Centralized Evaluation identified strategies States used to disseminate evidence-based interventions, comparing and contrasting processes used to expand reach and how the strategies contributed to expanded reach in 21 State health departments funded to disseminate self-management education and physical activity interventions.

## Grantees

In 2008-2012, the CDC Arthritis Program funded 21 State health departments to increase the reach of evidence-based interventions for arthritis:

- CDC funded 12 State Arthritis Programs (SAPs) in 2008-2012. State Arthritis Programs were set a reach target equal to 4% of the people in their State who have arthritis, capped at 40,000.
- The National Association of Chronic Disease Directors, working with the CDC, made \$50,000 Arthritis Integrated Dissemination (AID) grants to 9 State public health programs in 2008-2011.
   AID grantees attempted to disseminate interventions through other State chronic disease programs. AID grantees did not have a reach target.

## Methods

#### Data included:

- Six rounds of semiannual progress reports submitted by the grantees (July 2008 to June 2011).
- Four years of annual reach numbers submitted by the grantees (2008-2011).
- In-depth telephone interviews or site visits with grantees (December 2010-May 2011).
- ✓ Telephone interviews with 12 State Arthritis Program Coordinators (APCs)
- ✓ Site visits to 7 states, which added interviews with chronic disease program leadership, arthritis program staff, and other public health stakeholders
- Interviews with 15 delivery system partners who were working with States to disseminate interventions (December 2010–May 2011).
- Follow-up interviews with a selected group of 9 APCs at the end of the data collection period (March-April 2012).

Progress reports and reach numbers were extracted and coded into an online database. Interviews and site visit notes were coded and summarized using an analytic rubric developed for this evaluation. These data were merged for qualitative and statistical analyses including cross-tabs and correlations.

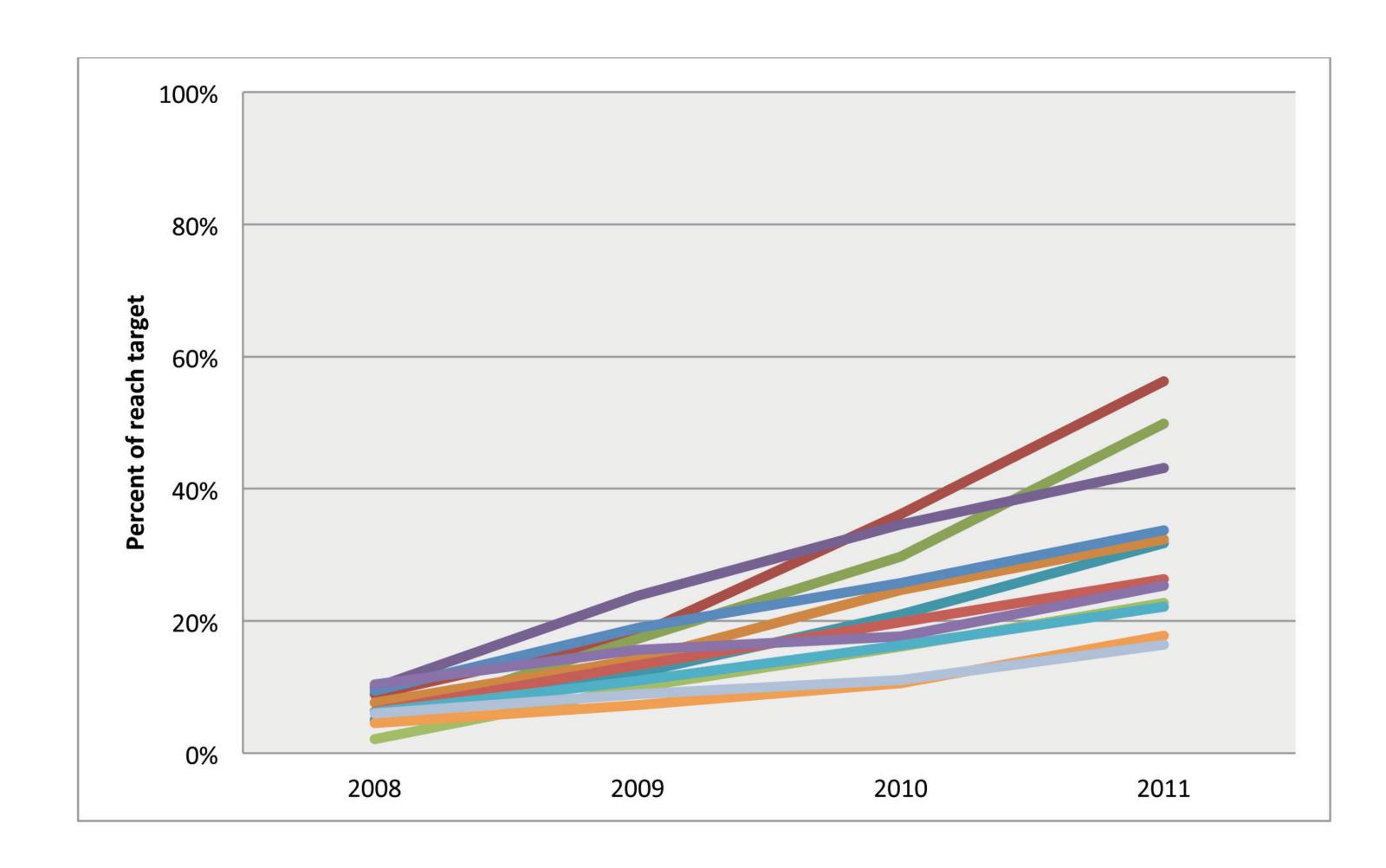
### Results

#### Reach

SAPs demonstrated yearly increases in program reach, but none were projected to meet their 4% reach target before the end of the grant cycle. (Figure 1).

- Three States were on track to achieve more than half of their reach target
- Five States appeared unlikely to achieve as much as a third of their reach target

Figure 1: Cumulative Reach, State Arthritis Programs 2008–2011



#### Strategies

The evaluation team identified strategies States used to expand reach of interventions (Table 1).

Table 1: Strategies Used to Expand Reach and Their Correlation with Reach (N=12)

STRATEGY	r	p value
Partner with multi-site delivery systems	0.66	0.020
Prioritize expansion of reach	0.83	0.001
Embed evidence-based interventions into partner operations*	0.46	0.128
Collaborate with other chronic disease programs*	0.50	0.102
Build new delivery system with multiple sites	-0.16	0.622
Partner with one delivery partner with one site	-0.07	0.821
Train leaders and master trainers	-0.08	0.801

\*Strategy had a chi-square probability of p<.20 but at least three States strongly indicated this strategy had contributed to their program effectiveness. In this manner, qualitative findings were integrated with the quantitative findings and were used to support statistically detected relationships.

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#### Promising Strategies

- Partnering with multi-site delivery systems (r=.66, p=.020)
- Multi-site delivery systems persuaded to adopt the intervention
- Delivery system uses its organizational resources (staff, funds, and access to the population) to implement classes or workshops
- Permitted SAPs to focus on partnership development, technical assistance, and quality control
- Day-to-day emphasis on reach expansion (r=.83, p=.001)
- State explicitly prioritized reach expansion among program goals
- Before every activity, staff asked themselves "Is this helping me expand the reach of my interventions?"
- Embedding interventions within routine partner processes (r=.46, p=.128)
- State worked with partners to make the intervention part of their routine operations, intended to promote sustainability
- SAPs did not have shared understanding about what constituted embedding
- SAPs with higher levels of reach described embedding as organizational or policy change (e.g., changed job description, revised mission statement or web page, established process for enrolling in a program)
- Collaborating with other chronic disease program areas (r=.50, p=.102)
- State attempted to build broad-based support for interventions within State chronic disease bureau
- Developed strategic workplans, pooled resources, or publicized interventions

## Strategies That Did Not Impact Reach

- Creating regional collaboratives
- Were to function as new delivery systems to implement interventions
- No correlation with expanded reach, but collaboratives may have been too new to impact reach
- Partnering with organizations to stage interventions at single sites
- State worked with partners that had only one location not linked to delivery system
- Resorted to when State was unable to partner with delivery systems
- Conducting trainings of leaders or master trainers
- Expanded capacity to deliver the interventions
- Trained individuals left responsible for finding locations for classes or workshops

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#### Challenges

Identifying delivery system partners. Some potential delivery systems, such as the YMCA and some senior care homes, were more decentralized than expected, with decision makers often located at the local or county level.

Gaining buy-in in complex organizations. States needed to invest time and effort to learn about the organization's needs and educate potential partners about the interventions.

Identifying champions in complex organizations. Some delivery system partners had complex organizational structures that proved challenging to navigate. An internal champion could promote the intervention internally, but it was not always easy to identify champions, ensure that they would take action, or be effective advocates within their organization.

**Time.** Partners needed time to decide whether to adopt the interventions and organizational change necessary for embedding required strong organizational buy-in and time to see successes.

## Discussion

Though SAPs did not reach their 4% reach target, they were able to demonstrate yearly increases in program reach. States most likely to increase reach of their interventions worked with delivery system partners, prioritized expansion of reach in the day-to-day operations of their program, embedded interventions with partners, and developed successful collaborative relationships with chronic disease programs.

#### Study Limitations

- Considerable variation in the quality of reach data
- Reach numbers did not always reflect State strategy or program efforts
- State efforts could not always be separated from activities supported by other funding sources

#### Study Strengths

- Systematic coding and rating
- Mixed methods integrating qualitative and quantitative data
- Real-world experiences
- Conducted over three years
- Captured diverse set of experiences across 21 States
- Captured diverse perspectives within States

## Conclusion

Community-based interventions can increase the quality of life for persons with a variety of chronic diseases. This evaluation provides a glimpse of how to effectively disseminate physical activity and self-management education interventions on a wide scale and increase access to these programs in the communities that need them. Engaging delivery system partners and persuading them to adopt and embed interventions into their routine operations is a successful way to expand the reach of interventions, although there are challenges to be overcome in using this strategy. The findings from this study may be useful to any State or local health department trying to scale up interventions to achieve a broad public health impact.



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