Reducing Social Distress for Chronic Disease Patients in Primary Care: An Intervention for Latino Type 2 Diabetes Patients Seen at Community Health Centers

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ABSTRACT

Background. Social and behavioral factors have important direct and indirect effects on chronic disease onset and progression. The U.S. health care system is beginning to focus on assessment and management of social and behavioral problems through federal mandates related to meaningful use of electronic health records and improved patient outcomes.

Methods. We examined the clinical adoption of a 20-item screening tool to measure social distress focusing on type 2 diabetes. This Internet-based survey tool was embedded within a diabetes team care dashboard used to manage Latino patients with poorly controlled type 2 diabetes (n = 399) seen at urban safety-net clinics with referral as needed to clinical, community, and social services.

Results. Results showed a high baseline prevalence of many of the 20 social distress issues assessed. The control group had a mean 6.8 ± 4.3 items at baseline and 6.2 ± 4.3 items at 6 months; the intervention group had a mean 7.2 ± 4.5 items at baseline and 5.6 ± 4.6 items at 6 months. The majority of participants (>90%) reported having one or more social distress issues during the previous week. Moreover, 11 of 20 social distress items were identified by ≥30% of patients as being present. However, social distress was significantly reduced from our intervention based on a culturally sensitive team model focused on actively managing social distress issues compared to usual diabetes team care (P < 0.01).

Conclusion. Social distress issues are common but were significantly reduced with a 6-month diabetes team intervention involving initial screening followed by tailored diabetes education and referral to existing local services.

Currently, 117 million Americans live with one or more chronic diseases. Direct treatment-related costs of chronic diseases have grown to encompass 86% of the $2.7 trillion annual U.S. health care costs and represent an unsustainable human and economic burden for the nation (1). The recent Health Information Technology for Economic and Clinical Health Act (HITECH) (2) and the Patient Protection and Affordable Care Act (3) represent landmark legislative efforts to improve U.S. health care technology infrastructure and care delivery systems to move toward an equitable and systematic population health approach to chronic disease management. This legislation also promotes a patient-centered team care model that will be essential to the improvement of outcomes for patients with chronic diseases (4). “Meaningful use” of electronic health records (EHRs), as mandated by the HITECH Act, allows providers to qualify for financial incentives and
avoid financial penalties. Meaningful use focuses initially on data capturing and sharing (Phase I), then advancing clinical processes (Phase II), and finally, improving outcomes (Phase III).

A significant aspect of the planning for Phase III of meaningful use is being coordinated by the Institute of Medicine (IOM) (5). This initiative promotes the standardized inclusion in EHRs of patient-reported data that will allow the consideration of upstream behavioral and psychosocial factors into routine patient assessment and management processes. The concept of meaningful use was replaced in 2015 with a set of consolidated, bipartisan legislative reforms to further stress “value over volume” of patient care (i.e., the Medicare Access and CHIP [Children’s Health Insurance Program] Reauthorization Act of 2015 [MACRA]) (6). Importantly, these provider payment innovations increasingly reward more patient-centered care and will create greater capacity for clinician teams to address the social and behavioral needs of individuals living with chronic diseases and create a positive impact on patient health status and outcomes (5).

Four social and behavioral domains are already regularly collected in EHRs; these include race/ethnicity, tobacco use, alcohol use, and residential address. Core social and behavioral domains and measures that the IOM committee recommends, but has not yet specifically defined, to guide adoption into certified EMRs include depression, financial resources and strain, exposure to violence, social connections and isolation, and stress.

Social determinants of health generally encompass the social and physical environment and patient access to health services when needed. Items such as income and wealth, family and household structure, social support and isolation, level of education, occupation, discrimination, neighborhood conditions and resources, and social institutions are included (7). The IOM has given priority to items that address both Healthy People 2020 goals (8) and are practical to use (i.e., briefer assessments that are easy to score, are sensitive to change, and produce results that can directly inform primary care interventions). The IOM committee places a priority on behavioral and social measures included in the EHR that can be consistently collected and shared among providers.

The IOM committee’s work on upstream social and behavioral factors of health is thus timely and ground-breaking, particularly for the management of diabetes, one of the most burdensome chronic diseases (9). The diabetes epidemic now affects 30.3 million people in the United States (10). However, most major national diabetes performance measures in use (e.g., the National Committee for Quality Assurance and American Diabetes Association Provider Recognition Program indices (11)) have not included patient self-management or psychosocial items as a focus of national quality-improvement efforts (12).

Given the groundswell of recent interest within the current U.S. health care reform efforts to more proactively manage social issues that can influence chronic disease outcomes, we report in this study on the application of a brief, computerized, EHR-linked patient assessment tool that we have developed and field-tested in previous work (13–15). This brief checklist is a practical assessment suitable for routine clinical practice and captures patients’ experience of social distress from living in an urban, poor community served by an integrated Federally Qualified Healthcare Center (FQHC). We report here on the clinical application of our social distress scale during a 4-year National Institutes of Health clinical trial as one component of a “psychosocial vital signs” patient assessment strategy we developed to better engage Latino patients with poorly controlled type 2 diabetes seen at urban safety-net clinics with known high social needs.

**Design and Methods**

The study was conducted at two affiliated FQHCs located in western Massachusetts in an area in which ~30% of local families live below the federal poverty income level (16). The clinics are located in a Designated Medically Underserved and Health Professional Shortage Area. The 29 clinic providers serve a predominantly (~80%) Latino, urban, poor community, including >2,400 diabetes patients.

Eligible patients with type 2 diabetes were recruited from December 2010 to December 2012. Inclusion criteria were age ≥18 years, self-identified Hispanic ethnicity, diagnosis of type 2 diabetes, A1C >7.5% (58 mmol/mol), and prior provider approval having been given for patient’s participation. The study protocol was approved by the Baystate Medical Center institutional review board. Patients were enrolled into a randomized, controlled trial to examine the impact of a patient-centered, comprehensive diabetes team care model that has been reported elsewhere (17).

This study showed that a 6-month intensive team care model using an electronic diabetes dashboard management tool targeting Latinos with poorly controlled type 2 diabetes and delivered by bicultural, bilingual diabetes clinicians improved A1C by 0.8% and significantly improved secondary outcomes of disease-specific emotional distress and social distress.

The intervention involved a program of five in-person, one-on-one diabetes education visits with a diabetes nurse or diabetes dietitian that were scheduled at baseline and 2 weeks, 1 month, 3 months, and 6 months after enrollment. The conceptual model was the Chronic Care Model (18), a widely used and validated clinical care planning approach for chronic disease management that has been previously applied to type 2 diabetes (19). The initial visit was 1 hour, and each of the remaining visits lasted 30 minutes. The intervention was delivered by a team of four.
bicultural, bilingual certified diabetes educators (CDEs), of which two were diabetes nurses and two were diabetes dietitians. Each education visit with a CDE began with a review based on a summary of patient-reported self-management behaviors and barriers (e.g., blood glucose testing, diet, physical activity, and medication adherence) and psychosocial challenges, including social distress.

The CDE delivered diabetes education tailored to each patient’s individual clinical, behavioral, and social distress profile based on diabetes education dashboard alerts and reports and referred each patient for suitable services, as needed and if agreed to by the patient. These services included a neighborhood mental health clinic; job application support; job agency services; free legal services; financial aid programs; the Supplemental Nutrition Assistance Program or Women Infants and Children nutrition programs; Alcoholics Anonymous support groups; state Medicaid services, including transportation for medical visits; the United Way 211 hotline for local resources; and women’s shelters. Notifications were sent to patients’ primary care provider through the EHR provider notes system, as appropriate. When multiple stressors were identified through the social distress assessment, patients’ preferences for support and level of existing service arrangements were considered in determining the best support to be provided to each patient over the course of the 6-month intervention. Finally, although the social distress assessment was a formalized component of the intervention (i.e., all patients were assessed), the social distress support activities did not follow a specific protocol, but rather were an important part of the diabetes team’s strategy to actively engage and support intervention patients based on each patient’s identified psychosocial needs.

Usual diabetes team care was delivered by four additional multicultural, bilingual diabetes nurses and diabetes dietitians who comprised the clinical site’s longstanding, in-house diabetes program. This program was designed as part of the Robert Wood Johnson Foundation Diabetes Initiative to advance the delivery of culturally sensitive care for patients with type 2 diabetes in the primary care setting (20,21). The usual diabetes condition involved a series of individual patient visits that included diabetes self-management education content. Visit frequency was based on individual patient needs as determined by program clinicians. Patients also had access to lifestyle and diabetes self-management support groups run at the clinics by peer volunteers and clinical staff.

Patients in the usual diabetes care group completed the same psychosocial assessment measures used with the intervention group, including the social distress scale. However, data from this assessment were used only for research purposes and not to guide clinical care delivered within the usual diabetes care condition. Patients in both the intervention and the usual diabetes care groups received routine medical care from their health care providers for any acute or emergent problems.

**Data Analysis**

We described characteristics of the study groups (Intervention Group and Usual Diabetes Care Group) at baseline using mean ± SD for continuous covariates and Student’s t tests to assess the statistical significance of differences in means between the two groups. For categorical covariates, we reported the number and percentage of patients within each category and examined differences between treatment groups using the Fisher’s exact test, which is more conservative than the $\chi^2$ test and is appropriate for both large and small cell frequencies. We similarly reported social distress item scores for the individual 20 social distress items at baseline and follow-up and by study group.

We conducted an outcome analysis based on raw (0–20 range) total social distress scores at follow-up as intention to treat, such that we analyzed patients with the group into which they were randomized regardless of how many intervention visits they completed. We conducted an efficacy subset analysis to address missing research data because loss to follow-up was small, with <10%
of patients having missing data at follow-up. For comparison of social distress outcome by treatment status, we conducted a sensitivity analysis using multiple imputation methods to address missing data. We evaluated associations between treatment group and the continuous social distress outcome variable (i.e., total raw social distress score [0–20 range] based on summing the individual 20 social distress items) using unadjusted and multiple linear regression. We adjusted models for baseline social distress values and considered covariates that were associated with treatment status or A1C at $P < 0.20$ on univariable analysis for inclusion in our final multiple regression models. We included covariates in the final multiple regression models if their addition resulted in a change of $\geq 10\%$ in the B coefficient for the treatment status variable.

Statistical analyses were performed using SAS version 9.3 (SAS Institute, Cary, N.C.) and Stata version 12.0 (StataCorp, College Station, Tex.) software. To examine the influence of missing data, we used multiple imputation to replace missing values. Assuming an underlying multivariate normal distribution, the command imputes missing values through an iterative Markov chain Monte Carlo approach. We created 20 imputed datasets to reduce sampling variability from the imputation process.

Results

Demographics

The study included 399 adults with a type 2 diabetes diagnosis. The average age was $55 \pm 11.1$ years; 60% were female; 100% reported Hispanic ethnicity, and 98% self-identified their race as white. Diabetes-related physiological characteristics included average A1C of $8.9 \pm 1.45\%$, BMI $34.7 \pm 7.6$ kg/m$^2$, systolic blood pressure $136 \pm 20$ mmHg, and diastolic blood pressure $78 \pm 11$ mmHg. Table 2 provides a breakdown of the baseline demographic and clinical findings for the intervention and control groups. Intervention group patients completed an average of $3.8 \pm 1.5$ intervention visits in person with CDEs. Although data were not collected on the number of clinic visits for control group patients, patients receiving usual care at the two participating clinical sites attended an average of 5.2 visits each with providers during a 5- to 6-month timeframe based on an unpublished internal clinic report we reviewed and interviews of diabetes staff members after the interven-

| Social Distress Scale Items | Patients Indicating That Item Was Stressful (%) |
|-----------------------------|-----------------------------------------------|
| 2. Not enough money for food, rent or mortgage, or clothes for my family or myself | 67.1 |
| 7. Problems with depression or anxiety in my family or myself | 65.6 |
| 1. Taking care of my family’s different needs and problems | 57.0 |
| 20. Difficulty affording the cost of travel to visit friends and family | 52.0 |
| 17. Lack of money for family celebrations or important cultural events | 49.0 |
| 5. Sickness, disability, or death in the family | 47.7 |
| 8. Problems reading or understanding written information (newspapers, bills, official forms, letters) | 47.5 |
| 9. Difficulty paying for medications, doctor visits, or medical equipment for my family or myself | 44.0 |
| 18. Difficulty affording to send money or gifts to friends and family | 43.2 |
| 10. Lack of affordable local transport for my family or myself (car, bus, taxi) | 40.6 |
| 19. Difficulties adjusting to American culture or language | 35.0 |
| 11. Having conflict or arguments among family members | 30.7 |
| 15. Living in an unsafe neighborhood (crime, violence, conflict) | 19.6 |
| 14. Legal problems for my family or myself (fines, arrest, court appearances, immigration problems, detention, or prison) | 18.1 |
| 13. Family members working in unsafe, low-paying, or stressful jobs, or being unemployed | 17.1 |
| 16. Our neighborhood looks run down and neglected | 14.8 |
| 3. Problems with alcohol or drug abuse in my family or myself | 14.6 |
| 4. Problems with violence or physical abuse in my family or myself | 14.1 |
| 6. Family members experiencing discrimination or racism at work or in public | 13.6 |
| 12. Overcrowding or lack of privacy in the house | 10.1 |
tion. Follow-up research visits were completed by 86.4% of patients in the intervention group and 90.5% of those in the control group.

**Social Distress**

The majority of participants (>90%) reported that at least one social distress issue “had been stressful” to them during the previous week (Table 3). The three most commonly identified stressors were “problems with depression or anxiety in my family or myself” (65.6%), “taking care of my family’s different needs and problems” (57.0%), and “difficulty affording the cost of travel to visit friends and family” (52.0%). Moreover, 11 social distress items were identified as being present by ≥30% of patients, with even the least common distress issues (i.e., discrimination and racism and overcrowding or lack of privacy in the home) still reported by a significant minority of 13.6 and 10.1% of patients, respectively.

Baseline social distress scores declined from a mean of 6.8 ± 4.3 at baseline to 6.2 ± 4.3 at the 6-month follow-up for the control group and from a mean of 7.2 ± 4.5 at baseline to 5.6 ± 4.6 at the 6-month follow-up for the intervention group. This represented a significant difference in change from baseline to 6 months in reported levels of social distress between participants in the control group and those in the intervention group (P = 0.01). Thus, despite high levels of patient-reported social distress among patients at baseline, having CDEs focus on providing intervention patients with diabetes self-management support and referral to local services as needed for social distress issues produced a significant improvement in mean (baseline-adjusted) social distress score at 6 months (P <0.01).

**Discussion**

We offered support to Latino type 2 diabetes patients living in poor, urban communities and experiencing social distress as part of a larger patient-centered, culturally sensitive diabetes intervention study. We found that the 20 social distress problems assessed were identified as problems for 10–66% of patients, with economic and mental health issues being the most common. There were significant challenges related to literacy (47.7%), adjusting to American culture or language (35%), and having legal problems such as fines, arrests, court appearances, immigration problems, detention, or prison (18.1%). Overall, we have found in this and previous studies (13,17) that the highly personal and sensitive questions in this social distress assessment can be successfully completed by patients attending safety-net clinics if bilingual, bicultural trained interviewers help the patients complete the social distress questions and work within a structured interview protocol reviewed and approved by an institutional review committee.

We confirmed previous study findings and found that a variety of social distress issues were commonly experienced within this sample of Hispanic patients with poorly controlled type 2 diabetes (baseline A1C 8.4%) who were seen at community health centers. The pattern of similar results across several studies is significant because chronic life stress has been associated with suboptimal glycemic control (23), and it is known that blood glucose levels tend to be more erratic on days when interpersonal and environmental stress levels are high than on days when stressors
### TABLE 3. Comparison of Patients in Usual Diabetes Care and Intervention Groups Indicating at Baseline and Follow-Up That Various Social Distress Issues “Had Been Stressful” to Them During the Past Week

| Social Distress Scale Item                                                                 | Usual Diabetes Care | Intervention |
|------------------------------------------------------------------------------------------|---------------------|--------------|
|                                                                                         | Baseline (n = 200)  | Follow-Up (n = 180) | Baseline (n = 198) | Follow-Up (n = 169) |
| 1. Taking care of my family's different needs and problems                               | 104 (52.0)          | 101 (56.1)    | 123 (62.1)          | 87 (51.5)           |
| 2. Not enough money for food, rent or mortgage, or clothes for my family or myself       | 132 (66.0)          | 107 (59.4)    | 135 (68.2)          | 91 (53.9)           |
| 3. Problems with alcohol or drug abuse in my family or myself                             | 24 (12.0)           | 19 (10.6)     | 34 (17.2)           | 20 (11.8)           |
| 4. Problems with violence or physical abuse in my family or myself                        | 27 (13.5)           | 12 (6.7)      | 29 (14.7)           | 15 (8.9)            |
| 5. Sickness, disability, or death in the family                                          | 91 (45.5)           | 73 (40.6)     | 99 (50.0)           | 50 (29.6)           |
| 6. Family members experiencing discrimination or racism at work or in public             | 31 (15.5)           | 17 (9.4)      | 23 (11.6)           | 15 (8.9)            |
| 7. Problems with depression or anxiety in my family or myself                            | 130 (65.0)          | 118 (65.9)    | 131 (66.2)          | 91 (53.9)           |
| 8. Problems reading or understanding written information (newspapers, bills, official forms, letters) | 95 (47.5)           | 90 (50.0)     | 94 (47.5)           | 64 (38.1)           |
| 9. Difficulty paying for medications, doctor’s visits, or medical equipment for my family or myself | 92 (46.0)           | 75 (41.7)     | 83 (41.9)           | 55 (32.5)           |
| 10. Lack of affordable local transport for my family or myself (car, bus, taxi)          | 85 (42.7)           | 65 (36.1)     | 76 (38.4)           | 62 (36.7)           |
| 11. Having conflict or arguments among family members                                     | 55 (27.5)           | 50 (27.8)     | 67 (33.8)           | 47 (27.8)           |
| 12. Overcrowding or lack of privacy in the house                                          | 15 (7.5)            | 14 (7.8)      | 25 (12.6)           | 19 (11.3)           |
| 13. Family members working in unsafe, low-paying, or stressful jobs, or being unemployed | 32 (16.0)           | 29 (16.1)     | 36 (18.2)           | 29 (17.3)           |
| 14. Legal problems for my family or myself (fines, arrest, court appearances, immigration problems, detention or prison) | 37 (18.5)           | 26 (14.4)     | 35 (17.7)           | 23 (13.6)           |
| 15. Living in an unsafe neighborhood (crime, violence, conflict)                          | 32 (16.0)           | 28 (15.6)     | 46 (23.2)           | 30 (17.8)           |
| 16. Our neighborhood looks run down and neglected                                          | 25 (12.5)           | 20 (11.1)     | 34 (17.2)           | 24 (14.2)           |
| 17. Lack of money for family celebrations or important cultural events                    | 100 (50.0)          | 74 (41.1)     | 95 (48.0)           | 62 (36.9)           |
| 18. Difficulty affording to send money or gifts back home to friends and family           | 88 (44.0)           | 71 (39.4)     | 84 (42.4)           | 58 (34.3)           |
| 19. Difficulties adjusting to American culture or language                                | 71 (35.7)           | 65 (36.1)     | 68 (34.3)           | 56 (33.1)           |
| 20. Difficulty affording the cost of travel back home to visit friends and family         | 106 (53.0)          | 72 (40.0)     | 101 (51.0)          | 62 (36.7)           |
are lower (24). Moreover, the types of social distress experienced in urban, poor Latino populations with diabetes have been previously shown to stem from fear related to the cost of care, language, discrimination and immigration status, and an individual’s cultural disconnect with traditional western medicine and fear of negative reaction (25). These fears were identified by the social distress scale used in this diabetes team intervention study.

Our intervention was conducted by Latino CDEs working with a certified EHR and within a comprehensive, electronic diabetes dashboard that presented an integrated display of clinical and psychosocial data. This presented the nurse and dietitian CDEs working with providers a practical means to quickly address social distress issues within a culturally sensitive care context. Previous research has shown that this team dashboard strategy is significantly more efficient and saves more time for providers than locating chronic disease management data through standard EHR navigation (26). Because of the CDEs’ personal cultural competence and understanding of local Latino language and culture (94% of patients were Latino Puerto Rican) and local resources, they were able to engage with patients and direct those with specific social distress issues to existing clinical, community, and social services, if agreed to by the patients, and then to follow up with patients over time. This study generally confirmed the feasibility and acceptability of a brief, practical Internet-based measure of social distress linked to a clinical care process that connects into an EHR (via internal notes and communication from the CDE team to the clinic providers) for patients and providers.

Another important finding of this study beyond the identified high prevalence of many social distress problems and the feasibility of the assessment and patient management process used was that social distress was significantly decreased from baseline to follow-up in the intervention team care group compared to the control group. This finding of improved social distress is similar to previous research showing that diabetes educators can affect both psychosocial and clinical outcomes (27, 28). However, these reports have also noted that there is often a shortage of Latino diabetes educators (29) to provide diabetes self-management education and patient social services support. Also, diabetes self-management support is generally limited by the number of sessions covered by commercial insurance plans, Medicaid, and Medicare (30).

Although not a focus of this study, both social workers and community health workers could potentially provide significantly greater capacity for clinical teams to more effectively manage social distress needs among chronic disease patients (31). In a recent study in Albuquerque, N.M., (32), a practical screening tool was used to determine social determinants in two academic clinics and one FQHC (n = 3,048). After the screening, a trained community health worker offered patients assistance connecting with appropriate local services and resources. The community resources provided numerous services such as running food banks, assisting patients in filling out job applications, accompanying patients to apply for food stamps, and arranging family meetings with the health care team. Forty-six percent of those surveyed reported having at least one social need, and 63% had multiple needs. As a result of this study, community health workers were hired in all seven of the University of New Mexico’s primary care clinics and the governor of New Mexico signed into law the Community Health Workers Act, paving the way for a statewide certification process for community health workers and Medicaid reimbursement for certified community health worker services (32).

A long-term business strategy is necessary to address the significant level of social distress present in FQHCs and in other primary care clinics to make a meaningful impact on the lives of individuals with diabetes and other chronic conditions and to meet EHR meaningful use guidelines. In January 2015, the Centers for Medicare & Medicaid Services announced the chronic care management Current Procedural Terminology (CPT) code 9940 (33) for use in nonprovider, non–face-to-face coordination services furnished to Medicare beneficiaries with multiple chronic conditions. This CPT code provides a mechanism for clinics to be reimbursed for addressing issues such as social distress to create a sustainable business model that complements other payment innovations such as pay for performance, bundled payments, and shared savings (34).

The financial reimbursement for a provider using CPT code 9940 for 50 Medicare patients in his or her patient panel having two chronic illnesses, at an average per-patient reimbursement of $42.60 per month, is $2,560 annually. A variety of licensed professionals such as nurses, dietitians, social workers, and clinical pharmacists can also provide services covered under CPT code 9940.

A drawback to using this CPT code is that patients can expect a copayment of $8.50 for these services, which may represent a financial barrier to some low-income patients seen in FQHCs. For clinics that find it difficult to meet the requirements, there are companies now offering comprehensive services focused specifically on CPT code 9940 (35–37). This CPT code thus provides a reimbursable method for meeting meaningful use guidelines for social determinants.

From a practical perspective, next steps after the current study could involve providing access to patient social distress surveys and patient profiles within the EHR and mak-
ing available to any designated team clinician a drop-down menu of follow-up questions that are linked to available referral resources such as community behavioral/mental health services, social work agencies, and legal aid programs. This would require some clinical system-level investment and focus as part of a broader care delivery strategy to more effectively manage upstream social and behavioral factors that influence patient medical outcomes. Notably, emerging clinician triage tools for social distress are becoming available through mobile health technology vendors (e.g., Purple Binder [38]) that can provide an up-to-date, searchable database of local social and community services. These services can be securely linked into the EHR as “white-label” applications (i.e., applications that can be adapted to look and operate as part of the EMR interface). Complementary online resources that encourage healthy eating and physical activity are also available through local community coalitions (e.g., Live Well in Springfield, Mass. [39]). Over time, such resources will be integrated into the EHR and team clinical processes and will no longer require the additional effort now needed to access them as stand-alone Internet resources.

Limitations
Because this study focused on Hispanic patients (principally Puerto Rican Americans) with poorly controlled type 2 diabetes, our results may not be generalizable to other FQHC patient populations or other settings; more research is needed to explore other settings, populations, and chronic conditions. Also, because our focus on social distress was part of a multicomponent team care intervention, we cannot draw conclusions about the direct impact of improvements in social distress on A1C. We did not track the number and type of social distress referrals or the results of these referrals. Additional study is needed to address these issues and to potentially expand the scope of our social distress interventions and further integrate our assessment and management of patients’ social distress.

Conclusion
This study confirmed previous reports finding that a majority of Hispanic individuals experience social distress and that this distress can be significantly reduced through assessment, tailored diabetes education, and referrals to local community and social services delivered by bicultural, bilingual diabetes educators. Many health care providers want to address patients’ social needs but may not feel confident in their ability to do so or have the time, payment options, or integrated clinical-decision support tools to be effective in their efforts (40). We have outlined several strategic methods for addressing the social distress needs of patients with type 2 diabetes. These methods can also be translated to address other chronic diseases for which upstream social factors such as social distress affect patients’ engagement in care and outcomes. These strategies can help providers improve their quality of care and begin to meet meaningful use and MACRA guidelines and IOM recommendations focusing on improved national management of upstream social and behavioral factors that significantly influence health.

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Duality of Interest
G.W. is the chief scientific officer of Silver Fern Healthcare LLC, a company founded to commercialize his prior research, including the work reported in this article.

Author Contributions
N.A.A. contributed to the discussion and wrote, reviewed, and edited the manuscript. S.Z. researched the data. G.W. researched the data, participated in the discussion, and wrote, reviewed, and edited the manuscript. G.W. is the guarantor of this work and, as such, had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

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