SUPPLEMENTARY DATA

Supplementary Table 1. *Search strategy in Medline (Ovid)*

Blocks	Nº	Search
Axes of inequities	1	exp *Healthcare Disparities/ or *Spouse Abuse/ or *Battered Women/ or exp *Health Status Disparities/ or exp *Poverty Areas/ or exp *Poverty/ or *Vulnerable Populations/ or Medical Indigency/ or *Rural health/
	2	exp Healthcare Disparities/ or exp Health Status Disparities/ or exp Poverty Areas/ or exp Poverty/ or Vulnerable Populations/ or *Spouse Abuse/ or Battered Women/ or Rural health/
	3	("in need" or poverty or gender-bias or low-income or underserved or inequit$ or inequalit$ or disadvantag$ or disparit$ or inner-city or rural).ti.
	4	("in need" or poverty or gender-bias or low-income or inequit$ or inequalit$ or disadvantag$ or disparit$ or inner-city).ti,ab.
	5	exp Ethnic Groups/ or Cultural Diversity/ or Minority Health/ or Minority Groups/
	6	exp Sex Factors/ or exp Socioeconomic Factors/ or Gender Identity/ or *Women/ or Women, Working/
	7	exp Social Problems/ or exp Social Conditions/ or exp Social Environment/ or Social Distance/ or exp Social Isolation/ or exp Social Class/
	8	(minorit$ or immigrant$ or racial or ethnic$ or elder$ or women or gender or disab$ or ((social or psychosocial or educational) and (differences or problems or population$))).ti.
	9	(2 or 4 or 7) and (5 or 6 or 8)
Diabetes	10	exp diabetes mellitus/ or diabetes.ti.
	11	(1 or 3 or 10) and 11
Health care	12	Community health services/ or health care rationing/ or Healthy People Program/ or exp capacity building/ or exp health facilities/ or exp health personnel/ or health promotion/ or exp *health services/ or health care reform/ or health plan implementation/ or health planning technical assistance/ or health priorities/ or health resources/ or national health programs/ or regional health planning/ or exp Preventive Health Services/ or health education/
	13	exp "analytical, diagnostic and therapeutic techniques and equipment (non mesh)"/og, ec, st, ut
	14	health services accessibility/
	15	exp Self Care/ not Self Medication/
Interventions	16	(intervention$ or plan$ or education or adherence or monitor$ or strateg$ or provision or address or attenuat$ or servic$ or measur$ or program? or programme? or prevention or diagnost* or treatment or follow-up or promotion or care or self-care or reminder or manag$ or self-manag$ or provid$ or rehabilitat$ or improv$ or prevent or preventing or tackling or address$ or attenuat$ or reduc$ or ((favor or favour or promote) and (equit$ or fairness or equality))).ti.
	17	12 or 13 or 14 or 15 or 16
	18	11 and 17
Epidemiological design	19	(quasi-experimental or evaluat$ or evidence or assessment or effectiveness or 'health survey' or trial or cohort or "longitudinal study" or utilization or access$).ti. or (quasi-experimental or random$ or 'health survey' or "longitudinal study").ab. or ((cohort or comparative or control$ or prospective or evaluation or blind$ or effectiv$) adj2 (study or trial)).ti,ab.
	20	exp cohort studies/ or exp clinical trials as topic/ or exp clinical trial/ or feasibility studies/ or intervention studies/ or comparative studies/ or evaluation studies/ or validation studies/
	21	(systematic adj2 (review$ or overview)).ti. or (REVIEW.pt. and (systematic adj1 (review$ or overview)).ab.) or exp meta-Analysis/ or (meta-anal$ or metaanal$ or meta anal$).ti,ab.
	22	19 or 20 or 21
	23	18 and 22
	24	limit 18 to (systematic reviews or meta analysis)
	25	23 or 24

SUPPLEMENTARY DATA

Supplementary Table 2. *Registry of the Bibliographic Searches.*

Databases	Platform/ Access	Search date	References retrieved
Core databases			
EMBASE	Ovid Licensed Resource	14/07/2012	513
Medline	Ovid Licensed Resource	14/07/2012	661
CINAHL	EBSCO Licensed Resource	14/07/2012	105
Current Contents	ISI Licensed Resource	14/07/2012	306
CRD Databases (DARE, HTA)	http://www.crd.york.ac.uk/crdweb/	14/07/2012	6
Coverage/regulatory/licensing agencies			
U.S. Centers for Medicare & Medicaid (CMS) Web site	http://www.cms.hhs.gov/default.asp?	15/07/2012	0
AETNA	http://www.aetna.com/index.htm	15/07/2012	0
National Guidelines Clearinghouse	http://www.ngc.gov	15/07/2012	0
Mc Master Health Forum	http://www.mcmasterhealthforum.org/healthsystemsevidence-en	15/07/2012	3
Grey literature			
Networked Digital Library of Theses and Dissertations - electronic theses and dissertations (ETDs)	http://www.ndltd.org/	15/07/2012	0
Other Internet Directories or search resources			
Health Evidence	http://www.evidence.nhs.uk/	15/07/2012	5
SCIRUS	http://www.scirus.com/	16/07/2012	317
LILACS - Literatura Latinoamericana y del Caribe en Ciencias de la Salud	http://bases.bireme.br/cgi-bin/wxislind.exe/iah/online/?IsisScript=iah/iah.xis&base=LILACS&lang=e	16/07/2012	0
CEA Registry	https://research.tufts-nemc.org/cear/default.aspx	16/07/2012	0
metaRegister of Controlled Trials (mRCT)	http://www.controlled-trials.com/mrct/	16/07/2012	0
Backward and forward search of the articles previously identified. ISI WEB OF KNOWLEDGE	http://apps.webofknowledge.com/	23/07/2012	1264
TOTALREFERENCES SCREENED			**3180**

SUPPLEMENTARY DATA

Supplementary Table 3. *Characteristics and outcomes of the interventions.*

Author (Year)	Duration (months)/ number participants	Providers	Population of study	Setting	Description	Outcomes*	Effectiveness	Study design	Critical appraisal
A) Interventions exclusively targeted to patients									
Jaber, L. A *et al* (1996) (36)	4/39	Pharmacists and medical residents	African American	Hospital	**Pharmacist intervention:** diabetes education, medication counseling, instructions on dietary regulation, exercise and home blood glucose monitoring, and evaluation and adjustment of their hypoglycemic regimen. **Control group:** usual care.	Primary outcomes: **HbA1c and fasting plasma glucose**. Secondary outcomes: blood pressure, total cholesterol, high-density and low-density lipoprotein, triglycerides, serum creatinine, creatinine clearance, microalbumin to creatinine ratio, and quality of life.	HIGH	RCT	WEAK
Agurs-Collins ,T.D *et al* (1997) (20)	6/64	Dietitians and support of medical staff	Older African American	Urban hospital	**Intervention group:** weight loss and exercise program culturally adapted. **Control group:** minimal intervention	**HbA1c, Weight,** physical activity, dietary intake of fat, saturated fat, cholesterol, nutrition knowledge, and **blood pressure**	PARTIAL	RCT	STRONG
Basch, C.E. *et al* (1999) (26)	6/280	Medical staff	African American	Home of the participants	**Intervention group:** remote intervention which consisted in mailing educational information (low-literacy 9-page color booklet and a motivational videotape) and carrying out a semi-structured telephone education and counseling. **Control group:** usual care	**Documented receipt of dilated retinal examination**	HIGH	RCT	MODERATE
Mayer-Davis, E.J *et al* (2001) (39)	2/33	Primary care physicians, clinic staff and health educator	Rural African American	Primary care	**Lifestyle Intervention (LS):** weight management intervention. The intervention emphasized frequent and sustained contact between the interventionist and participants, low calories/ low-fat diet, moderate physical activity and self-monitoring tools for both eating and physical activity. **Lifestyle plus Empowerment Evaluation Intervention (LS-EE):** same intervention. Evaluation: through observational and conversational feedback plus knowledge questionnaires and satisfaction questionnaires.	**Weight, BMI, and fasting blood glucose**	HIGH	RCT	WEAK
Keyserling,T. C *et al* (2002) (37)	12/200	Peer counselors and primary care clinicians	African American women	Primary care and community-based intervention	**Clinic and community-based intervention:** monthly visits with a nutritionist who provided counseling to enhance physical activity and dietary intake plus group sessions and phone calls from peer counselor **Clinic-based intervention:** monthly visits with a nutritionist who provided counseling to enhance physical activity and dietary intake **Control group:** minimal intervention (educational pamphlets mailed to participants)	Primary **outcome**: **Physical activity** Secondary outcomes**:** blood pressure, weight, cholesterol, **diabetes knowledge**, HbA1c, and dietary intake	HIGH	RCT	STRONG
Anderson R.M *et al* (2003) (23)	12/132	Health professionals	Urban African American	Eye disease screening clinics	**Standard follow-up intervention:** reminder letters a month before it was time to return for their next annual diabetes eye evaluation (DEE). **Personalized follow-up intervention:** also received the letters, but those patients who did not call for an appointment within 10 days received a phone call from project staff, encouraging them to return for a DEE.	**Returning for annual diabetes retinal exam**	HIGH	RCT	MODERATE

SUPPLEMENTARY DATA

Ziemer ,D.C *et al* (2003) (51)	6/648	Nurses, dietitians , podiatric and endocrin ologists	African America n	Diabetes clinic	Patients were randomized to receive instruction in: **Group I:** healthy food choices meal plan (HFC) or an **Group II:** exchange-based meal plan (EXCH) All patients are routinely scheduled to see a dietitian. At each of these appointments, patients receive individualized, one-on-one instruction in separate sessions. All patients are managed with a stepped care protocol that emphasizes no pharmacologic therapy during the first 2 months.	**HbA1c**, weight, serum lipids, and blood pressure	LOW	RCT	WEAK
Melku s,G.D *et al* (2004) (40)	3/25	Nurse practition ers and lay health assistant	African America n women	Primary care	Is a one-group pretest posttest (*pilot study*): **Intervention**: 6-week, cognitive-behavioral, culturally competent intervention. Groups were intended for 7 to 10 women. Written materials, videotapes and recipes designed especially for the black community was provided. Monthly nurse practitioner visits were incorporated into intervention.	**HbA1c, weight**, **BMI**, diabetes knowledge, self-efficacy, and **diabetes-related emotional distress**	PARTIAL	QE	WEAK
Anders on-Loftin, W *et al* (2005) (24)	6/97	Dietitian and nurse case manager	Rural African America n	Primary care	**Intervention group:** intervention with 3 components: 1. Educational classes, 2. Peer-professional discussion groups, 3. Follow-up: weekly telephone follow-up **Control group:** they received referral to a local 8-hour traditional diabetes class	HbA1c, cholesterol, **BMI**, and **food habits**	PARTIAL	RCT	MODERAT E
Anders on,R. M *et al* (2005) (22)	12/239	Nurse and dietitian	African America n	Primary care	**Intervention group:** weekly group sessions with the following components: 1) reflecting on self-management experiments, 2) discussing the emotional experience of living with diabetes, 3) engaging in systematic problem-solving, 4) answering clinical questions and 5) delivering of culturally tailored materials. After their six weeks of sessions patients were offered to join a support group or a monthly phone call. **Control group:** usual care.	Clinical indices: **HbA1c, serum cholesterol, high-density lipoprotein, low-density lipoprotein, triglycerides, weight**, systolic blood pressure, diastolic blood pressure, using insulin, and **testing blood sugar** Psychosocial indices: **perceived understanding of diabetes, diabetes empowerment scale, attitudes toward seriousness of diabetes, positive attitudes**, and negative attitudes	PARTIAL	RCT	MODERAT E
Tang T.S *et al* (2005) (47)	6/62	General practition er and nurse	African America n	Local communit y center	**Community-based group intervention:** DSME program which employed a patient-centered approach. The intervention was designed to be flexible, encouraging patients to attend sessions as frequently as they perceived the need to attend. Sessions were based on the autonomy motivation and support theory of behavior change and emphasized an approach supportive of and responsive to patient-specific needs, lifestyle, and goals.	Clinical indices: HbA1c, **BMI, lipidemia**, blood pressure. Self-care behaviors: **general diet, carbohydrate spacing, exercise, blood glucose monitoring, foot care.** Psychosocial indices: **quality of life,** difficulty with medication, **difficulty with exercise, difficulty with diet,** difficulty with glucose testing, difficulty with foot care.	PARTIAL	QE	WEAK
Amoak o,E *et al* (2008) (21)	1/68	Geriatric nurse practition er	Older African America n women	Outpatient medical clinics and private physicians ´ offices	Psychological adjustment and self-care were measured at two points for all participants: at enrollment (time 1) and at 6-week post baseline (time 2). **Intervention group:** phone calls of 10-60 min duration. The intervention focused on 4 aspects of experience with diabetes: 1) diagnosis, 2) treatment, medications, symptoms and side effects, 3) social, economic and family issues, and 4) self-care, diet, exercise and foot care. **Control group:** minimal intervention	**Psychological adjustment**, diabetes self-care (**exercise**, diet, blood sugar testing, foot care, and medications)	PARTIAL	RCT	MODERAT E

SUPPLEMENTARY DATA

Skelly, A.H *et al* (2009) (44)	9/180	Nurse practitioners	African American women	Participant's home.	**Intervention group:** teaching and counseling modules delivered by a nurse in the participant's home. The intervention was guided by 4 modules addressing symptoms of hyperglycemia, symptoms of hypoglycemia, numbness and tingling in the feet/foot pain, and prevention of cardiovascular symptoms. **Intervention group plus telephone booster**: 3-month after completion of the intervention, participants received telephone calls. **Control group:** usual care	Hba1c, symptom distress, perceived quality of life, and self-care activities	LOW	RCT	MODERATE
Murrock,C.J *et al* (2009) (42)	3/46	Dance instructor	African American women	Community-based clinic	**Intervention group:** Dance classes 2 evenings a week for 12 weeks, for a total of 24 classes. Each dance class was 60-min and choreographed to gospel music. **Control group:** usual care	HbA1c, weight, **body fat, and blood pressure.**	PARTIAL	RCT	STRONG
Bogner H.R *et al* (2010) (27)	1/58	Integrated care manager	Older African American	Primary Care	**Integrated care intervention:** Provision of an individualized program to improve adherence to oral hypoglycemic agents and antidepressants that recognizes patients' social and cultural context and integration of type 2 DM treatment with depression management. **Control group:** usual care	**HbA1c**, depressive symptoms, **adherence to oral hypoglycemic**	PARTIAL	RCT	STRONG
D´Eramo M.G *et al* (2010) (30)	3/109	clinical psychologist or psychiatric mental health	African American women	Primary Care	**Intervention group:** received an 11-week culturally relevant group DSM training, coping skills training, and diabetes care intervention. **Control group:** 10-week usual diabetes education and diabetes care intervention.	Clinical indices: **HbA1c, blood pressure, lipidemia** Psychosocial indices: **quality of life,** social function**,** role-emotional, mental health**, vitality, role-physical, bodily pain, perceived provider support for diet, exercise, diabetes-related emotional distress**	HIGH	RCT	MODERATE
Tang T.S *et al* (2010) (45)	24/77	Certified diabetes educator and a clinical psychologist	African American	Local community center	**Control period:** participants received weekly educational newsletters **Intervention period:** participants attended weekly DSME groups as frequently as they needed. Sessions were guided by participants' self-management questions and concerns, and also emphasized experiential learning, coping, problem-solving, and goal-setting	Clinical indices: **HbA1c**, blood pressure, **BMI**, **lipidemia**. Psychosocial indices: self-care behaviors, quality of life.	PARTIAL	QE	WEAK
Walker E.A *et al* (2010) (50)	2/195	Nurse and dietitian	African American	Primary Care	**Intervention:** Three educational sessions which included information about diabetes and its complications, risk factors, proper diet, recommendations for exercise, medications, and monitoring blood glucose. Teaching strategies included discussion, games, and demonstrations. Patient navigators provided follow-up by phone at the scheduled intervals.	**Diabetes knowledge**, HbA1c, weight and BMI	PARTIAL	QE	WEAK
Carter E.L *et al* (2011) (29)	9/47	General Practitioner and Nurse	Urban African American	Participant's home.	**Intervention group:** online DSM intervention. Participant acceded to 3 online modules: self-management, health education, and social networking. **Control group:** usual care	**Weight, BMI,** blood pressure, **HbA1c, diabetes knowledge, diabetes management practices,** healthy eating, physical activity**, physical health status, mental health status**.	PARTIAL	RCT	MODERATE
Ellish N.J *et al* (2011) (32)	1/329	Nurse	Older African American	Ophthalmology clinic	**Targeted intervention group:** received a 4-page newsletter which consisted of 6 sections, including a testimonial designed to model eye examination behavior and a barrier table to convey specific ideas to overcome barriers. **Tailored intervention group:** received a unique newsletter, with the same sections and pictures as the targeted newsletter but with specific messages based on their responses to selected questions from the baseline questionnaire.	Rate of dilated fundus examination confirmed by an optometrist or ophthalmologist.	LOW	QE	MODERATE

SUPPLEMENTARY DATA

Hill-Briggs F *et al* (2011) (35)	1/56	Unclear	Urban African American	Primary care	**Intervention group:** problem-based DSM training designed for delivery in an intensive program format (9 sessions). **Control group:** problem-based DSM training designed for delivery in a condensed program format (2 sessions).	Clinical indices: **HbA1c**, blood pressure, cholesterolemia. Self-care behaviors: **Knowledge, problem solving, self-management behavior**.	HIGH	RCT	STRONG
Tang T.S et al (2012) (46)	24/89	Certified diabetes educator and a clinical psychologist	African American	Local community center	**Empowerment-based DSM support intervention:** consisted of 88 weekly which were based on (1) self-management challenges or experiences, (2) recognize emotions associated with those experiences, (3) engage in group-based problem-solving, (4) ask questions about diabetes and its care, and (5) set behavioral goals and make action plans to achieve those goals. **Diabetes self management intervention:** mailed DSME consisting of weekly educational newsletters coupled with clinical feedback.	Clinical indices: HbA1c, weight, BMI, **blood pressure**, **serum cholesterol**, HDL, LDL. Self-care behaviors: following a **healthy diet**, **spacing carbohydrates**, exercising, monitoring **blood glucose**, **inspecting feet**, taking medication, **using insulin**. Psychosocial indices: **Quality of life**, empowerment.	PARTIAL	QE	WEAK
B) Interventions exclusively targeted to the Healthcare System									
Thaler, L.M *et al* (1999) (48)	6/1138	Endocrinology and nurse practitioner	Urban African American	Primary care	At each visit, patients were seen initially by a nurse practitioner who continued or modified management and seen subsequently by a physician with subspecialty training in endocrinology who reviews and /or amended the care plan. **Intervention group:** HbA1c values were immediately available to their providers. **Control group:** HbA1c values were available to the provider after the patient had left the clinic.	Primary outcome: **fasting or random plasma glucose** Secondary outcomes: HbA1c and **frequency of therapy intensification by treatment modality** (insulin-treated, diet-treated, and oral-treated)	HIGH	RCT	WEAK
Miller, C.D *et al* (2003) (41)	4/597	Family practitioners, general internists and nurse practitioners	African American	Primary care	During each visit, patients with diabetes had an A1c level measured. **Intervention group:** HbA1c values were immediately available to their providers. **Control group:** HbA1c values were available to the provider after the patient had left the clinic.	Primary outcome: **HbA1c and frequency of pharmacological diabetes therapy**	HIGH	QE	WEAK
Din-Dzietham,R *et al* (2004) (31)	48/47	The DIRECT staff	Primary care physician, nurse practitioners and physician assistants	Primary care	**Intervention group + pretest posttest:** Orientation sessions in order to promote the establishment a continuous quality care improvement program. Healthcare professionals were given a practice resource and provider quality improvement manuals. The retention plan included two major components: an education component with interactive feedback during regular and periodic follow-up visits, and diabetes-pertinent material distribution**.**	**Change** in **prevalence in selected patterns of care** and glycemic control	PARTIAL	QE	WEAK
Gary,T.L *et al* (2003) (34) Vetter, M.J *et al* (2004) (49)	24/186	Nurse case manager y community health workers	Urban African American	Primary care and community-based intervention	**Usual care + NCM:** 3 annual 45-min face-to-face clinic visits and/or telephone contacts. **Usual care + CHW:** 45 min face-to-face home visits and/or telephone contacts. **Usual care + NCM + CHW (combined intervention):** biweekly conferences to coordinate interventions and promote synergy. **Control group:** usual care and a quarterly newsletter to diabetes-related topics.	Primary outcome: HbA1c Secondary outcomes: **blood pressure, lipid profile**, physical activity, and dietary habits	PARTIAL	RCT	MODERATE

SUPPLEMENTARY DATA

Phillips, L.S *et al* (2005) (43)	36/4138	Research team	African American	Primary Care	Intervention addressed to resident practitioners, which were randomized to the following groups: **Intervention group A:** residents received hard copy computerized reminders that provided patient-specific recommendations for management at the time of each patient's visit **Intervention group B**: residents attended individual face-to-face feedback on performance for 5 min every 2 weeks **Intervention group C:** received intervention A and B **Control group:** no intervention	**HbA1c,** blood pressure, cholesterol.	PARTIAL	RCT	MODERATE
C) Interventions targeted both to patients and Healthcare System									
Anderson-Loftin *et al* (2002) (25)	60/23	Dietitian and nurse case manager	Rural African American	Primary care	Culturally competent, dietary self-management intervention **Intervention group + pretest posttest:** intervention with 3 essential components: 1) low-fat dietary education, 2) peer/professional discussion groups and 3) follow up telephone calls and home visits were made over 5 months of the intervention	Physiological outcomes: **HbA1c**, **fasting blood glucose**, lipidemia, BMI, and blood pressure, Diabetes self- management: **dietary habits,** utilization of health services, access of health services, food, and medication. Costs of care: **frequency of acute care visits**, number of hospital admissions, admitting diagnoses, and length of hospital stay within the last 6 months for treatment of diabetes-related illnesses	LOW	QE	WEAK
Bray,P *et al* (2005) (28)	12/160	Certified nurse specialist (CHS), physicians and interdisciplinary team of regional providers	Rural African American	Hospital	**Intervention Group:** implementation of a new procedure to remind patients their office visits and to recall those who missed appointments and educational sessions to the patients. Patients were assigned to group sessions over 6 months. Following the educational sessions, each patient saw the physician for a brief visit, after which the care plan was reviewed, laboratory tests were obtained, and the patient scheduled for a subsequent visit. **Control group:** usual care	**HbA1c,** weight, and blood pressure	PARTIAL	QE	MODERATE
Mahotiere,T *et al* (2006) (38)	60/16140	Combination of clinical staff and trained staff	African American	Hospital outpatients clinics, physician offices and community health centers	Multifaceted quality improvement project that consisted in the implementation of multiple interventions. Interventions targeted both African-American beneficiaries as well as the providers who served them. **Provider Interventions:** a selection of interventions based on the review of the literature and Medicare New York State Quality Improvement Organization prior experience with quality improvement in the physician office setting were conducted. Effective interventions included that focused on system changes surrounding the physician visit. **Patient interventions:** selection of interventions (training sessions, educational sessions, discussion groups, culturally tailored interventions…) based on the review of the literature and several discussion groups with different organizations **Reference group:** statewide intervention implemented by a Physician Office	Primary outcome: **proportion of beneficiaries with diabetes receiving a biennial lipid profile** Secondary outcomes: scores relating to the different interventions (it was not feasible to **determine** the direct impact of selected interventions on reducing the disparity)	HIGH	QE	WEAK

SUPPLEMENTARY DATA

Gary,T.L *et al* (2009) (33)	24/542	Nurse case manager and community health workers	African American	Primary care	**Control group:** minimal intervention (mailings and telephone calls every 6 months to remind participants about preventive screenings) **Intervention group:** all components of the minimal intervention plus individualized, culturally tailored care provided by a NCM and a CHW, using evidence-based clinical algorithms with feedback to primary care providers.	Primary outcome: **emergency department visits**. Secondary outcomes: hospitalization counts, HbA1c, **HDL**, **blood pressure**, weight, and height.	HIGH	RCT	MODERATE

HbA1c: glycosylated hemoglobin, NCM: nurse case manager, CHW: community health worker, RCT, Randomized Controlled Trial; QE, Quasiexperimental study.

*. Outcomes measures which showed a statistically significant improvement after the intervention are marked bold.