Diabetes Management: Team-Based Care for Patients with Type 2 Diabetes

Summary Evidence Table

Study	Intervention Characteristics	Population Characteristics	Results
Author, Year: Al Mazroui, 2009 **Study Design**: Individual RCT **Suitability of Design**: Greatest **Quality of Execution**: Fair	**Location**: United Arab Emirates **Setting**: Hospital **Intervention Duration**: 12 months **Intervention Details**: Components: Education: disease, lifestyle, medication adherence, self-monitoring and management Counseling: life-style changes (diet, physical activity, smoking cessation), medication adherence, self-monitoring and management Medication modification Testing and monitoring Long-term follow-up Intensity: NR Team member added: Pharmacist Number of team members (including PCP and patient): 3 Team member interactions: explicit; pharmacist and PCP have discussions regarding patient drug therapy Member training: NR Member medication privileges: assume to be PCP; pharmacist discuss with PCP to suggest changes Member access to medical records: assume all **Comparison:** Usual care with physician and nurse staff; patient received advice on self-monitoring of blood-glucose by medical or nursing staff	**Target Population:** Patients with type 2 diabetes recruited from a military hospital **Eligibility Criteria**: Inclusion: confirmed diagnosis of Type 2 diabetes; receiving oral hypoglycemic therapy; hospital consultant consented; patient consented; Exclusion: secondary forms of hypertension; serum creatinine > 184 mmol/L; macro-albuminuria > 300mg/24h; history of cerebrovascular accidents; convulsive disorder; diabetic proliferative retinopathy; diabetic autonomic neuropathy **Sample Size**: 240 **Attrition**: 2.5% **Demographics**: Age (geometric mean): 49.3 Gender: 30.8% female Race/Ethnicity: Non US SES: NR Education: NR Insurance: 100% insured Time since diagnosis: IOM level of risk: universal Co-morbidity: excluded on comorbidity	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: **A1c** Int: Pre: 8.5; Post: 6.9; Change: -1.6 Cont: Pre: 8.4; Post: 8.3; Change: -0.01 Net Difference: -1.5 **SBP** Int: Pre: 131.4; Post: 127.2; Change: -4.2 Cont: Pre: 132.6; Post: 132.1; Change: -0.5 Net Difference: -3.7 **DBP** Int: Pre: 85.2; Post: 76.3; Change: -8.9 Cont: Pre: 83.9; Post: 84.1; Change: 0.2 Net Difference: -9.1 **HDL** Int: Pre: 46.4; Post: 51.0; Change: 0.12 Cont: Pre: 46.0; Post: 46.4; Change: 0.01 Net Difference: 4.3 **LDL** Int: Pre: 137.3; Post: 117.6; Change: -19.7 Cont: Pre: 134.6; Post: 139.6; Change: 5.0 Net Difference: -24.7 **Total cholesterol** Int: Pre: 203.4; Post: 172.9; Change: -30.5 Cont: Pre: 203.8; Post: 205.7; Change: 1.93 Net Difference: -32.5 **Triglycerides** Int: Pre: 141.7; Post: 110.7; Change: -31.0 Cont: Pre: 137.3; Post: 154.1; Change: 16.8

Study	Intervention Characteristics	Population Characteristics	Results
			Net Difference: -47.8 **Weight (BMI)** Int: Pre: 28.3; Post: 27.3; Change: -1.1 Cont: Pre: 28.0; Post: 28.0; Change: 0.01 Net Difference: -3.8% **Proportion of patients reaching A1c target of <7%** Int: Post: 45.4% Cont: Post: 30.3% Difference: 15.1 pct pts (p<0.02) **Proportion of patients reaching BP target of <130/80mmHg** Int: Post: 33.6% Cont: Post: 25.4% Difference: 8.2 pct pts (95% CI: -3.4, 19.8)
Author, Year: Aubert, 1998 **Study Design**: Individual RCT **Suitability of Design**: Greatest **Quality of Execution**: Fair	**Location**: Jacksonville, FL, U.S. **Setting**: Clinic **Intervention Duration**: 12 months **Intervention Details**: Components: Education: disease, lifestyle (diet, physical activity), Counseling: life-style changes (diet, physical activity), medication adherence, Medication modification Testing and monitoring Long-term follow-up Intensity: initial meeting with nurse for 45 minutes; weekly follow-up calls for patients taking insulin; follow-up calls every 2 weeks for patients with oral or diet and exercise Team member added: Nurse care manager, endocrinologist	**Target Population:** General population with diabetes (type 1 and type 2) **Eligibility Criteria**: Inclusion: Members of the Prudential HealthCare HMO who had visited a physician for diabetes, had a hospital claim for diabetes had been seen by the utilization management nurse, or had been referred to an ophthalmologist for a diabetic retinal examination AND responded to a recruitment call. Exclusion: recent HbA1c value less than 7.0%; had uncontrolled hypertension (blood pressure > 180/110 mm Hg); had unstable angina (class 4); had had a myocardial infarction in the past 3 months; had had two or more episodes of seizures; had alcoholism or drug abuse documented in the chart; had late-	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: Reported medians **A1c** Int: Pre: 8.8; Post: 7.1; Change: -1.7 Cont: Pre: 8.4; Post: 7.8; Change: -0.6 Net Difference: -1.1 (95%CI: -1.62, 0.58; p<0.001) **SBP** Int: Pre: NR; Post: NR; Change: 1.9 Cont: Pre: NR; Post: NR; Change: 6.1 Net Difference: -4.2 (95%CI: -9.81, 1.41) **DBP** Int: Pre: 79; Post: NR; Change: -0.8 Cont: Pre: 79; Post: NR; Change: 1.5 Net Difference: -2.3 (95%CI: -5.79, 1.19) **HDL** Int: Pre: 37; Post: NR; Change: 2 Cont: Pre: 37; Post: NR; Change: 0.7

Study	Intervention Characteristics	Population Characteristics	Results
	Number of team members (including PCP and patient): 4 Team member interactions: Explicit; Nurse case manager met with family medicine physician and endocrinologist at least bi-weekly to review patient progress; medication adjustments; and related issues Member training: Nurse was trained in algorithms; algorithm progressively move a patient toward improvement of glycemic control through adjustment in medication, meal planning, and reinforcement of exercise. Member medication privileges: Non-PCP family medicine physician and endocrinologist were responsible for all diabetes management decisions for patients in intervention group; PCP has medication privileges; nurse case manager can make insulin regimen adjustments as needed; all changes communicated to PCP Member access to medical records: Assuming all members **Comparison:** Usual care: given blood glucose meters and strips and encouraged to discuss enrollment in diabetes class (same class as referred to in intervention)	stage complications of diabetes or other chronic conditions, such as severe immunodeficiency or cirrhosis; were pregnant or were planning to become pregnant in the next 12 months; or were unable to perform self-management. **Sample Size**: 138 **Attrition**: 27.5% **Demographics**: Age: NR Gender: male, 55 (40%); female, 83 (60%) Race/Ethnicity: white 77%; non-white, 23% SES: NR Education: NR Insurance: NR Time since diagnosis: NR Level of risk: universal Co-morbidity: obesity; intervention 68%, control 76%	Net Difference: 1.3 (95%CI: -2.17, 4.77) **LDL** Int: Pre: 126; Post: NR; Change: -6 Cont: Pre: 128; Post: NR; Change: 10.2 Net Difference: 4.2 (95%CI: -8, 16.3) **Total cholesterol** Int: Pre: 211; Post: NR; Change: -11.9 Cont: Pre: 206; Post: NR; Change: -7.2 Net Difference: -4.7 (95%CI: -21.54, 12.14) **Triglycerides** Int: Pre: 191; Post: NR; Change: -21.2 Cont: Pre: 196; Post: NR; Change: 10 Net Difference: -31.2 (95%CI: -130.2, 67.89) **Subgroup analyses**: A1c in persons with type 1 diabetes Int: Pre: NR; Post: NR; Change: -1.2% Cont: Pre: NR; Post: NR; Change: -0.2% Net Difference: -1.0% A1c in persons with type 2 diabetes Int: Pre: NR; Post: NR; Change: -1.7 % Cont: Pre: NR; Post: NR; Change: -0.7% Net Difference: -1.0%
Author, Year: Bellary 2008 **Study Design**: Group RCT **Suitability of Design**: Greatest	**Location**: Coventry and Birmingham, UK **Setting**: Clinic; community **Intervention Duration**: 24 months **Intervention Details**: Components: Education: disease, self-monitoring and management	**Target Population:** Type 2 diabetes patients with south Asian origin in UK (UK census categories: Indian, Pakistani, Bangladeshi, and other Asians); **Eligibility Criteria**: Clinics: 21 general practices with >80% of south Asian patients, 7 in Coventry, 14 in Birmingham; Intervention: 9 practices; Control:	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: **A1c** Int: Pre: 8.2 ± 1.9; Post: NR; Change: NR Cont: Pre: 8.2 ± 1.8; Post: NR; Change: NR Net Difference: -0.18 (95% CI: -0.34, -0.01; p=0.037)

Study	Intervention Characteristics	Population Characteristics	Results
Quality of Execution: Fair	Counseling: testing, monitoring, self-monitoring and management Testing and monitoring Long-term follow-up Intensity: NR Team member added: Practice nurse, link worker, community diabetes-specialist nurses Number of team members (including PCP and patient): 5 Team member interactions: Explicit; community diabetes-specialist nurses monitored practice nurse and link workers' work in observation sessions once every 3 months Member training: Practice nurses: formally trained in diabetes and had 1:1 observed sessions with a diabetes-specialist nurse; Link workers: attended a foundation course, equivalent to diploma, in diabetes management and care Member medication privileges: No; practice nurses consult with PCP for changes in prescriptions; assume only PCP make the actual changes; Member access to medical records: PCP, practice nurse, and patient **Comparison:** Control practices received the same treatment protocols, and practices managed patients with their existing resources; Routine practice nurse let diabetes clinics using the guidelines; community diabetes-specialist nurses also covered the control practices	12 practices; Simple randomization in both areas; Patients: adults of south Asian origin with type 2 diabetes; no exclusion criteria; **Sample Size**: 1486 **Attrition**: 14% **Demographics**: Age: <45 yrs: 14%; 45-64 yrs: 56%; ≥64 yrs: 30% Gender: male, 776 (52%); female, 709 (48%) Race/Ethnicity: Non US SES: NR Education: NR Insurance: 100% (UK) Time since diagnosis: 0-4 yrs: 40%; 5-9 yrs: 28%; 10-19 yrs: 24%; >20 yrs: 8% Level of risk: Universal Co-morbidity: At baseline, 268 (18%) patients (150 [17%] in the intervention group and 118 [19%] in the control group) had evidence of existing coronary heart disease or previous cardiovascular events, angina, myocardial infarction, cardiovascular accident, coronary artery bypass graft, or other heart problems;	**SBP** Int: Pre: 139.4 ± 21.1; Post: NR; Change: NR Cont: Pre: 141.1 ± 20.3; Post: NR; Change: NR Net Difference: -0.4 (95% CI: -2.3, 1.5; p=0.66) **DBP** Int: Pre: 82.9 ± 11; Post: NR; Change: NR Cont: Pre: 83.8 ± 11.1; Post: NR; Change: NR Net Difference: -1.6 (95% CI: -2.8, -0.5; p=0.007) **Total cholesterol** Int: Pre: 4.7 ± 1.1; Post: NR; Change: NR Cont: Pre: 4.7 ± 1.1; Post: NR; Change: NR Net Difference: 0.01 (95% CI: -0.11, 0.12; p=0.88) **Weight (BMI)** Int: Pre: 28.5 ± 4.8; Post: NR; Relative change: NR Cont: Pre: 28.6 ± 4.9; Post: NR; Relative change: NR Difference: 0.38 (95% CI: 0.20, 0.55; p<0.0001)
Author, Year: Chan, 2012 **Study Design**:	**Location**: Hong Kong **Setting**: Diabetic clinic	**Target Population:** Patients with type 2 DM at greater risk for developing CVD (HbA1c ≥ 8.0%)	**Follow-up Time Since Intervention Conclusion**: 0 months

Study	Intervention Characteristics	Population Characteristics	Results
Individual RCT **Suitability of Design**: Greatest **Quality of Execution**: Good	**Intervention Duration**: 9 months **Intervention Details**: Components: Education: disease, lifestyle (diet, physical activity, smoking cessation), medication adherence Counseling: life-style changes (diet, physical activity, smoking cessation), medication adherence, reinforcement of education Long-term follow-up Intensity: 271 pharmacist interventions were conducted; average 5 per patient; 33% of visits dealing with medication adherence Team member added: Pharmacist Number of team members (including PCP and patient): 3 Team member interactions: Implicit; pharmacist contacted PCP by notes in medical record. This only occurred for patient reported issues with medication or necessary treatment change, therefore it only happened in 29 of 271 total pharmacist interventions. Member training: NR Member medication privileges: PCP only Member access to medical records: All (specified) **Comparison:** Usual care - Patients in the control group received the same medical care without pharmacist interventions. The patient's drug and disease knowledge were assessed at baseline and at the end of the study by the same pharmacist.	**Eligibility Criteria**: Inclusion: ≥ 18yrs; clinical diagnosis of T2DM and current therapy with at least 5 drugs (in which 1 was a hypoglycemic agent); HbA1c ≥ 8.0% Exclusion: gestational diabetes; pregnancy; a secondary cause of hypertension; history of myocardial infarction, unstable angina, and heart failure; an uncorrected endocrine abnormality (Cushing disease, acromegaly); and end stage renal failure (glomerular filtration rate <10mL/min or undergone peritoneal dialysis or hemodialysis). Patients were also excluded from the study if they had marked dementia or unstable psychiatric illnesses, malignancy, or life- threatening conditions including cardiac arrest, sepsis, respiratory distress, and patients under care in the intensive care unit. **Sample Size**: 105 **Attrition**: 0% **Demographics**: Age: 62.4 Gender: male, 58 (55.2%); female, 47 (44.8%) Race/Ethnicity: NA SES: NR Education: NR Insurance: NR Time since diagnosis: 14.3 Level of risk: At risk for complications Co-morbidity: NR	**Results**: **A1c** Int: Pre: 9.7 ± 1.4; Post: NR; Change: -1.57 Cont: Pre: 9.5 ± 1.8; Post: NR; Change: -0.40 Net Difference: -1.17 (p<0.001) **SBP** Int: Pre: 141 ± 24; Post: NR; Change: 19.7 Cont: Pre: 138 ± 19; Post: NR; Change: 16.8 Net Difference: 2.9 (p=0.34) **DBP** Int: Pre: 75 ± 11; Post: NR; Change: -2.8 Cont: Pre: 74 ± 11; Post: NR; Change: -0.7 Net Difference: -2.1 (p=0.23) **HDL** Int: Pre: 42.2 ± 9.7; Post: NR; Change: 0.15 Cont: Pre: 74 ± 10.1; Post: NR; Change: 0.077 Net Difference: 0.077 (p=0.93) **LDL** Int: Pre: 101.3 ± 32.9; Post: NR; Change: -13.9 Cont: Pre: 107.1 ± 28.6; Post: NR; Change: -1.16 Net Difference: -12.76 (p=0.026) **Total cholesterol** Int: Pre: 170.1 ± 36.0; Post: NR; Change: -15.1 Cont: Pre: 182.1 ± 33.3; Post: NR; Change: -2.71 Net Difference: 3.09 (p=0.08) **Triglycerides** Int: Pre: 154.1 ± 80.6; Post: NR; Change: -19.5 Cont: Pre: 168.3 ± 124.9; Post: NR; Change: -19.5 Net Difference: 0 (p=0.99) **Weight (BMI)**

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			Int: Pre: 25.2 ± 3.4; Post: NR; Relative change: -0.16 Cont: Pre: 26.2 ± 3.6; Post: NR; Relative change: 0.07 Difference: -0.23 (p=0.24) **Proportion of patients reaching A1c target of <7%** Int: Change: 5.9 pct pts Cont: Change: 0 pct pts Net Difference: 5.9 pct pts **Proportion of patients reaching SBP target of <130mmHg** Int: Change: 13.7 pct pts Cont: Change: 9.3 pct pts Net Difference: 4.4 pct pts **Proportion of patients reaching DBP target of <80mmHg** Int: Change: 7.8 pct pts Cont: Change: 1.9 pct pts Net Difference: 5.9 pct pts **Proportion of patients reaching HDL target of <50mg/dL** Int: Change: 3.9 pct pts Cont: Change: 1.9 pct pts Net Difference: 2 pct pts (p=0.99) **Proportion of patients reaching LDL target of <100mg/dL** Int: Change: 17.6 pct pts Cont: Change: 7.4 pct pts Net Difference: 10.2 pct pts (p=0.85) **Subgroup analyses**: 9.8% of intervention group didn't meet any treatment goals; 16.7% of control group didn't reach any treatment goals

Study	Intervention Characteristics	Population Characteristics	Results
Author, Year: Choe, 2005 **Study Design**: Individual RCT **Suitability of Design**: Greatest **Quality of Execution**: Fair	**Location**: Ann Arbor, Michigan, U.S. **Setting**: Single university-affiliated clinic **Intervention Duration**: 12 months **Intervention Details**: Components: Education: medication, testing and monitoring, self- management Counseling: medication Long-term follow-up **Intensity:** initial visit with pharmacist for about 1 hour; monthly telephone contact with patients Team member added: Pharmacist Number of team members (including PCP and patient): 3 Team member interactions: Explicit; multidirectional; PCP and Pharmacist discussed patient progress and treatment options/changes in brief face-to-face interactions. Pharmacist periodically provided condensed "diabetes status updates" to providers Pharmacist had 1 hour intro education and monitoring session with patient, followed up as necessary and at least monthly by phone, and joined in on routine PCP visits PCP and patient maintained routine visits Member training: Not specifically in TBC Member medication privileges: Yes; Pharmacist could make medication adjustments (doses of insulin or hypoglycemic agents) (noted in discussion) Member access to medical records: Yes	**Target Population:** High risk (HbA1c ≥ 8.0%) type 2 diabetic patients without significant comorbidity **Eligibility Criteria**: Clinic: university-affiliated ambulatory care clinic with 10 primary care internists Patients: Identified 454 patients with DM at study site using ICD-9-CM diagnosis codes Inclusion: Most recent HbA1c level on record 8.0% or greater **Sample Size**: 80 **Attrition**: 19% **Demographics**: Age: 51.6 Gender: male, 38 (47.5%); female, 42 (52.5%) Race/Ethnicity: white 76%; non-white 24% SES: NR Education: NR Insurance: Medicare, 8 (10%); private insurance, 71 (89%); none, 1 (1%) Time since diagnosis: NR Level of risk: selected (at risk for complications) Co-morbidity: no, excluded	**Follow-up Time Since Intervention Conclusion**: Variable up to 12 months further follow up (24 total) Intervention group had more frequent follow-up than control group, and final measurements made earlier than control group; Intervention: average 13.6 months; Control: average 14.9 months; **Results**: **A1c** Int: Pre: 10.1 ± 1.8; Post: 8.0 ± 1.4; Change: -2.1 Cont: Pre: 10.2 ± 1.7; Post: 9.3 ± 2.1; Change: -0.09 Net Difference: -1.2 **Subgroup analyses:** We found a strong statistical interaction between the intervention and baseline HbA1c levels ($P < 0.001$), suggesting that patients with higher HbA1c levels at enrollment had a greater improvement in glycemic control than those with more moderate elevations.

Study	Intervention Characteristics	Population Characteristics	Results
	Comparison: Unstructured, regular visits with PCP as necessary		
Author, Year: Crowley, 2013 **Study Design**: Individual RCT **Suitability of Design**: Greatest **Quality of Execution**: Fair	**Location**: Durham, NC, U.S. **Setting**: Clinic **Intervention Duration**: 12 months **Intervention Details**: Components: Education: disease, lifestyle (diet, physical activity, smoking cessation), medication adherence, self-monitoring and management Counseling: life-style changes (diet, physical activity, smoking cessation), medication adherence Medication modification Testing and monitoring Long-term follow-up Intensity: on average, patients made 9.9 of 12 scheduled calls; each call lasted about 17.1 minutes; nurses initiated 436 PCP contacts, with 76% replied, and 18% resulted in medication change Team member added: Nurse Number of team members (including PCP and patient): 3 Team member interactions: Explicit. Nurses contact PCPs to relay summary information and facilitate any medication changes. Member training: Yes; not diabetes specific. Member medication privileges: PCP only, nurses encouraged PCPs to make changes if appropriate, but never provided specific suggestions; Member access to medical records: All	**Target Population:** African-Americans with type 2 diabetes; special population: African American and very poor and under-health educated (49% of patients with inadequate health literacy and 37% with annual income <$10,000) **Eligibility Criteria**: Inclusion: age ≥18yrs; self-reported black/African American race; ≥1 PCP visit in the past year, a type 2 diabetes International Classification of Diseases, Ninth Revision code within 3yrs, and ≥1 hemoglobin A1c (HbA1c) measurement in the past year. Exclusion: diagnosis of dementia, psychosis, or metastatic cancer; receipt of dialysis; recent (3 months) hospitalization for stroke, myocardial infarction, or coronary revascularization; pregnancy, expected pregnancy, or breastfeeding; nursing home residence; lack of telephone access; severely impaired speech/vision; or not speaking English. **Sample Size**: 359 **Attrition**: 4.2% **Demographics**: Age: 56 Gender: male, 100 (28%); female, 259 (72%)	**Follow-up Time Since Intervention** **Conclusion**: Varying follow up (end point data measurement median was 31 days after study end for HbA1c, 84 for LDL-C); effect sizes calculated from models for right after intervention completion **Results**: **A1c** Int: Pre: 8.0 ± 0.1; Post: 7.8 ± 0.1; Change: NR Cont: Pre: 8.0 ± 0.1; Post: 7.9 ± 0.1; Change: NR Net Difference: -0.1 (95% CI: -0.4, 0.2) **SBP** Int: Pre: 136.8 ± 0.9; Post: 137.6 ± 1.3; Change: NR Cont: Pre: 136.8 ± 0.9; Post: 134.7 ± 1.4; Change: NR Net Difference: 3.0 (95% CI: -0.06, 6.6) **LDL** Int: Pre: 99.1 ± 2.2; Post: 96.5 ± 2.8; Change: NR Cont: Pre: 99.1 ± 2.2; Post: 95.5 ± 2.8; Change: NR Net Difference: 1.0 (95% CI: -6.5, 8.5)

Study	Intervention Characteristics	Population Characteristics	Results
	Comparison: Usual care with written education material at baseline	Race/Ethnicity: African American 100% SES: Education, completed <12 y schooling: 30% Insurance: private/managed, 133 (37%); Medicare, 149 (42%); Medicaid, 60 (17%); Uninsured/worker's comp, 22 (6%) Time since diagnosis: NR Level of risk: diabetic with complications Co-morbidity: hypertension, (95%); chronic kidney disease, (13%); congestive heart failure, (17%)	
Author, Year: Depue, 2013 **Study Design**: Group RCT **Suitability of Design**: Greatest **Quality of Execution**: Fair	**Location**: Samoa, U.S. **Setting**: Clinic **Intervention Duration**: 12 months **Intervention Details**: Components: Education: disease, lifestyle (diet, physical activity, smoking cessation), medication adherence, self-monitoring and management Counseling: life-style changes (diet, physical activity, smoking cessation), medication adherence, monitoring, self-monitoring and management Goal setting and action plan Testing and monitoring Long-term follow-up Intensity: intervention group received 74% of expected visits on average across all risk levels Team member added: Nurse care manager	**Target Population:** Patients with type 2 diabetes in American Samoa **Eligibility Criteria**: Villages: within the clinic's service area; Patients: drawn from TC patient records; 18+, resident in service area; self-identify as Samoan; physician diagnosed type 2 diabetes; mentally competent; unlikely to leave American Samoa for >4 months; no serious comorbid conditions; more than one person in a household had type II diabetes were also enrolled; **Sample Size**: 268 **Attrition**: 9.3% **Demographics**: Age: 55 Gender: male, 102 (38%); female, 166 (62%)	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: **A1c** Int: Pre: 9.3 ± 2.0; Post: 9.6 ± 2.0; Change: -0.3 Cont: Pre: 10; Post: 10; Change: 0 Net Difference: -0.3 **SBP** Int: Pre: 132 ± 17.4; Post: NR; Change: NR Cont: Pre: 134 ± 17.4; Post: NR; Change: NR Difference: no significant difference **DBP** Int: Pre: 84 ± 7.8; Post: NR; Change: NR Cont: Pre: 84 ± 11.1; Post: NR; Change: NR Difference: not significant **Waist circumference (cm)** Int: Pre: 118 ± 18.8; Post: NR; Change: NR Cont: Pre: 121 ± 16.6; Post: NR; Change: NR Difference: not significant

Study	Intervention Characteristics	Population Characteristics	Results
	Number of team members (including PCP and patient): 3 Team member interactions: explicit; NCM provided feedback to physicians about patient care needs; patient risk profile from initial visit placed in medical chart for access by PCP; urgent levels of BG and BP were referred immediately to the TC physician Member training: Qualification required, training not provided by intervention Member medication privileges: PCP Member access to medical records: assume all **Comparison:** Usual care; both intervention and control groups received a copy of "Four Steps to Control Your Diabetes for Life", in Samoan language, from National Diabetes Education Program; risk profile also created for the usual care group and was placed in medical charts	Race/Ethnicity: Samoan American 100% SES: NR Education, mean yrs: 12.5 Insurance: NR Time since diagnosis: NR Level of risk: Universal Co-morbidity: 12% have comorbid conditions	**Weight (BMI)** Int: Pre: 35.6 ± 6.5; Post: NR; Relative change: NR Cont: Pre: 36.3 ± 7.8; Post: NR; Relative change: NR Difference: not significant **Subgroup analyses**: Clinically significant changes in HbA1c were greater among participants at higher risk, with unadjusted values of 69.2% in intervention group vs. 40.8% in usual care Participants at higher risk were much more likely to experience a clinically significant reduction
Author, Year: Doucette, 2009 **Study Design**: Individual RCT **Suitability of Design**: Greatest **Quality of Execution**: Fair	**Location**: Iowa City, IA, U.S. **Setting**: Community; pharmacy **Intervention Duration**: 12 months **Intervention Details**: Components: Education: disease, self-monitoring and management Counseling: testing, monitoring, self-monitoring and management Medication modification Testing and monitoring Long-term follow-up Intensity: NR Team member added: Pharmacist	**Target Population:** Adults with type 2 diabetes **Eligibility Criteria**: Inclusion: participants had to have completed at least two diabetes clinic classes within the past 2 years at the community diabetes education center and had to have 7.0% or greater HBA1c as of most recent lab results, receive care from a pharmacist at 1 of 7 study pharmacies; Exclusion: dialysis, hepatic disorder, stage IV heart failure, severe ischemic/hemorrhagic stroke, legal blindness, diabetes-related amputation, gestational diabetes only, and dementia	**Follow-up Time Since Intervention Initiation**: **Follow-up Time Since Intervention Conclusion**: 0 months **Results**: **A1c** Int: Pre: NR; Post: NR; Change: -0.27 Cont: Pre: NR; Post: NR; Change: 0.12 Net Difference: -0.39 (p=0.272) **SBP** Int: Pre: NR; Post: NR; Change: 7.1 Cont: Pre: NR; Post: NR; Change: 4.5 Net Difference: 2.6 (p=0.367) **DBP** Int: Pre: NR; Post: NR; Change: 1.2

Study	Intervention Characteristics	Population Characteristics	Results
	Number of team members (including PCP and patient): 3 Team member interactions: Implicit; Pharmacist sees patient every 3 months, patient sees PCP regularly, Pharmacist sends PCP SOAP notes, PCP may or may not change medication based off recommendation Member training: Yes; training on diabetes management and study protocol Member medication privileges: PCP only; pharmacist can recommend Member access to medical records: All **Comparison:** Patients in the control group received usual diabetes care from their primary care provider. Study participants did not receive additional diabetes education sessions from the participating diabetes education center during the study period.	**Sample Size**: 78 **Attrition**: 13.3% **Demographics**: Age: 60 Gender: male, 35 (43%); female, 43 (57%) Race/Ethnicity: White 96% SES: NR Education: HS grad or less, 47 (64%); college or technical degree, 26 (36%) Insurance: NR Time since diagnosis: NR Level of risk: Universal Co-morbidity: Reported on BMI	Cont: Pre: NR; Post: NR; Change: 0.3 Net Difference: 0.9 (p=0.705) **LDL** Int: Pre: NR; Post: NR; Change: -19.6 Cont: Pre: NR; Post: NR; Change: -12.0 Net Difference: -7.6 (p=0.320)
Author, Year: Frei, 2014 **Study Design**: Cluster randomized trial **Suitability of Design**: Greatest **Quality of Execution**: Good	**Location**: The German part of Switzerland (in the area of Zurich, St. Gallen and Appenzell) **Setting**: Primary care clinics **Intervention Duration**: 12 months **Intervention Details**: Components: Education: disease, lifestyle (diet, physical activity), medication adherence, testing, self-monitoring and management Counseling: life-style changes (diet, physical activity), medication adherence, testing, monitoring, self-monitoring and management Goal setting	**Target Population:** Adults with type 2 diabetes and HbA1c ≥ 7.0% measurement in past year **Eligibility Criteria**: Inclusion: ≥ 18yrs, type II diabetes, HbA1c ≥ 7.0% measurement in past year Exclusion: insufficient language skills to read and understand informed consent, patient information, and questionnaires; practice contact for emergencies only (i.e., no continuous patient-doctor relationship); and a life expectancy of 6 months. **Sample Size**: 326	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: **A1c** Int: Pre: 7.8 ± 1.5; Post: 7.6 ± 1.2; Change: NR Cont: Pre: 7.6 ± 1.1; Post: 7.3 ± 1.0; Change: NR Net Difference: -0.05 (p=0.708) **SBP** Int: Pre: 140.3 ± 18.4; Post: 136.4 ± 17.5; Change: NR Cont: Pre: 137.8 ± 16.8; Post: 137.5 ± 16.9; Change: NR Net Difference: -3.63 (p=0.050)

Study	Intervention Characteristics	Population Characteristics	Results
	Testing and monitoring Long-term follow-up Intensity: NR Team member added: Practice nurse Number of team members (including PCP and patient): 3 Team member interactions: Explicit; Workshops and sharing of traffic light scheme assessed patient parameters Member training: Yes Member medication privileges: PCP only Member access to medical records: Assume all **Comparison:** Usual care in Switzerland is focused on the PCP and the PCP-patient relationship, based on good clinical practice. As in most European countries, practice nurses in Switzerland are currently only marginally involved in the care for patients, and their education is less focused on medical issues, addressing mainly administrative matters.	**Attrition**: 6.6% **Demographics**: Age: 67 Gender: male, 187 (57.4%); female, 139 (42.6%) Race/Ethnicity: Non US SES: NR Education: NR Insurance: Universal (Switzerland) Time since diagnosis: 9.9yrs Level of risk: Universal, any diabetic Co-morbidity: 2.7 average number of comorbidities	**DBP** Int: Pre: 83.1 ± 10.4; Post: 79.6 ± 9.9; Change: NR Cont: Pre: 78.7 ± 10.2; Post: 79.2 ± 11.2; Change: NR Net Difference: -4.01 (p<0.001) **HDL** Int: Pre: 46.4 ± 11.6; Post: 46.4 ± 11.6; Change: NR Cont: Pre: 50.3 ± 15.5; Post: 50.3 ± 19.3; Change: NR Net Difference: -1.9 (p=0.182) **LDL** Int: Pre: 108.3 ± 42.5; Post: 104.4 ± 38.7; Change: NR Cont: Pre: 96.7 ± 42.5; Post: 100.5 ± 38.7; Change: NR Net Difference: -8.1 (p=0.033) **Total cholesterol** Int: Pre: 193.4 ± 46.4; Post: 189.5 ± 42.5; Change: NR Cont: Pre: 181.8 ± 42.5; Post: 181.8 ± 42.5; Change: NR Net Difference: -8.1 (p=0.033) **Weight (BMI)** Int: Pre: 30.5 ± 5.3; Post: 30.0 ± 4.9; Change: NR Cont: Pre: 30.7 ± 5.9; Post: 30.8 ± 5.8; Change: NR Net Difference: -0.24 (p=0.213)
Author, Year: Gabbay, 2006 **Study Design**: Individual RCT	**Location**: Hershey, PA, U.S. **Setting**: Clinic **Intervention Duration**: 12 months **Intervention Details**: Components:	**Target Population:** Adults with diabetes, 18yrs and older; type 1 and type 2 diabetes **Eligibility Criteria**: Inclusion: ICD 9 encounter codes (two or more visits for diabetes within the past year)	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: **A1c** Int: Pre: 7.46 ± 1.4; Post: 7.45 ± 1.4 Change: NR

Study	Intervention Characteristics	Population Characteristics	Results
Suitability of Design: Greatest **Quality of Execution**: Fair	Education: disease, self-monitoring and management Counseling: monitoring, self-monitoring and management Goal setting and action plan Long-term follow-up Intensity: NR Team member added: Nurse care manager; dietitian and other specialists Number of team members (including PCP and patient): 4 Team member interactions: Explicit; NCM coordinated care and communication between everyone, close communication was maintained with PCP; patient met 1:1 with all other team members; PCP saw patient, gave guidance to NCM; dietician and other specialists communicated with NCM and some patients Member training: Yes; The nurse case manager was a registered nurse, associate of applied sciences (AAS) who was trained at the Penn State Diabetes Center through a series of seminars with a dietitian, a certified diabetes nurse educator and an endocrinologist. Member medication privileges: Specified PCP only; nurse can make recommendations Member access to medical records: all (NR on specialists) **Comparison:** The control group received ongoing usual care by their PCP, and had no interaction with the nurse case manager. PCPs continued to be free to refer the patients to other specialists.	Exclusion: cannot speak English, residents of nursing homes **Sample Size**: 332 **Attrition**: 0% **Demographics**: Age: 64.5 Gender: male, 181 (55%); female, 151 (45%) Race/Ethnicity: NR; "primarily white population" SES: NR Education: NR Insurance: NR Time since diagnosis: 9.4yrs Level of risk: diabetes with complications Co-morbidity: coronary heart disease, (33%); periphery heart disease, (6.7%); hypertension, (72.7%); cerebrovascular disease, (9.9%)	Cont: Pre: 7.36 ± 1.5; Post: 7.46 ± 1.4; Change: NR Net Difference: -0.05 **SBP** Int: Pre: 137 ± 19; Post: 129 ± 18 Change: NR Cont: Pre: 136 ± 17; Post: 138 ± 1.4; Change: NR Net Difference: -10 (p<0.001) **DBP** Int: Pre: 77 ± 10; Post: 72 ± 9 Change: NR Cont: Pre: 77 ± 10; Post: 78 ± 10; Change: NR Net Difference: -6 (p<0.001) **LDL** Int: Pre: 105 ± 36; Post: 97.5 ± 32 Change: NR Cont: Pre: 105 ± 35; Post: 99 ± 32; Change: NR Net Difference: -1.5 **Weight (lbs)** Int: Pre: 206 ± 47; Post: 207 ± 47; Change: NR Cont: Pre: 200 ± 48; Post: 202 ± 47; Change: NR Difference: NR **Proportion of patients reaching BP target of <130/80mmHg** Int: Pre: 29%; Post: 49%; Change: 20 pct pts (95% CI: 9.2, 30.8) **Subgroup analyses**: Percent of patients at goal BP (<130/80): increased in the intervention group from 29% at baseline to 49% at the end of the study. Baseline A1C (7.4) and LDL (105) did not change significantly in either group during the course of the study.

Study	Intervention Characteristics	Population Characteristics	Results
Author, Year: Gary, 2003 **Study Design**: Individual RCT **Suitability of Design**: Greatest **Quality of Execution**: Fair	**Location**: East Baltimore, MD, U.S. **Setting**: Clinic; community **Intervention Duration**: 24 months **Intervention Details**: Components: Education: disease, lifestyle (diet, physical activity, smoking cessation), medication adherence, testing, self-monitoring and management Counseling: life-style changes (diet, physical activity, smoking cessation), medication adherence, testing, monitoring, self-monitoring and management Goal setting and action plan Medication modification Testing and monitoring Long-term follow-up Intensity: NR Team member added: Arm 1: NCM; Arm 2: NCM+CHW Number of team members (including PCP and patient): 3/4 Team member interactions: Explicit; Arm 1: NCM provided physician feedback, suggested medication changes; Arm 2: same interaction with PCP, NCM and CHW conducted biweekly conferences to coordinate interventions and promote synergy Member training: NR Member medication privileges: PCP; NCM can make recommendations Member access to medical records: PCP, NCM; not CHW **Comparison:** Continued ongoing care with their own health professionals. In addition, they	**Target Population:** African Americans in East Baltimore with type 2 diabetes **Eligibility Criteria**: Inclusion: African American ancestry, aged 35-75; and type 2 diabetes; attended either Johns Hopkins Outpatient Center or the East Baltimore Medical Center for primary care within past year; Exclusion: Participants were excluded if they had comorbid conditions limiting probable life span to <4yrs (e.g., cancer, AIDS) or indication of end-stage complications of diabetes (kidney dialysis or transplant, blindness, or lower extremity amputation). **Sample Size**: 149 **Attrition**: 20% **Demographics**: Age: 59 Gender: male, 35 (23%); female, 114 (77%) Race/Ethnicity: African American 100% SES: NR Education: mean of 10 years Insurance (medical assistance): 46% Time since diagnosis: 9yrs Level of risk: Universal Co-morbidity: Excluded	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: Arm 1: CHW Arm 2: NCM Arm 3: NCM+CHW **A1c** Arm 1: Pre: 8.4 ± 2.0; Post: NR; Change: NR Arm 2: Pre: 8.8 ± 2.2; Post: NR; Change: NR Arm 3: Pre: 8.6 ± 1.9; Post: NR; Change: NR Cont: Pre: 8.5 ± 2.0; Post: NR; Change: NR Net Difference (Arm 3 vs. Arm 1): -0.5 Net difference (Arm 3 vs. Arm 2): -0.49 **Weight (BMI)** Arm 1: Pre: 33 ± 5; Post: NR; Change: NR Arm 2: Pre: 33 ± 8; Post: NR; Change: NR Arm 3: Pre: 33 ± 7; Post: NR; Change: NR Cont: Pre: 34 ± 8; Post: NR; Change: NR Difference (Arm 3 vs. Arm 1): 0.25 Difference (Arm 3 vs. Arm 2): 0.4 **Subgroup analyses**: Intervention intensity: larger effects were seen for individuals received more visits, but results were not statistically significant; Patients received NCM care vs. patients received CHW care: NCM had slightly larger declines in total cholesterol; CHW had slightly larger declines in SBP and DBP; not statistically significant

Study	Intervention Characteristics	Population Characteristics	Results
	received a quarterly newsletter on various diabetes-related health topics and on-going trial communication		
Author, Year: Gary, 2009 **Study Design**: Individual RCT **Suitability of Design**: Greatest **Quality of Execution**: Fair	**Location**: Baltimore, MD, U.S. **Setting**: Clinic and community **Intervention Duration**: 24 months **Intervention Details**: Components: Education: disease, lifestyle (diet, physical activity, smoking cessation), medication adherence, testing, self-monitoring and management Counseling: life-style changes (diet, physical activity, smoking cessation), medication adherence, testing, monitoring, self-monitoring and management Goal setting and action plan Medication modification Testing and monitoring Long-term follow-up Intensity: divided into high and low intensity; high intensity if had >=2 visits with NCM and >=4 visits with CHW at 24 months f/u Team member added: Nurse care manager; CHW Number of team members (including PCP and patient): 4 Team member interactions: Explicit; All information from the intensive intervention was fed back to the participant's primary care provider in a written or verbal manner depending on urgency; designed to prompt provider behavior. Patients who needed further follow-up were scheduled for additional home visits	**Target Population:** African-Americans in Baltimore City ≥25yrs old with type 2 diabetes. Special population: African-Americans; very much in poverty; urban **Eligibility Criteria**: Inclusion: insured African-American patients, ≥ 25yrs of age, receiving care at one of the six clinic sites, with diagnosed diabetes (ICD-9=250); identified through admin databases and screening by phone; able to provide contact info for 2 family members or friends not living in the home, and no active participation in the MCO's other disease management programs Exclusion: Significant comorbid conditions likely to lead to death within the next 3–5yrs (cancer, AIDS, end-stage renal disease, active tuberculosis, Alzheimer's disease, and congestive heart failure, using ICD-9 codes); likely to move from Baltimore City in the next 24 months, having a severe psychiatric health condition that would limit participation in the intervention (e.g., schizophrenia) **Sample Size**: 542 **Attrition**: 10% **Demographics**: Age: 57.6	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: **A1c** Int: Pre: 7.7 ± 2.1; Post: NR; Change: -0.2 Cont: Pre: 8.0 ± 2.2; Post: NR; Change: -0.08 Net Difference: -0.12 **Subgroup analyses**: Participants with more visits with CHW and NCM had a statistically significant decline in HbA1c level (−0.68%) compared with the minimal group (P =.03); At 24m f/u, participants with higher intervention frequency, particularly CHW visits, had a lower rate ratio compared with the minimal intervention group; At 36m f/u, participants with a higher frequency of CHW visits, but not necessarily NCM visits, were significantly less likely to have ER visits and hospitalizations compared with the minimal intervention group

Study	Intervention Characteristics	Population Characteristics	Results
	Member training: Yes; CHW trained over 6 weeks in 6 phases Member medication privileges: Can ask PCP for permission Member access to medical records: Assume PCP and NCM **Comparison:** The minimal intervention consisted of telephone calls every 6 months to remind participants about preventive health screenings (HbA1c tests, primary care and specialty visits). A written summary of their health care utilization was sent to the participant's primary care provider. Participants also received DM-specific information in the mail. In general, this minimal telephone-based intervention was aimed at prompting participants to become more involved in their health care.	Gender: male, 146 (26.9%); female, 396 (73.1%) Race/Ethnicity: African American 100% SES: NR Education: mean of 11.5 years Insurance (capitated): 70.8% Time since diagnosis: NR Level of risk: Universal Co-morbidity: Excluded	
Author, Year: Groeneveld, 2001 **Study Design**: Group RCT **Suitability of Design**: Greatest **Quality of Execution**: Fair	**Location**: Leiden, The Netherlands **Setting**: Clinic **Intervention Duration**: 12 months **Intervention Details**: Components: Education: disease, lifestyle (diet), medication adherence Counseling: life-style changes (diet), medication adherence Medication modification Testing and monitoring Long-term follow-up Intensity: NR Team member added: nurse/ diabetes educator, dietician Number of team members (including PCP and patient): 2	**Target Population:** Patients with type 2 diabetes **Eligibility Criteria**: Patient at participating clinic; the GP considered him/ her to be a type II diabetes patient and if he/ she had had a fasting blood glucose (FBG) > 6.7 mmol/l or random blood glucose >11.1 mmol/l on at least two occasions; the diabetes was mainly managed by the GP; <75 yrs **Sample Size**: 246 **Attrition**: 27% **Demographics**: Age: 62.4	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: **A1c** Int: Post: 7.5 Cont: Post: 7.1 Difference: 0.4 (p=0.06) **FBG** Int: Pre: 10.4 ± 3.8; Post: 9.2 ± 2.6; Change: -1.2 Cont: Pre: 9.7 ± 3.5; Post: 10.1 ± 3.1; Change: 0.4 Net Difference: -1.6 **SBP** Int: Pre: 137 ± 21; Post: 135 ± 18; Change: -2 Cont: Pre: 149 ± 24; Post: 143 ± 21;

Study	Intervention Characteristics	Population Characteristics	Results
	Team member interactions: Implicit; Diabetes Service members worked together, Diabetes Service contacted GPs with lab results and advice for treatment, patient interacted with both Member training: NR Member medication privileges: PCP only; staff from the Diabetes Service can suggest changes Member access to medical records: all **Comparison:** Usual care	Gender: male, 103 (42%); female, 143 (58%) Race/Ethnicity: Non US SES: NR Education: NR Insurance: 100% Time since diagnosis: NR Level of risk: universal Co-morbidity: none	Change: -6 Net Difference: 4 **DBP** Int: Pre: 81 ± 9; Post: 80 ± 8; Change: -1 Cont: Pre: 86 ± 9.7; Post: 82 ± 9; Change: -4 Net Difference: 3 **Total cholesterol** Int: Pre: 240 ± 46; Post: 235 ± 46; Change: -5 Cont: Pre: 240 ± 50; Post: 235 ± 39; Change: -5 Net Difference: 0 (p = 0.45) **Weight (kg)** Int: Pre: 77.3 ± 20; Post: 77.9 ± 20; Change: 0.6 Cont: Pre: 81.5 ± 16; Post: 79.8 ± 15; Change: -1.7 Net Difference: 2.8% **Subgroup analyses**: Patients with lower FBG at baseline had no difference between study arms in A1c after 1 year. For patients with higher FBG at baseline, intervention arm patients had lower A1c after 1 year than control arm patients.
Author, Year: Hargraves, 2012 **Study Design**: Group RCT **Suitability of Design**: Greatest **Quality of Execution**: Fair	**Location**: Massachusetts, U.S. **Setting**: Clinic **Intervention Duration**: 13 months **Intervention Details**: Components: Education: disease, self-monitoring and management Goal setting Long-term follow-up	**Target Population:** Patients with type 2 diabetes **Eligibility Criteria**: Clinic: all health centers participating in the current study participated in the first 12 months of a statewide diabetes health disparities collaborative; Patients: type II diabetes patients who had been assigned to the provider champion and his/her team for the duration of the Collaborative	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: **Proportion of patients reaching A1c target of <7.0%, African Americans** Int: Pre: 31.2%; Post: 35%; Change: 3.8 pct pts Cont: Pre: 43.7%; Post: 43.4%; Change: -0.3 pct pts Net Difference: 4.1 pct pts

Study	Intervention Characteristics	Population Characteristics	Results
	Intensity: 49% of patients had one recorded encounter with CHW, 24% had 2 encounters, 27% had 3 or more encounters; 48% lasted 15 minutes or less, 33% 16-30 minutes, 19% more than 30 minutes Team member added: CHW Number of team members (including PCP and patient): expanded by 1 (incremental) Team member interactions: Implicit; CHW part of team, recorded interactions and communicated through Electronic Health Records; Member training: Yes Member medication privileges: assume providers, not CHW Member access to medical records: assume providers, not CHW **Comparison:** TBC; incremental effectiveness study	**Sample Size**: 1415 **Attrition**: NR **Demographics**: Age: 53.3 Gender: male, 680 (48%); female, 735 (52%) Race/Ethnicity: White 42%; African American 17%; Other 8%; NR 33% SES: NR Education: NR Insurance: 53.5% with public insurance; 13% with private insurance; 14% with other insurance Time since diagnosis: NR Level of risk: Universal Co-morbidity: NR	**Proportion of patients reaching A1c target of <7.0%, Latinos** Int: Pre: 53.2%; Post: 50.6%; Change: -2.6 pct pts Cont: Pre: 51%; Post: 44.6%; Change: -6.4 pct pts Net Difference: 3.8 pct pts **Proportion of patients reaching A1c target of <7.0%, Hispanic white** Int: Pre: 40.4%; Post: 46.3%; Change: 5.9 pct pts Cont: Pre: 43.8%; Post: 49.0%; Change: 5.2 pct pts Net Difference: 0.7 pct pts **Proportion of patients reaching BP target of <130/80mmHg, African Americans** Int: Pre: 15.2%; Post: 12.1%; Change: -3.1 pct pts Cont: Pre: 27%; Post: 29.7%; Change: 2.7 pct pts Net Difference: -5.8 pct pts **Proportion of patients reaching BP target of <130/80mmHg, Latinos** Int: Pre: 31.5%; Post: 28.8%; Change: -2.7 pct pts Cont: Pre: 37.3%; Post: 30.4%; Change: -6.9 pct pts Net Difference: 4.2 pct pts **Proportion of patients reaching BP target of <130/80mmHg, Hispanic white** Int: Pre: 19.6%; Post: 19.2%; Change: -0.4 pct pts Cont: Pre: 38.1%; Post: 41.2%; Change: 3.1 pct pts Net Difference: -3.5 pct pts **Proportion of patients reaching LDL target of <100mg/dL, African Americans** Int: Pre: 33.6%; Post: 33.0%;

Study	Intervention Characteristics	Population Characteristics	Results
			Change: -0.4 pct pts Cont: Pre: 56.7%; Post: 70.5%; Change: 13.8 pct pts Net Difference: -14.2 pct pts **Proportion of patients reaching LDL target of <100mg/dL, Latinos** Int: Pre: 48.4%; Post: 54.5%; Change: 6.1 pct pts Cont: Pre: 39.9%; Post: 44.9%; Change: 5 pct pts Net Difference: 1.1 pct pts **Proportion of patients reaching LDL target of <100mg/dL, Hispanic white** Int: Pre: 55%; Post: 45.7%; Change: -9.3 pct pts Cont: Pre: 38%; Post: 40.1%; Change: 2.1 pct pts Net Difference: -11.4 pct pts
Author, Year: Hiss, 2007 **Study Design**: Individual RCT **Suitability of Design**: Greatest **Quality of Execution**: Fair	**Location**: Detroit, MI, U.S. **Setting**: Clinic **Intervention Duration**: participants re-evaluated 6-months after joining study; unclear if study continued after that; dates not reported **Intervention Details**: Components: Counseling: no details provided Goal setting and action plan Medication modification Testing and monitoring Long-term follow-up Intensity: 5.8 face-to-face contacts and 1.0 by phone for all type 2 patients; face-to-face meetings averaged 45	**Target Population:** Adults with type 2 diabetes **Eligibility Criteria**: Type II diabetes patients 18yrs or older; interested patients were given toll-free number to contact project staff and go through the initial comprehensive diabetes evaluation **Sample Size**: 197 **Attrition**: 17% **Demographics**: Age: 56.4yrs Gender: male, 66 (33%); female, 131 (66%) Race/Ethnicity: White 66%; African American 27%; Other 3%	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: **A1c** Int: Pre: 7.7 ± 0.18; Post: 7.28 ± 0.15; Change: -0.42 Cont: Pre: 7.4 ± 0.18; Post: 7.18 ± 0.17; Change: -0.22 Net Difference: -0.2 (-0.65, 0.25) **SBP** Int: Pre: 134.6 ± 21.8; Post: 127.3; Change: -7.3 Cont: Pre: 128.7 ± 18.7; Post: 132.8; Change: 4.1 Net Difference: -11.4 (-13.5, -2.5) **DBP** Int: Pre: 75.2 ± 10.3; Post: 74.2;

Study	Intervention Characteristics	Population Characteristics	Results
	minutes; phone contacts averaged 20 minutes Team member added: nurse Number of team members (including PCP and patient): 3 Team member interactions: Explicit; patient action plan developed with physician and nurse; "Communication between the physician and study nurse occurred frequently via letter, phone, and e-mail." Member training: NR Member medication privileges: assume PCP only Member access to medical records: assume all **Comparison:** All patients (intervention and control) received a basic intervention – one time free and comprehensive evaluation of their diabetes	SES: NR Education: NR Insurance: 82% insured Time since diagnosis: 7.4yrs Level of risk: universal Co-morbidity: NR	Change: -0.96 Cont: Pre: 72.7 ± 9.6; Post: 73.4; Change: 0.65 Net Difference: -1.61 (-2.0, -1.2) **Total cholesterol** Int: Pre: 197.2 ± 46.4; Post: 194.7 ± NR; Change: -2.5 Cont: Pre: 197.2 ± 65.7; Post: 188.3 ± NR; Change: -8.9 Net Mean Difference: 6.4 (-10.2, 23.0) Patients with A1c in "action-indicated" (high) range at baseline saw much larger reductions in clinical outcomes than all patients across the board.
Author, Year: Huang, 2010 **Study Design**: Individual RCT **Suitability of Design**: Greatest **Quality of Execution**: Fair	**Location**: Koahsiung, Taiwan **Setting**: Clinic **Intervention Duration**: 12 months **Intervention Details**: Components: Education: disease, lifestyle (diet, physical activity), medication adherence, self-monitoring and management Counseling: life-style changes (diet) Long-term follow-up Intensity: NR Team member added: registered dieticians Number of team members (including PCP and patient): 3	**Target Population:** Adults with type 2 diabetes **Eligibility Criteria**: 30-70yrs of age; Receiving treatment at one of five primary health care clinics; ADA-based diagnosis of diabetes based on ADA guidelines (HbA1c >= 6.5%) Exclusion: pregnant; see below **Sample Size**: 154 **Attrition**: 20% **Demographics**: Age: 56.8 Gender: male, 67 (44%); female, 87 (56%) Race/Ethnicity: Non US	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: **A1c** Int: Pre: 8.0 ± 1.5; Post: 7.5; Change: -0.5 Cont: Pre: 8.4 ± 1.8; Post: 8.3; Change: -0.1 Net Difference: -0.8 (-1.75, 0.15) **SBP** Int: Pre: 131.8 ± 19.8; Post: 131.1; Change: -0.7 Cont: Pre: 134.9 ± 17.4; Post: 140.9; Change: 6.0 Net Difference: -6.7 (-12.3, -1.1) **DBP** Int: Pre: 79.7 ± 10.5; Post: 79.7; Change: 0.0 Cont: Pre: 84.2 ± 10.3; Post: 84.8;

Study	Intervention Characteristics	Population Characteristics	Results
	Team member interactions: Explicit; dieticians and patients set up plans and kept in contact; physicians consulted dieticians Member training: Yes Member medication privileges: PCP only Member access to medical records: assume PCP only **Comparison:** Patients in the control group received the routine care practiced at their primary care, which may have also included a summary of basic dietary principles by nurses	SES: NR Education: 68% <6yrs 68%; 32% >6yrs Insurance: Insured 100% Time since diagnosis: 4.8yrs Level of risk: universal Co-morbidity: None; patients excluded based on comorbidity	Change: 0.6 Net Difference: -0.6 **LDL** Int: Pre: 117.8 ± 33.4; Post: 111.8; Change: -6.0 Cont: Pre: 118.5 ± 32.5; Post: 118.6; Change: 0.1 Net Difference: -6.1 **HDL** Int: Pre: 50.1 ± 12.2; Post: 50.0; Change: -0.1 Cont: Pre: 48.7 ± 11.1; Post: 48.1; Change: -0.6 Net Difference: 0.5 **Total cholesterol** Int: Pre: 183.0 ± 37.9; Post: 176.9; Change: -5.1 Cont: Pre: 187.3 ± 38.4; Post: 187.6; Change: 0.3 Net Difference: -5.4 **Triglycerides** Int: Pre: 145.4 ± 90.2; Post: 141.6; Change: -3.8 Cont: Pre: 164.6 ± 122.9; Post: 164.3; Change: -0.3 Net Difference: -3.5 **Weight (BMI)** Int: Pre: 25.7 ± 3.2; Post: NR; Change: 0.1 Cont: Pre: 27.0 ± 4.7; Post: NR; Change: 0.1 Net Difference: 0%
Author, Year: Jameson, 2010 **Study Design**: Individual RCT	**Location**: Grand Rapids, Michigan, U.S. **Setting**: Clinic **Intervention Duration**: 12 months	**Target Population:** Adults with diabetes (type 1 or type 2) **Eligibility Criteria**: Inclusion: Patients with diabetes 18yrs or older having A1C levels of	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: **A1c** (median) Int: Pre: 10.4 ± 1.2; Post: NR; Change: -1.5

Study	Intervention Characteristics	Population Characteristics	Results
Suitability of Design: Greatest **Quality of Execution**: Fair	**Intervention Details**: Components: Education: disease, lifestyle (diet, physical activity), medication adherence, self-monitoring and management Medication modification Testing and monitoring Long-term follow-up Intensity: average of 6 office visits and 3 telephone calls per patient over the course of a year. Office visits lasted 30-60 minutes. Telephone calls were 10-20 minutes in length Team member added: Pharmacist Number of team members (including PCP and patient): 3 Team member interactions: Implicit; NR Member training: No Member medication privileges: Patient's primary care physician approved any changes in medication or therapy, although the pharmacist was given autonomy to adjust insulin doses as needed Member access to medical records: Assume all **Comparison:** Both study groups received the aggressive outreach; clinical practice guidelines, diabetes indicators, and performance thresholds are tracked routinely and are shared regularly with providers and staff; the latest quality indicators for individual patients are available at each office visit; in addition, there is systematic telephone and mail outreach to patients who are due for diabetes-related care	9.0% or higher or no office visits within 12 months. Exclusion: Patients excluded if an endocrinologist was managing their diabetes or if they were not expected to live for the duration of the study. **Sample Size**: 104 **Attrition**: 0% **Demographics**: Age: 49.5 Gender: male, 50 (49%); female, 53 (51%) Race/Ethnicity: White: 63.1% SES: NR Education: NR Insurance: 30.1% Time since diagnosis: NR Level of risk: Universal Co-morbidity: NR	Cont: Pre: 11.1 ± 1.6; Post: NR; Change: -0.4 Net Difference: -1.1 (p = 0.06) **Subgroup analyses**: Post hoc subgroup analysis showed that male patients in the intervention group achieved a statistically significant improvement in their A1C level (median, -1.90%, interquartile range, -0.05% to -2.95%) versus the control group (median, -0.15%; interquartile range, 0.98% to -1.38%) Twice as many patients of nonwhite race/ethnicity and male patients (post hoc) in the intervention group exceeded the 1.0% improvement mark. No treatment effects using this measure were seen for patients of white race/ethnicity or for female patients

Study	Intervention Characteristics	Population Characteristics	Results
Author, Year: Kraemer, 2012 **Study Design**: Individual RCT **Suitability of Design**: Greatest **Quality of Execution**: Fair	**Location**: Eugene and Springfield and Lane County, Oregon, US **Setting**: Pharmacy near employer at city and county offices **Intervention Duration**: 12 months **Intervention Details**: Components: Education: disease Counseling: Medication modification Testing and monitoring Long-term follow-up Intensity: NR Team member added: pharmacist educator Number of team members (including PCP and patient): 3 Team member interactions: explicit; They were requested to fax, e-mail, or mail a progress note to the patient's primary care physician after each visit Member training: Yes Member medication privileges: NR Member access to medical records: assume all **Comparison:** Control-group patients were provided written educational information about managing diabetes and same financial incentives as intervention group	**Target Population:** City and county employees with either type 1 or type 2 diabetes **Eligibility Criteria**: Inclusion: 1) employed by (or listed as medical insurance beneficiary of) a participating employer, 2) diagnosed with either type I or type II diabetes mellitus, 3) of age 18yrs or older, 4) willing and able to provide informed consent Exclusion: pregnancy-related diabetes and inability to converse and read materials in English **Sample Size**: 67 **Attrition**: 3% **Demographics**: Age: 54.3 Gender: male, 34 (50.7%); female, 33 (49.3%) Race/Ethnicity: White 93%, African American 2%, Asian 3%, Native American 2% SES (income): $15,000 - <30,000 9% $30,000 - <50,000 34% $50,000-<100,000 31% $100,000 + 18% Education: High School grad 13% Some college 48% College grad 28% Master's degree 5% Insurance: 100% insured Time since diagnosis: 8.8yrs Level of risk: Diabetic at risk for complications Co-morbidity: Yes	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: **A1c** Int: Pre: 7.3 ± NR; Post: 6.8 ± NR; Change: -0.5 Cont: Pre: 7.4 ± NR; Post: 7.2 ± NR; Change: -0.2 Net Difference: -0.34 (p = -0.08) **SBP** Int: Pre: 136.3 ± NR; Post: 132.7 ± NR; Change: -3.6 Cont: Pre: 129.5 ± NR; Post: 131.8 ± NR; Change: 2.3 Net Difference: -5.9 (p = 0.96) **DBP** Int: Pre: 78.4 ± NR; Post: 80.6 ± NR; Change: 2.1 Cont: Pre: 75.3 ± NR; Post: 79.3 ± NR; Change: 4.0 Net Difference: -1.9 (p = 0.61) **HDL** Int: Pre: 46.2 ± NR; Post: 39.9 ± NR; Change: -6.3 Cont: Pre: 50.7 ± NR; Post: 47.1 ± NR; Change: -3.6 Net Difference: -2.7 (p = 0.16) **LDL** Int: Pre: 99.5 ± NR; Post: 95.6 ± NR; Change: -3.9 Cont: Pre: 100.7 ± NR; Post: 100.9 ± NR; Change: 0.1 Net Difference: -4.0 (p = 0.44) **Total cholesterol** Int: Pre: 177.1 ± NR; Post: 165.4 ± NR; Change: -11.6

Study	Intervention Characteristics	Population Characteristics	Results
			Cont: Pre: 186.4 ± NR; Post: 181.4 ± NR; Change: -5.1 Net Difference: -6.5 (p = 0.14) **Triglycerides** Int: Pre: 164.6 ± NR; Post: 155.8 ± NR; Change: -8.9 Cont: Pre: 172.2 ± NR; Post: 166.4 ± NR; Change: -5.8 Net Difference: -3.1 (p = 0.92)
Author, Year: Krein, 2004 **Study Design**: Individual RCT **Suitability of Design**: Greatest **Quality of Execution**: Good	**Location**: Ann Arbor and Detroit, Michigan, U.S. **Setting**: VA medical center **Intervention Duration**: 18 months **Intervention Details**: Components: Education: self-monitoring and management Counseling: life-style changes (diet, physical activity), testing, monitoring, self-monitoring and management Goal setting Medication modification Testing and monitoring Long-term follow-up Intensity: case managers reported having substantial contact with 26% of the case-managed patients, moderate contact with 34%, and minimal or no contact with 40% Team member added: Nurse Case Manager Number of team members (including PCP and patient): 3 Team member interactions: implicit; Providers were notified by internal e-mail that a change was recommended and could opt to have the case	**Target Population:** Veterans with poorly controlled (≥7.5% HbA1c) type 2 diabetes **Eligibility Criteria**: Used automated clinical data from each facility to identify potential study subjects as those with at least one prescription for an oral hypoglycemic agent, insulin, or blood glucose monitoring supplies filled in the previous 12 months, most recent hemoglobin A1C (HbA1C) level was ≥ 8.5% (within the last year) and general medicine clinic visit scheduled between May 1999 and January 2000; baseline HbA1c >=7.5%; Ineligible participants: younger than 18yrs; were never diagnosed with diabetes; had type 1 diabetes or were diagnosed before the age of 30yrs; had no telephone; did not speak English; were not competent for interview; reported primary source of diabetes care outside the VA; see exclude on comorbidity **Sample Size**: 246 **Attrition**: 12%	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: **A1c** Int: Pre: 9.3 ± 1.5; Post: 9.3 ± 2.1; Change: -0.02 Cont: Pre: 9.2 ± 1.4; Post: 9.2 ± 2.1; Change: -0.16 Net Difference: 0.13 (-0.4, 0.68) **SBP** Int: Pre: 145 ± 21; Post: 146 ± 24; Change: 3 Cont: Pre: 145 ± 20; Post: 144 ± 23; Change: 1 Net Difference: 2 (-4, 8) **DBP** Int: Pre: 86 ± 12; Post: 83 ± 24; Change: -3 Cont: Pre: 86 ± 11; Post: 83 ± 23; Change: -3 Net Difference: 0.85 (-2, 4) **LDL** Int: Pre: 123 ± 37; Post: 106 ± 29; Change: -18 Cont: Pre: 123 ± 38; Post: 109 ± 32; Change: -13 Net Difference: -5 (-17, 6)

Study	Intervention Characteristics	Population Characteristics	Results
	manager make the adjustment or to address the issue personally Member training: Yes Member medication privileges: PCP, NCM can ask for changes Member access to medical records: all **Comparison:** All study participants (intervention and control) were given an A&D Medical semiautomatic blood pressure monitor, home blood pressure monitoring guidelines, a lay version of the VA Diabetes Clinical Guidelines, and a periodic study newsletter; Usual care	**Demographics**: Age: 61 Gender: male, 238 (97%); female, 8 (3%) Race/Ethnicity: NR SES: NR Education: 45% high school or more Insurance: 100% insured by VA, 60% non-VA insurance Time since diagnosis: 11yrs Level of risk: Increased risk for complications Co-morbidity: participants had 4 comorbid conditions on average	
Author, Year: Litaker, 2003 **Study Design**: Individual RCT **Suitability of Design**: Greatest **Quality of Execution**: Fair	**Location**: Cleveland, OH, U.S. **Setting**: Hospital **Intervention Duration**: 12 months **Intervention Details**: Components: (choose from the following) Education: disease, lifestyle (diet, physical activity, smoking cessation), medication adherence Medication modification Testing and monitoring Long-term follow-up Intensity: NR Team member added: Nurse Practitioner Number of team members (including PCP and patient): 3 Team member interactions: implicit Member training: Yes Member medication privileges: PCP only Member access to medical records: all **Comparison:**	**Target Population:** Patients with type 2 diabetes **Eligibility Criteria**: Patients with established diagnoses of mild or moderate hypertension and non-insulin dependent diabetes mellitus without known end-organ complications, and received care at the time of study entry at the study site, and were residents of the metropolitan Cleveland, Ohio area **Sample Size**: 157 **Attrition**: 0% **Demographics**: Age: 60.5 Gender: male, 65 (41%); female, 92 (59%) Race/Ethnicity: African American 59.2% SES: NR Education: NR Insurance: NR Time since diagnosis: NR	**Follow-up Time Since Intervention Conclusion**: 6-12 months for A1c; 0 for other outcomes **Results**: **A1c** Int: Pre: 8.4 ± 1.4; Post: NR; Change: -0.63 Cont: Pre: 8.5 ± 1.6; Post: NR; Change: -0.15 Net Difference: -0.48 (-0.88, -0.08) **HDL** Int: Pre: 42 ± 12; Post: NR; Change: 3 Cont: Pre: 45 ± 12; Post: NR; Change: 0.4 Net Difference: 2.6 (0.43, 4.77) **Total cholesterol** Int: Pre: 212 ± 43; Post: NR; Change: -10.8 Cont: Pre: 211 ± 37; Post: NR; Change: -9.9 Net Difference: -0.91 (-10.3, 8.5) **Proportion of patients reaching BP target of <130/85mmHg** Int: Pre: 8.9%; Post: 13.9%; Change: 5.1 pct pts Cont: Pre: 9.0%; Post: 12.8%; Change: 3.8 pct pts

Study	Intervention Characteristics	Population Characteristics	Results
	Usual care	Level of risk: Diabetes with complications Co-morbidity: mild or moderate hypertension (stages I – II)	Net Difference: 1.2 pct pts (95% CI: -9.4, 11.8) **Quality of Life** Favorable improvements in physical and mental wellbeing scores (SF-12)
Author, Year: McLean, 2008 **Study Design**: Individual RCT **Suitability of Design**: Greatest **Quality of Execution**: Fair	**Location**: Edmonton, Canada **Setting**: Community (Pharmacy) **Intervention Duration**: 6 months **Intervention Details**: Components: Education: disease, lifestyle Counseling: life-style changes Medication modification Testing and monitoring Long-term follow-up Intensity: NR Team member added: pharmacist, nurse Number of team members (including PCP and patient): 4 Team member interactions: explicit; study team communicated results of the assessments to each patient's PCP Member training: Yes Member medication privileges: Unclear Member access to medical records: Assume all **Comparison:** usual care; wallet card; pamphlet on diabetes, general diabetes counseling from the nurse or pharmacist; telephone follow-up at 12wks; in-person close-out visit at 24wks; no therapeutic advice	**Target Population:** Adults with diabetes (type 1 or type 2) with elevated BP **Eligibility Criteria**: 14 community pharmacies with no patient overlap with the SCRIP trial in 1999-2001; >18; type 1 or 2 diabetic patients with BP≥130/80 mmHg on 2 screening visits separated by 2 weeks; identified in participating pharmacies through use of diabetes indicator medications recorded in pharmacy databases; BP measured using commercial BP monitor, average of 5 BP measures taken 1 minute apart **Sample Size**: 227 **Attrition**: 7% **Demographics**: Age: 65 Gender: male, 136 (60%); female, 91 (40%) Race/Ethnicity: NA SES: NR Education: NR Insurance: 100% Time since diagnosis: NR Level of risk: Universal Co-morbidity: Yes	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: **SBP (adjusted)** Int: Pre: 142.5 ± 15.5; Post: xx ± xx; Change: -10.1 Cont: Pre: 139.9 ± 11.9; Post: xx ± xx; Change: -5.0 Net Difference: -5.6 (p = 0.008) **Proportion of patients reaching BP target of <130/80mmHg** Int: Pre: 2.6%; Post: 47%; Change: 44.4 pct pts Cont: Pre: 3.6%; Post: 33%; Change: 29.4 pct pts Net Difference: 15.0 pct pts (95% CI: 2.4, 27.6) **Subgroup analyses**: Patients with baseline systolic BP above 160 mmHg: Intervention: -27.4 mmHg Control: -3.3 mmHg Difference: -24.1, SE: 1.96; p<0.001

Study	Intervention Characteristics	Population Characteristics	Results
Author, Year: The California Medi-Cal Type 2 Diabetes Study Group, 2004 **Study Design**: Individual RCT **Suitability of Design**: Greatest **Quality of Execution**: Fair	**Location**: Southern California (Santa Barbara, Los Angeles, and San Diego counties), US **Setting**: Clinic; 3 clinics; 1 study site was a community-based program within a county-wide managed care plan for Medi-Cal recipients. The other two study sites were university-based centers. **Intervention Duration**: 36 months **Intervention Details**: Components: Education: disease, lifestyle (diet, physical activity, smoking cessation), medication adherence, testing, self-monitoring and management Counseling: life-style changes (diet, physical activity, smoking cessation), medication adherence, testing, monitoring, self-monitoring and management Goal setting and action plan Medication modification Testing and monitoring Long-term follow-up Intensity: NR Team member added: Registered Nurse, Dietician, Endocrinologist Number of team members (including PCP and patient): 5 Team member interactions: Explicit; The study staff at each site, consisting of registered nurses and registered dietitians working in close collaboration with an endocrinologist, provided diabetes case management to the intervention group only. Evidence-based practice guidelines and algorithms for medication and insulin	**Target Population:** Individuals with type 2 diabetes who are on Medi-Cal (Medicaid in California), a service primarily for racial/ ethnic minority, low income populations. Special population: Medi-Cal **Eligibility Criteria**: ≥ 18yrs; type 2 diabetes of at least 1 year duration; on Medi-Cal; HbA1c % > 7.5 **Sample Size**: 358 **Attrition**: 11.5% **Demographics**: Age: 57 Gender: male, 101 (28%); female, 257 (72%) Race/Ethnicity: White 36%; African American 16%; Other 10% SES: NR Education: Beyond 12th grade 20% 12th grade 20% 9-11th grade 20% 8th grade or less 40% Insurance: 100% Time since diagnosis: 11.1yrs Level of risk: Universal Co-morbidity: NR	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: **A1c** Int: Pre: 9.54 ± 0.12; Post: 7.66 ± 0.17; Change: -1.88 Cont: Pre: 9.66 ± 0.13; Post: 8.53 ± 0.20; Change: -1.13 Net Difference: -0.77 (-1.02, -0.52) **SBP** Int: Pre: 136.3 ± 27.3; Post: 133.4; Change: -2.83 Cont: Pre: 134.0 ± 13.1; Post: 134.6; Change: 0.58 Net Difference: -3.41 (-9.35, 2.53) **DBP** Int: Pre: 81 ± 54.6; Post: 74.38; Change: -6.62 Cont: Pre: 76 ± 13.1; Post: 75.52; Change: -0.48 Net Difference: -6.14 (-11.4, -0.88) **HDL** Int: Pre: 41.9 ± 13.6; Post: 46.5; Change: 4.61 Cont: Pre: 43.0 ± 14.2; Post: 46.3; Change: 3.32 Net Difference: 1.29 (-3.4, 6.0) **LDL** Int: Pre: 129.8 ± 43.6; Post: 115.6; Change: -14.2 Cont: Pre: 130.1 ± 47.2; Post: 121.0; Change: -9.1 Net Difference: -5.12 (-20.8, 10.6) **Total cholesterol** Int: Pre: 210.0 ± 45; Post: 198.3; Change: -11.7

Study	Intervention Characteristics	Population Characteristics	Results
	initiation and/or adjustment were used in a collaborative practice model with the primary care provider; written record of participant interactions shared with primary care providers to ensure continuity and quality of care; Member training: Yes Member medication privileges: PCP approval needed Member access to medical records: Assume all **Comparison:** Usual care		Cont: Pre: 212.1 ± 48.5; Post: 205.6; Change: -6.5 Net Difference: -5.17 (-19.1, 8.8) **Triglycerides** Int: Pre: 209.3 ± 158.2; Post: 186.7; Change: -22.6 Cont: Pre: 220.3 ± 178.4; Post: 200.7; Change: -19.6 Net Difference: -2.99 (-58.8, 52.9) **Weight (kg)** Cont: Pre: 87.4; Post: 89.3; Change: 1.9 Cont: Pre: 84.1; Post: 83.9; Change: -0.3 Difference: 2.5% **Weight (BMI)** Int: Pre: 33.1; Post: 34.0; Change: 0.92 Cont: Pre: 31.5; Post: 32.5; Change: 0.95 Difference: -0.1%
Author, Year: Odegard, 2005 **Study Design**: Individual RCT **Suitability of Design**: Greatest **Quality of Execution**: Fair	**Location**: Seattle, WA, U.S. **Setting**: Clinic **Intervention Duration**: 6 months **Intervention Details**: Components: Education: disease, lifestyle (diet, physical activity, smoking cessation), medication adherence, testing, self-monitoring and management Counseling: life-style changes (diet, physical activity, smoking cessation), medication adherence, testing, monitoring, self-monitoring and management Goal setting and action plan Medication modification Testing and monitoring	**Target Population:** Adult patients with type 2 diabetes eligible under the University of Washington Medicine Clinics, consisting of 70 primary care providers based in 8 clinics. **Eligibility Criteria**: Type II DM; Age ≥ 18 yo; HbA1c ≥ 9% Exclude: non English speaking; unstable psychiatric conditions; patients with terminal prognosis within 6 months **Sample Size**: 77 **Attrition**: 14.3% **Demographics**: Age: 51.7	**Follow-up Time Since Intervention Conclusion**: 6 months **Results**: **A1c** Int: Pre: 10.2; Post: 8.2; Change: -2.0 **Proportion of patients reaching A1c target of <7%** Int: Post: 8% Cont: Post: 13% Difference: -5 pct pts **Subgroup analysis:** Stratification by baseline A1c level did not result in a significantly different effect of the intervention over usual care

Study	Intervention Characteristics	Population Characteristics	Results
	Intensity: intervention participants averaged 4.5 + 1.9 telephone contacts; about 10 minutes per call; and 2.1 in-person visits about 30 minutes in length Team member added: Pharmacist Number of team members (including PCP and patient): 3 Team member interactions: explicit; Pharmacist and patient interacted through education, follow-up, and goal setting Pharm and PCP – Pharm development of DCP was communicated via electronic medical record to PCP; Pharm consulted PCP Member training: No Member medication privileges: PCP only Member access to medical records: all **Comparison:** Subjects in the usual-care group were instructed to continue normal care with their primary care provider. Diabetes education was not provided during the baseline interview to avoid introducing an intervention for patients in the control group	Gender: male, 43 (56%); female, 34 (44%) Race/Ethnicity: NR SES: NR Education: 81% >12yrs of education Insurance: NR Time since diagnosis: NR Level of risk: person with diabetes at risk for complications Co-morbidity: NR	
Author, Year: O'Hare, 2004 **Study Design**: Group RCT **Suitability of Design**: Greatest **Quality of Execution**: Fair	**Location**: Foleshill Coventry and East Birmingham, UK **Setting**: Clinic **Intervention Duration**: 12 months **Intervention Details**: Components: Education: disease, lifestyle (diet, physical activity, smoking cessation) Counseling: life-style changes (diet, physical activity, smoking cessation), medication adherence, management	**Target Population:** South Asian ethnicity (ethnic origin categories Indian, Pakistani and Bangladeshi) patients with type 2 diabetes and diabetic complications (risk factors). **Eligibility Criteria**: UK census ethnic origin categories Indian, Pakistani and Bangladeshi. Patients eligible were of South Asian ethnicity, with Type 2 diabetes plus at least one of three defined risk factors: elevated blood	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: **A1c** Int: Pre: 7.8 ± 1.9; Post: NR; Change: -0.23 Cont: Pre: 8.1 ± 2.1; Post: NR; Change: -0.20 Net Difference: -0.03 (-0.36, 0.30) **SBP** Int: Pre: 146.3 ± 21.7; Post: NR; Change: -6.69 Cont: Pre: 143.8 ± 21.7; Post: NR;

Study	Intervention Characteristics	Population Characteristics	Results
	Medication modification Testing and monitoring Long-term follow-up Intensity: NR Team member added: Practice Nurse; Link workers/CHWs Number of team members (including PCP and patient): 4 Team member interactions: Implicit; The link worker and specialist nurse attended clinics and supported practice nurses and encouraged adherence to the prescribing protocol Member training: NR Member medication privileges: assume PCP Member access to medical records: NR, assume PCP **Comparison:** Incremental: control practices received the same guidelines to achieve targets, but used existing practice resources for managing their patients with diabetes	pressure, systolic >140 mmHg or diastolic > 80 mmHg, HbA1c 7%, total cholesterol 5.0 mmol/l **Sample Size**: 361 **Attrition**: 10% **Demographics**: Age: 12% <45yrs; 54% 45-64yrs; 34% 65+ Gender: male, 185 (51%); female, 176 (49%) Race/Ethnicity: Non US SES: NR Education: NR Insurance: 100% Time since diagnosis: 31% 0-4yrs; 28% 5-9yrs; 26% 10-19yrs; 4% 20+ Level of risk: at risk for complications Co-morbidity: hypertension, hyperlipidemia	Change: -2.11 Net Difference: -4.58 (-8.84, -0.32) **DBP** Int: Pre: 82.8 ± 10.8; Post: NR; Change: -3.14 Cont: Pre: 80.7 ± 11.3; Post: NR; Change: 0.28 Net Difference: -3.41 (-5.66, 1.16) **Total cholesterol** Int: Pre: 212.7 ± 54.1; Post: NR; Change: -19.7 Cont: Pre: 197.2 ± 38.7; Post: NR; Change: 4.6 Net Difference: -14.6 (-25.1, -4.6)
Author, Year: Pape, 2011 **Study Design**: Group RCT **Suitability of Design**: Greatest **Quality of Execution**: Fair	**Location**: Oregon, US **Setting**: Clinic (Providence Primary Care Research Network, 16 clinics) **Intervention Duration**: 24 months **Intervention Details**: Components: Education: medication adherence Counseling: medication adherence Goal setting (LDL target) Medication modification Testing and monitoring Intensity: NR Team member added: pharmacist	**Target Population:** Adult patients within Providence Primary Care Research Network with diabetes **Eligibility Criteria**: Inclusion: 18 or older Exclusion: no evidence of visiting the clinic within past 3 years **Sample Size**: 68 PCPs total, with 6229 patients **Attrition**: NA **Demographics**: Age: mean of 63 years	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: **A1c** Int: Post: 7.2 (95% CI: 6.9, 7.5) Cont: Post: 7.1 (95% CI: 7.0, 7.3) Mean difference: 0.1 (p = 0.57) **SBP** Int: Post: 128 (95% CI: 125, 131) Cont: Post: 127 (95% CI: 126, 129) Mean difference: 1 (p = 0.61) **DBP** Int: Post: 73 (95% CI: 72, 74)

Study	Intervention Characteristics	Population Characteristics	Results
	Number of team members (including PCP and patient): 3 Team member interactions: explicit; electronic communication between pharmacist and physician Member training: Not required Member medication privileges: PCP's approval needed for proposed changes Member access to medical records: all **Comparison:** Clinics allocated to control arm had access to a disease management program that provides automated quality reporting, benchmarking, and robust care opportunity decision support for panel of patients with diabetes	Gender: male, 2844 (46%); female, 3385 (54%) Race/Ethnicity: NR SES: NR Education: NR Insurance: 100% insured (Commercial: 44% Medicare: 49% Medicaid: 4% Other: 3%) Time since diagnosis: NR Level of risk: diabetes with risk for complications Co-morbidity: 59% of intervention and 61% of control have hypertension; 23% of intervention and 22% of control had coronary heart disease	Cont: Post: 73 (95% CI: 71, 74) Mean difference: 0 (p = 0.81) **LDL** Int: Pre: 104 ± 32; Post: 83 (95% CI: 82, 85); Change: -21 Cont: Pre: 107 ± 33; Post: 95 (95%CI: 91, 97); Change: -12 Net Difference: -9 (p < 0.001) **Proportion of patients reaching A1c target of <7%** Int: Post: 51% Cont: Post: 49% Difference: 2 pct pts **Proportion of patients reaching BP target of <130/80** Int: Post: 55% Cont: Post: 49% Difference: 6 pct pts (95% CI: 3.4, 8.6) **Proportion of patients reaching LDL target of <100** Int: Pre: 33%; Post: 78%; Change: 45 pct pts Cont: Pre: 29%; Post: 50%; Change: 21 pct pts Difference: 24 pct pts (95% CI: 21.7, 26.3) **Satisfaction with care**: high in both intervention and control groups
Author, Year: Piette, 2001 **Study Design**: Individual RCT **Suitability of Design**: Greatest	**Location**: Palo Alto, CA, US **Setting**: VA system clinics (3 general medicine clinics and one diabetes specialty clinic within a university-affiliated VA health care system) **Intervention Duration**: 12 months **Intervention Details**: Components:	**Target Population:** Veterans **Eligibility Criteria**: Inclusion: adults patients from 3 medicine clinics and 1 diabetes specialty clinic within a university-affiliated VA health care system with a diagnosis of diabetes and an active prescription for a hypoglycemic agent	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: **A1c** Int: Pre: 8.2 ± 1.7; Post: 8.1 ± 0.1; Change: -0.1 Cont: Pre: 8.1 ± 1.7; Post: 8.2 ± 0.1; Change: 0.1 Net Difference: -0.2 ± 0.3

Study	Intervention Characteristics	Population Characteristics	Results
Quality of Execution: Good	Education: disease, self-monitoring Counseling: medication adherence, appropriate testing and monitoring Medication modification Long-term follow-up Intensity: nurse communicated with patients by phone an average of 1.1 times per month Team member added: nurse Number of team members (including PCP and patient): 3 Team member interactions: explicit; nurse communicated with PCP using established protocol created by the research team Member training: Not required Member medication privileges: PCP only; nurse can recommend dosage adjustments to patients' PCP Member access to medical records: all **Comparison:** Usual care; no detailed description provided	Exclusion: >75 years, mentally ill, life expectancy of <12 months, newly diagnosed, planned to discontinue receiving services from clinic within 12 month follow up period, or didn't have a touch-tone phone. **Sample Size**: 272 **Attrition**: 7.4% **Demographics**: Age: mean age of 60.5 Gender: male, 264 (97%); female, 8 (3%) Race/Ethnicity: white, 60.3%; African American, 18%; Hispanic, 12.5% SES, income: 21% < $10,000 Insurance: 100% covered by VA Time since diagnosis: NR Level of risk: universal Co-morbidity: intervention and control groups have 2 comorbidities each	**Healthcare use** Being seen at podiatry clinics: Int: Post: 62% Cont: Post: 42% Difference: 20 pct pts (p = 0.03) Patients receiving intervention reported more frequent blood glucose and foot inspections at 12 months than patients receiving usual care.
Author, Year: Planas, 2012 **Study Design**: Individual RCT **Suitability of Design**: Greatest **Quality of Execution**: Fair	**Location**: Tulsa, OK, USA **Setting**: Community pharmacies (as part of a regional pharmacy chain) **Intervention Duration**: 9 months **Intervention Details**: Components: Education: disease, lifestyle (diet), medication adherence, self-monitoring and management Counseling: medication adherence, self-monitoring and management Goal setting (treatment goals) Medication modification	**Target Population:** Diabetes patients enrolled in a large managed care organization **Eligibility Criteria**: Inclusion: screening attendees at a local health fair for city employees insured by the MCO; faxed patient referrals from MCO PCPs; 18 years, currently insured by the MCO, able and willing to come to visits during the intervention period, have most recent A1c value in previous 6 months be 7.0% or more Exclusion: pregnant, enrolled in another diabetes program	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: **A1c** Int: Pre: 7.6 ± 1.03; Post: 7.09 ± 0.96; Change: -0.52 Cont: Pre: 7.79 ± 0.96; Post: 7.9 ± 0.88; Change: 0.11 Net Difference: -0.63 (p = 0.02) **SBP** Int: Pre: 139.2 ± 17.89; Post: 124.0 ± 16.91; Change: -15.2 Cont: Pre: 141.05 ± 24.92; Post: 140.18 ±

Study	Intervention Characteristics	Population Characteristics	Results
	Testing and monitoring Long-term follow-up Intensity: patient education and diabetes management services on a monthly basis; 1-hour visits Team member added: pharmacist Number of team members (including PCP and patient): 3 Team member interactions: explicit; pharmacist communicate with PCP via fax or telephone Member training: required; pharmacists trained by researchers, 23.5 hours of training on diabetes management, including most recent treatment guidelines for diabetes, hypertension, and dyslipidemia Member medication privileges: PCP only Member access to medical records: all **Comparison:** Control group participants visit at 3-month intervals and lasted about 30 minutes. No individual diabetes education from the pharmacist, nor diabetes management services. Participants encouraged to contact their PCP for questions	**Sample Size**: 65 **Attrition**: 30.8% **Demographics**: Age: mean of 63.4 years Gender: male, 27 (41.5%); female, 38 (58.5%) Race/Ethnicity: white, 81.5%; African American, 15.4% SES: NR Education: high school diploma or less, 47.6% Insurance: 100% insured Time since diagnosis: NR Level of risk: universal Co-morbidity: 68.4% of intervention group and 38.5% of control group were obese (BMI ≥ 30kg/m^2)	19.99; Change: -0.87 Net Difference: -14.33 (p = 0.01) **DBP** Int: Pre: 78.13 ± 10.34; Post: 73.73 ± 9.94; Change: -4.4 Cont: Pre: 75.27 ± 12.57; Post: 74.91 ± 10.29; Change: -0.36 Net Difference: -4.04 (p = NS) **LDL** Int: Pre: 109.33 ± 36.83; Post: 97.31 ± 24.14; Change: -12.02 Cont: Pre: 94.38 ± 38.17; Post: 90.5 ± 31.32; Change: -3.88 Net Difference: -8.14 (p = NS) **Proportion of patients reaching A1c target of <7%** Int: Pre: 23.3%; Post: 46.7%; Change: 23.3 pct pts Cont: Pre: 13.6%; Post: 9.1%; Change: -4.5 pct pts Difference: 27.9 pct pts (95% CI: 6.4, 49.4) **Proportion of patients reaching BP target of <130/80** Int: Pre: 20.0%; Post: 53.3%; Change: 33.3 pct pts Cont: Pre: 22.7%; Post: 22.7%; Change: 0 pct pts Difference: 33.3 pct pts (95% CI: 8.3, 58.3) **Proportion of patients reaching LDL target of <100** Int: Pre: 30%; Post: 46.7%; Change: 16.7 pct pts Cont: Pre: 45.5%; Post: 45.5%; Change: 0 pct pts Difference: 16.7 pct pts (95% CI: -10.7, 44.1)
Author, Year: Rothman, 2005	**Location**: NC, U.S.	**Target Population:**	**Follow-up Time Since Intervention Conclusion**:

Study	Intervention Characteristics	Population Characteristics	Results
Study Design: Individual RCT **Suitability of Design**: Greatest **Quality of Execution**: Good	**Setting**: Clinic; University of NC general internal medicine practice **Intervention Duration**: 12 months **Intervention Details**: Components: no component detail provided Education Counseling Medication modification Monitoring Long-term follow-up Intensity: care team made a median of 45 contacts or care-related activities, a total of 460 minutes (38 minutes per month) for each intervention patient Team member added: pharmacist Number of team members (including PCP and patient): 3 Team member interactions: explicit; pharmacist submit meeting session reports to PCP; medication communication needed Member training: no Member medication privileges: pharmacist can suggest changes, but PCP approval needed Member access to medical records: all **Comparison:** All participants, intervention and control, received a 1-hr management session; conducted by clinical pharmacist practitioner from disease management team; usual care after the education session	Underserved patients with uncontrolled type 2 diabetes **Eligibility Criteria**: Inclusion: ≥18 years old; diagnosed with type 2 diabetes; getting their diabetes care in the practice; A1c ≥ 8%; spoke English; life expectancy > 8 months Exclusion: None **Sample Size**: 217 **Attrition**: 10.6% **Demographics**: (Report on overall population; state NR if not reported, no stats (SD)) Age: mean of 55 Gender: male, 95 (44%); female, 122 (56%) Race/Ethnicity: African American, 140 (64.5%) SES, income: 71% < $20,000 Education: 159 (73%) high school or less Insurance: NR Time since diagnosis: NR Level of risk: diabetes with complications Co-morbidity: reported on hypertension; hypercholesterolemia	0 months **Results**: **A1c** Int: Pre: 11 ± 2; Post: NR; Change: -2.5 Cont: Pre: 11 ± 3; Post: NR; Change: -1.6 Net Difference: -0.8 (95% CI: -1.7, 0) **SBP** Int: Pre: 140 ± 21; Post: NR; Change: -7 Cont: Pre: 137 ± 21; Post: NR; Change: 2 Net Difference: -9 (95% CI: -16, -3) **DPB** Int: Pre: 82 ± 12; Post: NR; Change: -4 Cont: Pre: 80 ± 11; Post: NR; Change: 1 Net Difference: -5 (95% CI: -9, -1) **Total cholesterol** Int: Pre: 213 ± 84; Post: NR; Change: -4 Cont: Pre: 201 ± 47; Post: NR; Change: 1 Net Difference: -5 (95% CI: -9, -1) **Weight (Kg)** Int: Pre: 101; Post: NR; Change: 1.9 Cont: Pre: 100; Post: NR; Change: 0.1 Relative Change: 1.8% **Diabetes treatment satisfaction** Int: Pre: 29; Post: NR; Change: 8 Cont: Pre: 27; Post: NR; Change: 4 Relative Change: 13.8% **Urgent care visits** Int: Pre: 0.4; Post: 0.2; Change: -0.2 Cont: Pre: 0.3; Post: 0.2; Change: -0.1 Relative Change: -25.0% **Emergency department visits, all causes** Int: Pre: 0.4; Post: 0.4; Change: 0 Cont: Pre: 0.4; Post: 0.5; Change: 0.1 Relative Change: -25.0%

Study	Intervention Characteristics	Population Characteristics	Results
			Hospitalization, all causes Int: Pre: 0.3; Post: 0.2; Change: -0.1 Cont: Pre: 0.2; Post: 0.2; Change: 0 Relative Change: -33.3%
Author, Year: Scott, 2006 **Study Design**: Individual RCT **Suitability of Design**: Greatest **Quality of Execution**: Fair	**Location**: Iowa, U.S. **Setting**: Siouxland Community Health Center, community clinic **Intervention Duration**: 9 months **Intervention Details**: Components: Education: disease, lifestyle (diet, physical activity), medication adherence, testing, self-monitoring and management Counseling: life-style changes (diet, physical activity), medication adherence, testing, monitoring, self-monitoring and management Goal setting Medication modification Testing and monitoring Long-term follow-up Intensity: NR Team member added: pharmacist Number of team members (including PCP and patient): 3 Team member interactions: explicit; pharmacist worked closely with the physicians and other providers and consulted on pharmacotherapy for patients Member training: Not required Member medication privileges: unclear Member access to medical records: all **Comparison:** Patients in control group received standard diabetes care and were	**Target Population:** Patients with diabetes, majority below poverty line **Eligibility Criteria**: Inclusion: Siouxland Community Health Center member, over 18, with a diagnosis of type 2 diabetes Exclusion: NR **Sample Size**: 149 **Attrition**: 12.1% **Demographics**: Age: 3.6% less than 30 years; 47.5% less 30-49 years; 48.9% 50-69 years Gender: male, 58 (39%); female, 91 (61%) Race/Ethnicity: 56.4% white, 3.4% African American, 0.7% Asian American, 3.4% American Indian, 4.0% unknown, 32.2% Hispanic SES: NR Education: NR Insurance: NR Time since diagnosis: NR Level of risk: universal level of risk Co-morbidity: metabolic syndrome diagnosis, 83.2%	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: **A1c** Int: Pre: 8.8; Post: 7.08; Change: -1.7 Cont: Pre: 8.7; Post: 8.0; Change: -0.7 Net Difference: -1.0 (p<0.05) **SBP** Int: Pre: ; Post: 126.6; Change: -3.4 Cont: Pre: 130.7; Post: 132.8; Change: 2.1 Net Difference: -5.5 (95% CI: -10.2, -0.8) **DBP** Int: Pre: 79.3; Post: 75.9; Change: -3.4 Cont: Pre: 79.6; Post: 78.2; Change: -1.4 Net Difference: -2.0 **HDL** Int: Pre: 41.3; Post: 42.9; Change: 1.6 Cont: Pre: 41.5; Post: 42.4; Change: 0.9 Net Difference: 0.7 **LDL** Int: Pre: 116.1; Post: 96.7; Change: -19.4 Cont: Pre: 120.5; Post: 112.3; Change: -8.2 Net Difference: -11.2 **Weight (BMI)** Int: Pre: 36.4; Post: 36; Change: -0.4 Cont: Pre: 35.9; Post: 35.7; Change: -0.2 Net Difference: -0.5% (p=0.04) **Proportion of patients reaching A1c target of <7%** Int: Change: 42.2%

Study	Intervention Characteristics	Population Characteristics	Results
	managed by a nurse; all enrollees attend appointments at baseline, 3, 6, and 9 months; nurse collecting data for control group restricted to gather info and instructed not to provide any additional education		Cont: Change: 8.4% Difference: 33.8 pct pts (p=0.05) **Proportion of patients reaching SBP target of <130** Int: Change: 37.3% Cont: Change: -2.5% Difference: 39.8 pct pts (p=0.04) **Proportion of patients reaching DBP target of <80** Int: Change: 12.9% Cont: Change: 13.9% Difference: -1 pct pts (p=0.11) **Proportion of patients reaching HDL target of >40** Int: Change: -6.9% Cont: Change: -7.5% Difference: 0.6 pct pts (p=0.13) **Proportion of patients reaching LDL target of <100** Int: Change: 14.8% Cont: Change: -4.7% Difference: 19.5 pct pts (p=0.10) **Diabetes quality of life overall score** Int: Pre: 262; Post: 286.4; Change: 24.4 Cont: Pre: 232.5; Post: 247.3; Change: 14.8 Net Difference: 3.7%
Author, Year: Sczupak, 1977 **Study Design**: Individual RCT **Suitability of Design**: Greatest	**Location**: NY, U.S. **Setting**: Hospital outpatient clinic **Intervention Duration**: 12 months **Intervention Details**: Components: Education: disease, medication adherence, testing	**Target Population:** Women with diagnosed diabetes, either type 1 or 2, treated at Monday-morning diabetes clinic at E.J. Meyer Memorial Hospital **Eligibility Criteria**: Inclusion: 25 to 80 years old, have been diagnosed with diabetes for at least 3 years, unable to control diabetes by diet alone	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: **Fasting blood glucose > 150mg/100ml per number of blood samples drawn** Int: Post: 76.1% Cont: Post: 85.1% Difference: -9 pct pts (NS)

Study	Intervention Characteristics	Population Characteristics	Results
Quality of Execution: Fair	Counseling: medication adherence, testing, monitoring Medication modification Testing and monitoring Long-term follow-up Intensity: one meeting each month; extended to once every 2 months on occasion Team member added: 1 Number of team members (including PCP and patient): 3 Team member interactions: explicit; periodic review of patient's medical chart and discussions with patient's physician Member training: Not required Member medication privileges: all qualified team members; pharmacist can recommend changes Member access to medical records: all members **Comparison:** All other services of the clinic remained intact; pharmacist also worked with control group but were limited to the dispensing of all prescribed formulary medications and clarification of the physician's directives	Exclusion: NR **Sample Size**: 40 **Attrition**: 0% **Demographics**: Age: mean of 58.4 years Gender: female, 40 (100%) Race/Ethnicity: 25% white, 72.5% African American, 2.5% American Indian SES (self-supporting): 7.5% Education: NR Insurance: NR Time since diagnosis: mean of 15.1 years Level of risk: patients had complications Co-morbidity: NR	**Fasting blood glucose > 200mg/100ml per number of blood samples drawn** Int: Post: 60.9% Cont: Post: 68.9% Difference: -8 pct pts (NS) **Fasting blood glucose > 300mg/100ml per number of blood samples drawn** Int: Post: 16.3% Cont: Post: 27.0% Difference: -10.7 pct pts (NS) **Proportion of patients increased weight by 5lbs compared to previous clinic visit** Int: Post: 10.3% Cont: Post: 15.0% Difference: -4.7 pct pts (NS) **Adherence to appointments** Int: Post: 95.8% Cont: Post: 84.4% Difference: 11.5 pct pts ($p < 0.001$) **Renal disease: complaints of nocturia per # of physician-patient contacts** Int: Post: 14.7% Cont: Post: 40.0% Difference: -25.3 pct pts ($p < 0.001$) **Renal disease: complaints of polyuria per # of physician-patient contacts** Int: Post: 12.9% Cont: Post: 28.3% Difference: -15.4 pct pts ($p < 0.05$) **Emergency room visits per patient study month** Int: Post: 0.4% Cont: Post: 2.6% Difference: -2.2 pct pts (NS) **Hospital admissions required per patient study month, all causes**

Study	Intervention Characteristics	Population Characteristics	Results
			Int: Post: 2.1% Cont: Post: 6.3% Difference: -4.2 pct pts (p < 0.05)
Author, Year: Simpson, 2011 (Ladhani, 2012) **Study Design**: Individual RCT **Suitability of Design**: Greatest **Quality of Execution**: Good	**Location**: Alberta, Canada **Setting**: Clinic **Intervention Duration**: 12 months **Intervention Details**: Components: Counseling: medication adherence Medication modification Monitoring Long-term follow-up Intensity: NR Team member added: pharmacists Number of team members (including PCP and patient): 6 Team member interactions: explicit; recommendations discussed with primary care physician Member training: Yes; pharmacists completed structured online training courses for hypertension and diabetes management and reviewed the Canadian Hypertension Education Program and Canadian Diabetes Association guideline recommendations prior to starting the study Member medication privileges: PCP only Member access to medical records: all **Comparison:** Also team-based care, but no contact from pharmacists	**Target Population:** Adults with type 2 diabetes **Eligibility Criteria**: Inclusion: Type 2 diabetes patients regularly seen by the primary care team, did not qualify for urgent specialist referral and assessment. Exclusion: Patients seeking care in special clinics for hypertension, or dyslipidemia **Sample Size**: 260 **Attrition**: 14.2% **Demographics**: Age: 59.1 Gender: male, 111 (42.7%); female, 149 (57.3%) Race/Ethnicity: NR SES: NR Education: NR Insurance: universal coverage Time since diagnosis: 5.4 years Level of risk: universal level of risk Co-morbidity: 5.4% with atrial fibrillation; 15.8% with coronary artery disease; 3.8% stroke; 2.7% peripheral artery disease; 20.0% depression	**Follow-up Time Since Intervention Conclusion**: 0 month **Results**: **A1c** Int: Pre: 7.5 ± 1.6; Change: -0.15 Cont: Pre: 7.3 ± 1.3; Change: 0.03 Net Difference: -0.18 (95% CI: -0.51 to 0.14) **SBP** Int: Pre: 130.4 ± 14.9; Change: -7.4 Cont: Pre: 128.3 ± 15.7; Change: -2.5 Net Difference: -4.9 (95% CI: -8.7 to -1.0) **DBP** Int: Pre: 74.4 ± 10.0; Change: -2.3 Cont: Pre: 73.9 ± 10.8; Change: 0.6 Net Difference: -2.9 (95% CI: -5.6 to -0.2) **HDL** Int: Pre: 44.5; Change: 0.4 Cont: Pre: 44.5; Change: 0.8 Net Difference: -0.4 (95% CI: -2.3 to 1.16) **LDL** Int: Pre: 93.6; Change: -8.9 Cont: Pre: 93.2; Change: -3.9 Net Difference: -5.0 (95% CI: -12.8 to 2.7) **Triglycerides** Int: Pre: 168.3; Change: -8.0 Cont: Pre: 154.1; Change: 8.0 Net Difference: -15.9 (95% CI: -38.1 to 5.3) **Total cholesterol** Int: Pre: 170.5; Change: -8.9 Cont: Pre: 169.0; Change: -3.5 Net Difference: -5.4 (95% CI: -14.7 to 3.9)

Study	Intervention Characteristics	Population Characteristics	Results
			Composite score (UKPDS Risk Engine Score) Int: Pre: 19.5; Change: -2.7 Cont: Pre: 21; Change: -1.2 Difference: -1.5 (95% CI: -3.3 to 0.2) **Emergency room visits, all causes** Int: Post: 8.4% Cont: Post: 8.5% Difference: -0.1 pct pts **Hospitalization, all causes** Int: Post: 3.1% Cont: Post: 3.9% Difference: -0.8 pct pts
Author, Year: Taylor, 2003 **Study Design**: Individual RCT **Suitability of Design**: Greatest **Quality of Execution**: Fair	**Location**: CA, U.S. **Setting**: Kaiser Permanente Medical Center **Intervention Duration**: 12 months **Intervention Details**: Components: Education: disease management Counseling: self-monitoring and management Goal setting Medication modification Testing and monitoring Long-term follow-up Intensity: weekly 1 to 2hr group sessions for 4 weeks, with telephone follow-up calls after; for patients completing 1yr of intervention, mean number of phone contacts was 12.8 (range 3-30) Team member added: nurse case manager	**Target Population:** Patients with uncontrolled diabetes, both type 1 and 2, and comorbid conditions **Eligibility Criteria**: Inclusion: patients diagnosis of diabetes and hypertension, dyslipidemia, or CVD, with A1c>10% Exclusion: no English; not willing or able to attend the group sessions; congestive heart failure as primary diagnosis; <18yrs of age; pregnant; enrolled in a diabetes management clinic; or living too far away, moving, deceased, or no-show to baseline appointment **Sample Size**: 169 **Attrition**: 24.9% **Demographics**: Age: mean of 55.1	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: **A1c** Int: Pre: 9.5; Change: -1.14 Cont: Pre: 9.5; Change: -0.35 Net Difference: -0.8 **SBP** Int: Pre: 126.5; Change: 4.4 Cont: Pre: 128.5; Change: 8.6 Net Difference: -4.2 **DBP** Int: Pre: 73.3; Change: 2.2 Cont: Pre: 72.3; Change: 1.9 Net Difference: 0.3 **HDL** Int: Pre: 48; Change: 0.2 Cont: Pre: 46.8; Change: -0.7 Net Difference: 0.9 **LDL**

Study	Intervention Characteristics	Population Characteristics	Results
	Number of team members (including PCP and patient): 4 Team member interactions: explicit; phone contacts with PCP Member training: nurse care managers underwent several days of training on Kaiser Permanente's protocols for diabetes and cholesterol. Member medication privileges: PCP only Member access to medical records: assume all with access **Comparison:** Patients remain under treatment of their PCP. They received pamphlets on diabetes with instructions encouraging them to seek diabetes care and education	Gender: male, 89 (52.7%); female, 80 (47.3%) Race/Ethnicity: 61.5% white, 7.7% African American, 15.4% Asian American, 0.6% other, 35.5% Hispanic SES: NR Education: 23.7% high school or less, 40.2% some college, 20.1% college grad, 16.0% postgrad degree Insurance: NR Time since diagnosis: NR Level of risk: diabetes with complications Co-morbidity: 65.7% with hypertension, 38.5% with hypocholesteremia, 23.1% with CVD, 11.2% with depression	Int: Pre: 124.1; Change: -19.4 Cont: Pre: 123.9; Change: -6.5 Net Difference: -12.9 **Total cholesterol** Int: Pre: 210.4; Change: -20.6 Cont: Pre: 224.1; Change: -11.5 Net Difference: -9.1 **Triglycerides** Int: Pre: 195.2; Change: -11 Cont: Pre: 243.8; Change: -10.5 Net Difference: -0.5 **Proportion of patients reaching A1c target of <7.5%** Int: Post: 42.6% Cont: Post: 24.6% Difference: 18.0 pct pts (p<0.03) **Proportion of patients reaching SBP target of <130mmHG** Int: Pre: 68.9%; Post: 52.5%; Change: -16.4 pct pts Cont: Pre: 57.6%; Post: 42.4%; Change: -15.2 pct pts Difference: -1.2 pct pts (p=0.06) **Proportion of patients reaching DBP target of <85mmHG** Int: Pre: 90.2%; Post: 83.6%; Change: -6.6 pct pts Cont: Pre: 86.4%; Post: 84.7%; Change: -1.7 pct pts Difference: -4.9 pct pts (p>0.2) **Proportion of patients reaching HDL target of ≥35mg/dL** Int: Pre: 90.3%; Post: 88.7%; Change: -1.6 pct pts Cont: Pre: 90.3%; Post: 91.9%; Change: 1.6 pct pts Difference: -3.2 pct pts (p>0.2)

Study	Intervention Characteristics	Population Characteristics	Results
			Proportion of patients reaching LDL target of ≤100mg/dL Int: Pre: 33.9%; Post: 45.2%; Change: 11.3 pct pts Cont: Pre: 27.1%; Post: 37.3%; Change: 10.2 pct pts Difference: 1.1 pct pts (p>0.2) **Proportion of patients reaching total cholesterol target of ≤200mg/dL** Int: Pre: 44.3%; Post: 67.2%; Change: 22.9 pct pts Cont: Pre: 42.2%; Post: 51.6%; Change: 9.4 pct pts Difference: 13.5 pct pts (p>0.2) **Emergency room visits, all causes** No significant changes **Hospitalization, all causes** No significant changes
Author, Year: Taylor, 2005 **Study Design**: Individual RCT **Suitability of Design**: Greatest **Quality of Execution**: Fair	**Location**: Alberta, Canada **Setting**: Family practice clinic **Intervention Duration**: 4 months **Intervention Details**: Components: Education: disease, lifestyle (diet, physical activity, smoking cessation), medication adherence, testing, self-monitoring and management Counseling: life-style changes (diet, physical activity, smoking cessation) Goal setting and action plan Medication modification Testing and monitoring Intensity: NR	**Target Population:** Patients with type 2 diabetes **Eligibility Criteria**: Inclusion: type 2 diabetes; all participants living in their own homes and had a life expectancy greater than 1 year Exclusion: recent or pending pregnancy, illnesses (other than diabetes) that required hospitalization in past 3 months; uncontrolled hypertension; late-stage diabetes-related complications **Sample Size**: 39 **Attrition**: 2.5%	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: **A1c** Int: Pre: 7.69; Post: 7.4; Change: -0.29 Cont: Pre: 7.69; Post: 8.4; Change: 0.72 Net Difference: -1.0 (p=0.10) **SBP** Int: Pre: 134; Post: 132; Change: -2 Cont: Pre: 129; Post: 136; Change: 7 Net Difference: -9 (p=0.17) **DBP** Int: Pre: 79; Post: 74; Change: -5 Cont: Pre: 70; Post: 75; Change: 5 Net Difference: -10 (p=0.04)

Study	Intervention Characteristics	Population Characteristics	Results
	Team member added: nurse, dietician, exercise specialist Number of team members (including PCP and patient): 5 Team member interactions: explicit; nurse made notes about patient care and shared at regularly scheduled case conferences Member training: NR Member medication privileges: PCP only Member access to medical records: assume nurse and PCP **Comparison:** Standard medical care; nurse had no contact with the control group	**Demographics**: Age: mean of 62 Gender: male, 26 (67%); female, 13 (33%) Race/Ethnicity: 100% white SES: NR Education: NR Insurance: universal coverage Time since diagnosis: 10 years Level of risk: universal level of risk Co-morbidity: excluded based on comorbidity	**HDL** Int: Pre: 44.9; Post: 39.4; Change: -5.5 Cont: Pre: 50.3; Post: 51.8; Change: 1.5 Net Difference: -7.0 (p=0.5) **LDL** Int: Pre: 116; Post: 108.3; Change: -7.7 Cont: Pre: 119.1; Post: 120.7; Change: 1.6 Net Difference: -9.3 (p=0.98) **Total cholesterol** Int: Pre: 194.1; Post: 192.6; Change: -1.5 Cont: Pre: 201.0; Post: 204.2; Change: 3.2 Net Difference: -4.7 (p=0.98) **Triglycerides** Int: Pre: 205.5; Post: 246.1; Change: 40.6 Cont: Pre: 156.8; Post: 155.9; Change: -0.9 Net Difference: 41.5 (p=0.41) **Physical functioning (SF-36 Health Survey)** Int: Pre: 60.7; Post: 72.7; Change: 12 Cont: Pre: 67; Post: 66.4; Change: -0.6 Net Difference: 20.8% (p=0.18) **Diabetes impact (clinical trial questionnaire)** Int: Pre: 79.1; Post: 80.1; Change: 1 Cont: Pre: 81.2; Post: 76.7; Change: -4.5 Net Difference: 7% (p=0.07)
Author, Year: Weinberger, 1995 **Study Design**: Individual RCT **Suitability of Design**:	**Location**: North Carolina, U.S. **Setting**: General Medical Clinic of Durham, Department of Veterans Affairs Medical Center **Intervention Duration**: 12 months **Intervention Details**:	**Target Population:** Patients with diabetes **Eligibility Criteria**: Inclusion: patients with diabetes; age of onset ≥40 years; access to telephone; received primary care from the study clinic	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: **A1c** Int: Pre: 10.7 ± 3.3; Post: 10.5 ± 0.2; Change: -0.2 Cont: Pre: 10.7 ± 3.4; Post: 11.1 ± 0.3;

Study	Intervention Characteristics	Population Characteristics	Results
Greatest **Quality of Execution**: Good	Components: Education: disease, lifestyle (diet), medication adherence, self-monitoring Counseling: medication adherence, monitoring Long-term follow-up Intensity: NR Team member added: nurse Number of team members (including PCP and patient): 3 Team member interactions: explicit; nurse alerts physicians when necessary; telephone the PCP with urgent messages Member training: NR Member medication privileges: PCP Member access to medical records: assume all **Comparison:** Usual care	Exclusion: incompetent for interview; resident of nursing home; severely impaired in vision, hearing or speech; receiving home health care; life expectancy <12 months **Sample Size**: 275 **Attrition**: 8% **Demographics**: Age: mean age of 63.7 Gender: male, 272 (98.9%); female, 3 (1.1%) Race/Ethnicity: 60% white SES: NR Education: 65.1% high school or more Insurance: VA enrollees Time since diagnosis: 11.2 years Level of risk: diabetes with complications Co-morbidity: # of comorbidities, intervention with 3.1, and control with 3.2	Change: 0.4 Net Difference: -0.6 (p=0.046) **Physical functioning (SF-36 Health Survey)** Int: Pre: 52.3; Post: 57.4; Change: 5.1 Cont: Pre: 54.9; Post: 58.3; Change: 3.4 Net Difference: 3.1% (p=0.66) **Mental health (SF-36 Health Survey)** Int: Pre: 68.9; Post: 72.2; Change: 3.3 Cont: Pre: 74.6; Post: 75.6; Change: 1 Net Difference: 3.1% (p=0.66)
Author, Year: Welch, 2011 **Study Design**: Individual RCT **Suitability of Design**: Greatest **Quality of Execution**: Fair	**Location**: MA, U.S. **Setting**: Urban community health center **Intervention Duration**: 12 months **Intervention Details**: Components: Education: disease, lifestyle (diet), self-monitoring and management Counseling: life-style changes (diet), self-monitoring and management Medication modification Testing and monitoring Long-term follow-up	**Target Population:** Hispanic adults with type 2 diabetes **Eligibility Criteria**: Inclusion: at least a year of diabetes diagnosis; age 30-85 years; A1c>7.5%; Hispanic ethnicity; independently living and ambulatory Exclusion: severe diabetes complications; severe psychiatric illness; severe visual restrictions; would not be available for study period **Sample Size**: 46	**Follow-up Time Since Intervention Conclusion**: 0 months **Results**: **A1c** Int: Pre: 9.0 ± 1.2; Post: 7.4 ± 1.4; Change: -1.6 Cont: Pre: 8.5 ± 1.0; Post: 7.9 ± 1.4; Change: -0.6 Net Difference: -1.0 **SBP** Int: Pre: 132 ± 17; Post: 124.5 ± 15.1; Change: -7.5 Cont: Pre: 143 ± 28; Post: 134.4 ± 21.6;

Study	Intervention Characteristics	Population Characteristics	Results
	Intensity: 7 face-to-face visits; web-based monitoring Team member added: nurse, dietician Number of team members (including PCP and patient): 4 Team member interactions: explicit; nurse contacted PCP to initiate or increase diabetes medications as needed; diabetes care team discussed the 1-page summary report generated by team nurse with the PCP by phone and a hard copy was placed in patient charts Member training: NR Member medication privileges: PCP only Member access to medical records: assume all **Comparison:** Diabetes education consisting of seven 1-hour visits over a 12-month period, conducted by bicultural and bilingual clinic support staff trained to review a set of diabetes education booklets with participants	**Attrition**: 15% **Demographics**: Age: mean age of 55.8 Gender: male, 16 (35%); female, 30 (65%) Race/Ethnicity: 100% Hispanic SES (income): 43.5% < $5000/year Education: 39.1% high school diploma or higher Insurance: 100% Medicaid Time since diagnosis: 11.9 years Level of risk: universal level of risk Co-morbidity: 56% of intervention group with depression; 76.2% of control group with depression	Change: -8.6 Net Difference: 1.1 (95%CI : -11.8, 14.0) **DBP** Int: Pre: 80 ± 12; Post: 77.7 ± 9.9; Change: -2.3 Cont: Pre: 81 ± 14; Post: 82.1 ± 9.2; Change: 1.1 Net Difference: -3.4 (95%CI: -10.4, 3.6) **Weight (BMI)** Int: Pre: 33.8; Post: 32.6; Change: -1.2 Cont: Pre:35.8; Post: 33.8; Change: -2 Difference: 2.2% **Proportion of patients reaching A1c target of <7.0%** Int: Post: 47.6% Cont: Post: 27.8% Difference: 19.8 pct pts (p=0.02) **Proportion of patients reaching BP target of <130/80mmHg** Int: Post: 55% Cont: Post: 27.8% Difference: 27.2 pct pts (p=0.09) **Patients' satisfaction with care** Int: Post: 35.7 Cont: Post: 33.8 Differences: 5.6% (p=0.06)

Abbreviations

A1c: HbA1c or glycated hemoglobin

BMI: Body Mass Index

BP: Blood pressure

CHW: Community health worker

Cont: Control arm

DBP: Diastolic blood pressure

DM: Diabetes Mellitus

HDL: High-density lipoprotein

Int: Intervention arm

LDL: Low-density lipoprotein

Mean Difference: Intervention arm post minus control arm post

NA: Not applicable

NCM: Nurse Case/Care Manager

Net Difference: [intervention arm pre minus intervention arm post] minus [control arm pre minus control arm post]

Non US: Study not conducted in United States; therefore race/ethnicity data is not collected

NR: Not reported

PCP: Primary Care Provider

Post: Post-intervention measurement

Pre: Pre-intervention/ baseline measurement

RCT: Randomized control trial

SBP: Systolic blood pressure

SES: Socioeconomic status

TBC: Team-Based Care

Yrs: Years