Multifocal Interventions Enhance Outcomes and Reduce Disparities among Diverse Patient Populations

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1. Background

Through grants to five organizations, The Merck Company Foundation supports comprehensive, multifaceted, community-based programs that add key factors to improve health outcomes for people living with diabetes.

The five programs and grantees are:

- Improving Diabetes Care and Outcomes on the South Side of Chicago, University of Chicago, Illinois
- Camden City Diabetes Coalition, Camden, New Jersey
- Diabetes for Life Program, Memphis, Tennessee
- Diabetes Equity Project, Dallas, Texas
- Wind River Indian Reservation, Wyoming

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Patient Component:

1. Diabetes Self-care Behaviors2:

- A composite of measures across at least 2 grantees included:
  - Hemoglobin A1c level
  - Blood pressure
  - LDL cholesterol

Table 2. Demographic Characteristics of Participants in the Cohort

Table 3. Clinical Measures Aggregated Across All Grantees

Table 4. Patient-Reported Measures Aggregated Across the Five Programs

2. Cross-Site Evaluation

Methods

We collected clinical and patient-reported data from the five grantees four times over the past 3 years and conducted two site visits (one virtual) to document the interventions undertaken. All data aggregated across grants and sites was used to understand the net effect of the Alliance programs on diabetes and health outcomes.

- Measures of diabetes control included HbA1c level, blood pressure, and LDL cholesterol.
- Patient-reported measures common across at least 2 grantees included:
  - Hemoglobin A1c level
  - Blood pressure
  - LDL cholesterol

3. Preliminary Results

For the patient cohort, we used t-tests and multivariable regression analyses to understand how health and diabetes outcomes changed over time in response to the program participation. Table 3 presents the descriptive statistics for the baseline and follow-up clinical measures, and indicates significant differences.

- Blood pressure: F = 4.0, p = .049
- HbA1c level: F = 3.5, p = .062
- LDL cholesterol: F = 3.2, p = .075

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Table 4. Patient-Reported Measures Aggregated Across the Five Programs

3. Preliminary Results (continued)

Although these five programs are not randomized controlled trials, early comparisons of clinical and patient-reported measures from baseline to follow-up show improvements across almost all measures, including both clinical and behavioral outcomes. This preliminary evaluation suggests that the Alliance is demonstrating that diabetes outcomes can be improved and disparities potentially decreased in groups most burdened by diabetes management by using multifocal, multidisciplinary interventions that include patient, provider, and system components. Analyses specific to comparing racial differences did not emerge as significant.

5. Next Steps

The next steps in the cross-site evaluation include additional data collection, including a comparison cohort, which will allow us to determine with more confidence whether disparities in diabetes were reduced. Each site will also be providing more clinical and patient-reported outcomes data on the programs to come to a close in 2013. In addition, the final site visit with grantees at the end of this intervention programs will allow us to better understand the impact of the programs across the course of the initiative that have helped contribute to program success. A detailed process evaluation will describe process improvements and accomplishments across the sites that contributed to changes in clinical outcomes.