

# Implementing Diabetes Self-Management Programs for Patients with Low Literacy: Midterm Process Evaluation Results from the Alliance to Reduce Disparities in Diabetes

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## Background

The Alliance to Reduce Disparities in Diabetes, sponsored by The Merck Foundation, is a consortium of five grantees, a National Program Office based at the University of Michigan, and an external independent evaluator, RTI International. The Alliance integrates innovative clinician and patient education and quality of care improvements aimed at underserved patients with diabetes who have low literacy.<sup>1</sup> The grantees' programs focus on reducing disparities in diabetes care and enhancing outcomes through clinical and community interventions.<sup>2,3</sup> The grantee sites have enrolled a multiracial patient group and implemented multilevel and multicomponent interventions to enhance patient skills, clinician cultural competencies, and health care systems changes to address disparities and enhance care.

Across sites, the multicomponent approach focuses on three core components:

- Patient Component:** Patient self-management education includes curricula on topics such as the basics of diabetes; food diary instructions and healthy eating tips; physical activity and exercise; goal setting; glucose monitoring; understanding clinical outcomes; managing high and low glucose; checking blood sugar levels; long-term complications; and treatment options.
- Clinician Component:** Provider education includes cultural competency training and behavioral change education about communicating effectively with patients and facilitating lifestyle improvements.
- System Change Component:** Diabetes management via systems changes includes care coordination, use of diabetes registries, nurse or community health worker participation in care management, enhanced community partnerships, and policy changes. All of these elements focus on improving care for and self-management by patients with diabetes.

Each grantee site provides clinical (hemoglobin A1c [HbA1c], blood pressure [BP]) and patient-reported outcomes (diabetes competence, quality of life, resources and supports for self-management, and diabetes self-care behaviors) for program participants to the evaluator. To date, baseline and follow-up clinical data from more than 1,000 patients show a decrease of mean HbA1c values from 8.5% to 7.9% and a decrease in BP from 132/80 to 129/78,  $p < .001$ .<sup>4</sup> Analyses of the patient-reported survey measures also show significant improvements in perceived diabetes competence, resources and supports for self-management, and self-care behaviors. Multivariable regression analysis shows that patients who participated in more than half of the program offerings across sites had greater changes in both HbA1c and BP over time, controlling for age and gender.<sup>4</sup>

As part of the evaluation, RTI International is also conducting a qualitative process evaluation. Process evaluations answer key questions about program implementation, program utility, and process analysis. Describing these processes allows program implementers to identify with greater certainty which specific intervention processes contribute to observed health outcomes.<sup>5</sup>

The purpose of this presentation is to report on the key themes emerging across the sites that illuminate how they have implemented their programs from inception to midway through their projects, specifically focused on the patient self-management program components that are serving low literacy patients.

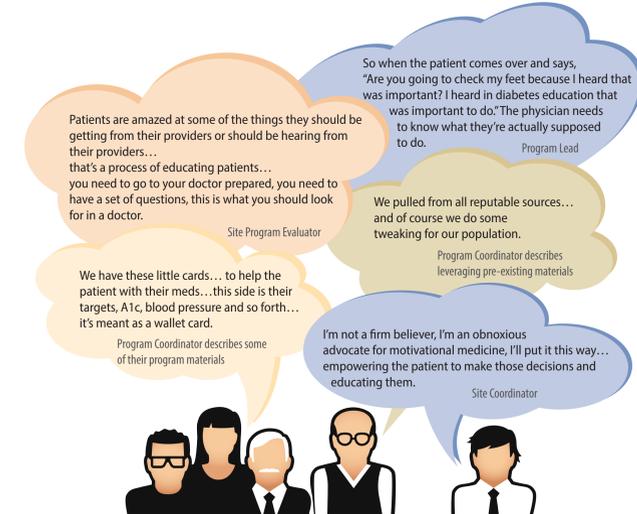
## Methods

- Participant Interviews** – To date, two waves (2010 and 2012) of interviews have been conducted and analyzed with 54 participants who were either CEOs, medical directors, project managers, site coordinators, or allied health professionals.
- Interview Guide Topics and Data Collection** – Two-person teams used semi-structured interviews to gather multiple perspectives on program implementation. Interview length varied from 30 to 90 minutes. Topics discussed included client characteristics and access to care, intervention implementation, reach, effectiveness, sustainability, and lessons learned for each of the program components.
- Analysis Approach** – Audio-recordings of the interviews were transcribed and loaded into NVivo 10.0 for qualitative analysis. The team developed a codebook based on themes derived from an initial scan of the transcripts and knowledge of program structure. A team of four project staff coded the data first into overarching domains (e.g., general program operations, patient-self-management education) then into domain sub-codes (e.g., patient-centered care). Analyses of coding reports were used to identify common themes across sites that related to implementing successful programs for underserved, low literacy patients with diabetes.<sup>6</sup>

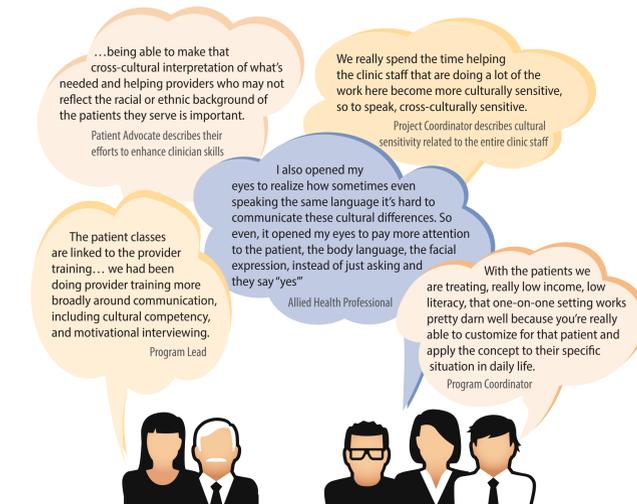
## Process Evaluation Results

Several cross-site themes emerged that illustrate how programs have been serving low literacy patients managing diabetes. All four themes focus on creating a supportive environment for patients and their health care providers that foster meaningful and productive interactions:

- Sites are **increasing patient education and empowerment** through the use of low-cost, pre-existing educational materials that have been adapted for local clientele, coaching patients to know what to expect and say during medical encounters, and providing easy-to-use information that patients can carry with them as reminders, such as pocket cards.



- Sites are **enhancing patient and provider communication skills** by using culturally appropriate language, shared decision-making and goal setting techniques, providing clinicians with training to enhance sensitivity and cultural competence, and tailoring program materials and treatment options to increase relevance and appeal for patients.



- Sites are **providing resources and support that extend beyond the clinic and support self-management** by inviting patients' family members to attend educational sessions, tapping into community resources and partnerships, and using community health workers who are embedded in neighborhoods and communities where patients live and work.



- Sites are **making changes in clinic workflow and systems** such as implementing electronic medical records that capture important patient data, changing workflow so that patients provide intake and medical history information before seeing a health care provider, and intensifying treatment by providing additional clinical staff such as nurse practitioners. These changes create higher-quality encounter time with providers.



## Implications for Policy, Delivery, or Practice

Based on midterm process evaluation findings, reaching low literacy patients with diabetes to support self-management requires a comprehensive approach that involves:

- empowering and educating patients and providers,
- involving families and community supports, and
- changes in clinic workflow and health care delivery.

Each of these factors contributes to a productive and meaningful relationship between patients and health care providers at the point of care. Our findings suggest that literacy interventions focusing on increasing patients' literacy skills may be only one part of the solution. Programs that also enhance the context in which patients receive care, their interactions with clinicians, and the systems in which patients and clinicians manage care are important. Extending care beyond clinic walls to the communities in which people live and work is also important. For example, program implementers cited several examples in which family members were important sources of support and actively help patients manage diabetes. This suggests that family involvement in diabetes "self" management programs could be helpful for patients who manage chronic illnesses on a daily basis. Research shows that health literacy is an important predictor of many health outcomes.<sup>7</sup> Interventions that target and enhance the context and systems in which low literacy patients receive care will likely affect a broad array of health outcomes and patient well-being.

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## Acknowledgments

Funded by The Merck Foundation.

- We would like to thank The Merck Foundation for funding the Alliance to Reduce Disparities in Diabetes; Leslie Hardy, Vice President of The Merck Company Foundation; and National Program Office members Noreen Clark, Julie Dodge and Belinda Nelson, and the five grantee sites who participated in the process evaluation and have provided clinical and patient-reported outcomes to RTI International.

## More Information

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Presented at: IHA Health Literacy Conference, Irvine, California, May 08-10, 2013

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RTI International is a trade name of Research Triangle Institute.