

Interventions Engaging Community Health Workers to Prevent Diabetes

Evidence Tables of Included Studies with Greatest Suitability of Study Design

Study Details	Population Characteristics	Intervention + Comparison Description	Health Outcomes* and Summary
<p>Author(s): Duggan et al. 2014</p> <p>Location: Washington State</p> <p>Setting(s): Home-based intervention; recruitment in Lower Yakima Valley, WA</p> <p>Scale: Eligible participants randomized n=430 (intervention: 219, comparison: 211); analyses n=320 (intervention: 166, comparison: 154); number of settings: 1</p> <p>Design: Group RCT</p> <p>Intervention Duration: 5 weeks</p> <p>Quality of Execution: Fair</p> <p>Limitation(s): 3 <i>Measurement (1)</i> Table data does not match text data for HbA1c results</p> <p><i>Interpretation of results (2)</i> Substantial loss to f/u throughout study</p> <p>Majority of participants had prior diagnosis of diabetes (67%) and results were not stratified on this factor</p> <p>Funding: National Institute for Health (NIH)</p>	<p>Inclusion: Hispanic adult >18 y.o.; abnormal HbA1c >6.0%</p> <p>Exclusion: NR</p> <p>Recruitment: Recruitment was conducted at health fairs and community events. Hispanic men and women screened for blood glucose. Clients with elevated screening BG referred for fasting BG and HbA1c to determine study eligibility</p> <p>n=5,280 screened with 1,031 (17.7%) having abnormal BG</p> <p>Reported Baseline Demographics [Intervention Participants n=320]: Mean age: 50.6 Sex: Female 70.6% Race/ethnicity: Hispanic by recruitment results Education: <HS: 81.6%; HS: 11.8%; College: 6.7% Low income: NR Medicaid/Medicare: NR No health insurance: NR Unemployed: 61.8%</p> <p>Reported Risk Factors [Intervention Participants]: Prior diagnosis of diabetes: 67.3% Mean BMI: 32.9 kg/m²</p>	<p>CHW Activities: CHW delivered, home-based education intervention for Hispanic clients at increased risk for type 2 diabetes</p> <p>CHWs met with participants for a one-on-one face-to-face sessions (delivered in English or Spanish); Five 1 hour sessions over 5 weeks; Program content includes diabetes education/awareness and self-management methods; Healthy lifestyle: (client/ family) with diet and physical activity</p> <p>CHW Core Roles Met: Providing culturally appropriate information and health education + Providing informal counseling and social support + Building individual and community capacity + Providing informal counseling and social support</p> <p>CHW Models of Care Met: Screening and health education provider</p> <p>CHW Characteristics: #CHWs involved in intervention: NR CHW matched to population by: Language + Location Payment: Employed at Community Health Center Educational background: NR Years of experience: NR Supervisor: NR CHW performance evaluation: NR Recruitment: NR</p>	<p>Sample Size: 430 randomly assigned, 219 to intervention, 211 to comparison. 111/116 in intervention completed, 117/154 in control completed Completion rate: 96% (control: 76%)</p> <p>Glycemic Outcomes: Change HbA1c (SD), % Baseline Intervention (n=166): 8.31 (0.13) Comparison (n=154): 8.04 (0.17) 3 month follow-up Intervention (n=166): 7.68 (0.11) Comparison (n=154): 7.59 (0.13) Change in mean difference: -0.2% p=0.04</p> <p>Additional Outcomes**: PA + Nutrition</p> <p>Summary: A CHW delivered lifestyle modification program for recruited Hispanic men and women with elevated HbA1c measurements demonstrated improvements in HbA1c, but not in physical activity or diet outcomes at 3 months.</p>

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors

** Health behavior outcomes provided in Appendix

Diabetes: Community Health Workers – Evidence Table, Studies with Greatest Suitability of Study Design

Study Details	Population Characteristics	Intervention + Comparison Description	Health Outcomes* and Summary
<p>Applicability: Hispanics at risk for DM with low educational attainment Home-based intervention</p>	<p>No statistically significant differences in baseline characteristics between Groups at randomization and participants</p>	<p>Training: CHWs were trained in both diabetes education and working with the community (100 hours included CDC CHW evaluation tool kit). Trained by local diabetes specialist. Twice yearly refresher courses</p> <p>Other Provider(s): NA</p> <p>Other Provider(s) Activities: NA</p> <p>Community Partners Involved: Sunnyside Community Hospital provided the free BG screenings</p> <p>Comparison Group: RCT with participants in immediate and a delayed intervention (comparison group) after study completion</p>	
<p>Author(s): Faridi et al. 2010</p> <p>Location: New Haven and Bridgeport (control), Connecticut</p> <p>Setting(s): Community; urban churches</p> <p>Scale: Intervention: 121 participants completed baseline (83 completed post-intervention); Control: 125 participants completed baseline (78 post-intervention); number of CHWs: 21 community health advisors (CHA); number of settings: 13 intervention churches + 6 control churches</p> <p>Design: Before-after with comparison group</p>	<p>Inclusion: Adult>18 y.o.; African-American residents in New Haven or Bridgeport; members of congregation of the participating churches; have diabetes or are at risk of diabetes</p> <p>Diabetes risk determined by one or more of the following criteria: BMI>25; have parent with diabetes; have sibling with diabetes and/or have had gestational diabetes</p> <p>Exclusion: Inability to read/speak English; not at risk for diabetes; inability to participate in the intervention activities; inability to commit to participating and</p>	<p>CHW Activities: Intervention adapted materials from ‘Diabetes Prevention Program (DPP) Lifestyle Intervention Manual of Operations’</p> <p>CHW delivered education/ lifestyle content: health enhancing physical activity programs/healthful diet; reading food labels; portion control; healthful cooking; weight loss programs; social support; diabetes medications; empowering participants to communicate effectively with physicians</p> <p>CHWs decided intervention methods; tailored frequency of contact and teaching methods to participants’ preferences; organized community outreach events to raise awareness of</p>	<p>Sample Size: n=161 for analysis; loss to follow-up at 12 months; 121 from intervention group completed baseline measurements, 83 completed post-intervention measurements Completion rate: 68.6% (control 62.4%)</p> <p>Weight-Related Outcomes: Change in body weight (SD), lbs 12 month follow-up Intervention (n=83): 0.32 (25.92) Control (n=78): 0.82 (19.30) Change in mean difference: -0.5 lbs p=0.8976</p> <p>Change in body mass index (SD), kg/m²</p>

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors

** Health behavior outcomes provided in Appendix (below)

Study Details	Population Characteristics	Intervention + Comparison Description	Health Outcomes* and Summary
<p>Intervention Duration: 12 mos</p> <p>Quality of Execution: Fair</p> <p>Limitation(s): 3 <i>Sampling (1)</i> Convenience sample for selection of participants</p> <p><i>Interpretation of results (2)</i> Loss to follow-up: only 68.5% of the intervention group and 62.9% of the control; Pastor selects CHWs only on willingness to participate</p> <p>Inclusion criteria implies diabetics in the sample population but doesn't provide a number (have diabetes or are at risk of diabetes)</p> <p>Funding: Connecticut Health Foundation and the Centers for Disease Control and Prevention (CDC)</p> <p>Applicability: African American women in faith-based settings</p>	<p>completing the program</p> <p>Recruitment: By CHWs; 10–15 members of their congregation based on inclusion criteria</p> <p>Reported Baseline Demographics [Intervention Participants n=121]: Median age: 18–39: 25.8% 40–49: 24.7% 50–59: 21.4% 60–79: 28.1% Sex: Female 84.8% Race/ethnicity: African-American 100% Education: ≤HS 47.4% Some college 32.2% Associate or bachelor degree 20.3% Low income: <\$29,999: 51.8% Medicaid: NR Medicare: NR No health insurance: NR Unemployed: NR</p> <p>Reported Risk Factors [Intervention Participants]: BMI: New Haven 33.8 kg/m² Bridgeport: 31.9 kg/m²</p>	<p>diabetes in community; educated community members on key findings of DPP trial; provided strategies for incorporating DPP lifestyle intervention into daily routine</p> <p>CHWs engaged in diabetes-related advocacy; presented program to community residents to highlight effort to elicit support from other community organizations and key stakeholders in varying degrees</p> <p>CHW Core Roles Met: Providing culturally appropriate information and health education + Providing informal counseling and social support + Building individual and community capacity + Advocating for individual and community needs</p> <p>CHW Models of Care Met: Screening and health education provider</p> <p>CHW Characteristics: # CHWs involved in intervention: 21 CHW matched to population by: NR Payment: The CHAs received monetary compensation for their training, but not for the intervention. Education: NR Years of experience: NR Supervisor: NR CHW performance evaluation: NR Recruitment: Pastors asked to nominate 2 to 3 members of their churches who were natural leaders and respected by members of their congregations Training: 10-wk training session series (2 hr/session); sessions led by a</p>	<p>12 month follow-up Intervention (n=83): -0.63 (6.72) Control (n=78): 0.13 (3.18) Change in mean difference: -0.76 kg/m² p=0.4191</p> <p>CVD Risk Factors: Change in avg total cholesterol (SD), mg/dL 12 month follow-up Intervention(n=83): -24.2 (266.6) Control (n=78): -20.3 (247.7) Change in mean difference: -3.9 mg/dL p=0.9241</p> <p>Additional Outcomes**: PA + Nutrition</p> <p>Summary: At the end of the 1-yr intervention, there were no significant differences in the change in diabetes knowledge, body mass index, physical activity self-efficacy, energy expenditure or nutrition micronutrient intake between the New Haven participants and Bridgeport participants</p>

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors
** Health behavior outcomes provided in Appendix (below)

Diabetes: Community Health Workers – Evidence Table, Studies with Greatest Suitability of Study Design

Study Details	Population Characteristics	Intervention + Comparison Description	Health Outcomes* and Summary
		<p>certified diabetes educator and facilitated by members of the research team; focused on diabetes prevention knowledge, awareness of diabetes-related risk factors; based on the DPP lifestyle strategies to reduce the incidence of diabetes</p> <p>Other Provider(s): NA</p> <p>Other Provider(s) Activities: NA</p> <p>Community Partners Involved: Researchers at Yale Prevention Research Center in collaboration with a Community Participatory Team (CPT) which consisted of local church members, community based organizations, local health department officials and academic members</p> <p>Comparison Group: Bridgeport (6 churches) received a delayed intervention only after completing the post-intervention surveys and measurements</p>	
<p>Author(s): Islam et al. 2013</p> <p>Location: New York City, NY</p> <p>Setting(s): Community, not specified</p> <p>Scale: 127 individuals were screened for eligibility (72 eligible); 48 consented to participate in the study (25 randomized to the treatment group + 23 randomized to the control group); Analysis: 21 treatment group, 14 control group;</p>	<p>Inclusion: Self-identified as Korean; identified as at-risk by an interviewer-administered diabetes risk assessment adapted from the American Diabetes Association diabetes risk test which calculates “at-risk” scores based on family history of diabetes, BMI, and other factors; between 18 and 75 y.o.</p> <p>Exclusion: Confirmed diabetes from a health professional;</p>	<p>CHW Activities: Led by a trained, bilingual Korean American CHW and programmatic staff.</p> <p>Six CHWs facilitated 2-hour group sessions for treatment group participants with a project curriculum adapted from DPP which included following topics: diabetes prevention overview, nutrition, physical activity, diabetes complications and other cardiovascular diseases, stress and family support, and access to care.</p>	<p>Sample Size: n=36 for analysis, loss-to-follow-up: 16% treatment group, 39.1% control group 25 allocated to treatment, 21 with complete data Completion rate: 88% (control: 61%)</p> <p>Weight-Related Outcomes: Change in avg weight (SD), lbs Baseline Intervention (n=21): 138.30 (20.90) Control (n=14): 138.3 (26.20)</p>

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors

** Health behavior outcomes provided in Appendix (below)

Study Details	Population Characteristics	Intervention + Comparison Description	Health Outcomes* and Summary
<p>number of CHWs: 6; number of settings: NR</p> <p>Design: Group RCT</p> <p>Intervention Duration: 6 mos</p> <p>Quality of Execution: Fair</p> <p>Limitation(s): 2 <i>Interpretation of results (2)</i> Only 9/25 completed all 6 sessions</p> <p>>10% baseline differences for insurance, annual household income, and hypertension</p> <p>Funding: CDC and NIH</p> <p>Applicability: Females in a Korean-American community</p>	<p>serious health problems (e.g. terminal illness); participated in a previous cardiovascular disease study</p> <p>Recruitment: CHWs recruited subject’s in-person at various community-based venues, including health fairs and cultural fairs at churches and community settings between May and July 2011</p> <p>Reported Baseline Demographics [Intervention Participants n=25]: Mean age (SD): 61.0 (8.6) Sex: Female 68.0% Race/ethnicity: Asian 100% (100% self-identified as Korean) Education: ≤HS: 40.0% Low income: <\$20,000: 36.0% (2011 family of 4 federal income=\$22,350) Medicaid: NR Medicare: NR No health insurance: 36.0% Unemployed: Reported employed: 36.0%</p> <p>Reported Risk Factors [Intervention Participants]: Hypertensive: 12.5% of participants High cholesterol: 13.0% of participants BMI (SD): 24.1 (3.3) kg/m²</p>	<p>Sessions were held every 3 weeks in a convenient community setting.</p> <p>Treatment group participants received follow-up phone calls from CHW (2 calls after sessions 1-5 for a total of 10 calls over 6 month intervention period); discussed challenges and strategies for improving diet and physical activity and reducing stress were discussed</p> <p>CHW Core Roles: Bridging/cultural mediation between communities and the health care system + Providing culturally appropriate and accessible health education and information + Providing informal counseling and social support + Building individual and community capacity</p> <p>CHW Models of Care Met: Screening and health education provider</p> <p>CHW Characteristics: # CHWs involved in intervention: 6 CHW matched to population by: Language + Race/ethnicity Payment: NR Educational background: NR Years of experience: NR Supervisor: NR CHW performance evaluation: NR Recruitment: NR Training: 60-hour core-competency training, given over 8 days in a 3-week period. Training focused on comprehensive skills for CHWs, facilitated by trainers associated with independent CHW professional association. Project CHW and staff also</p>	<p>6 month follow-up Intervention (n=21): 137.1 (21.90) Control (n=14): 139.00 (27.70) Change in mean difference: -1.9 lbs p=0.14</p> <p>Change in avg BMI (SD), kg/m² Baseline Intervention (n=21): 24.5 (3.3) Control (n=14): 23.8 (3.4) 6 month follow-up Intervention (n=21): 24.3 (3.5) Control (n=14): 23.90 (3.6) Change in mean difference: -0.3 kg/m² p=0.12</p> <p>Change in weight circumference (SD), in Baseline Intervention (n=21): 34.3 (3.7) Control (n=14): 33.7 (2.8) 6 month follow-up Intervention (n=21): 33.9 (3.4) Control (n=14): 34.0 (2.8) Change in mean difference: -0.70 in p=0.23</p> <p>Glycemic Outcomes: Change in fasting blood glucose (SD), mg/dL Baseline Intervention (n=21): 104.70 (26.10) Control (n=14): 107.8 (33.80) 6 month follow-up Intervention (n=21): 108.7 (21.80) Control (n=14): 108.30 (17.00)</p>

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors
** Health behavior outcomes provided in Appendix (below)

Study Details	Population Characteristics	Intervention + Comparison Description	Health Outcomes* and Summary
		<p>attended approximately 30 hours of add'l trainings on mental health, motivational interviewing, and other related topics</p> <p>Other Provider(s): NA</p> <p>Other Provider(s) Activities: NA</p> <p>Community Partners Involved: Community-based participatory Research; New York University School of Medicine, Korean American-serving community-based organization (Korean Community Services of Metropolitan New York)</p> <p>Comparison Group: RCT control group received first educational session and no add'l care</p>	<p>Change in mean difference: 3.50 mg/dL p=0.74</p> <p>CVD Risk Factors: Change in SBP (SD), mmHg Baseline Intervention (n=21): 123.30 (15.00) Control (n=14): 129.8 (19.60) 6 month follow-up Intervention (n=21): 121.3 (18.20) Control (n=14): 129.50 (13.50) Change in mean difference: -1.70 mmHg p=0.94</p> <p>Change in DBP (SD), mmHg Baseline Intervention (n=21): 76.00 (8.70) Control (n=14): 78.1 (11.10) 6 month follow-up Intervention (n=21): 77.7 (10.40) Control (n=14): 83.00 (9.70) Change in mean difference: -3.20 mmHg p=0.40</p> <p>Additional Outcomes**: PA + Nutrition + Diabetes knowledge + Mental health</p> <p>Summary: CHW-delivered community-based participatory research among Korean Americans significantly improved weight, waist circumference, diastolic blood pressure, physical activity, nutrition, diabetes knowledge, and mental health</p>

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors
 ** Health behavior outcomes provided in Appendix (below)

Study Details	Population Characteristics	Intervention + Comparison Description	Health Outcomes* and Summary
<p>Author(s): Islam et al. 2014</p> <p>Location: New York City, NY</p> <p>Setting(s): Community, Sikh Asian Indian American Social Service Agency</p> <p>Scale: 175 individuals were screened for eligibility (126 eligible); 126 consented to participate in the study (76 randomized to the treatment group + 50 randomized to the control group); analysis: 59 treatment group, 47 control group</p> <p>Design: Before-after with comparison group</p> <p>Intervention Duration: 6 mos</p> <p>Quality of Execution: Fair</p> <p>Limitation(s): 3 <i>Interpretation of results</i> (3) Only 78% of treatment group completed intervention</p> <p>>10% diff between treatment and control groups (gender, education)</p> <p>Contamination (control group demonstrated positive changes in BP and other health behaviors, suggesting that some intervention health promotion efforts may have been disseminated)</p> <p>Funding: Grants from CDC, NIH, NIH on Minority Health and Health</p>	<p>Inclusion: Self-identified as Sikh Asian Indian; identified as at-risk by an interviewer-administered diabetes risk assessment tool adapted from the American Diabetes Association, which calculates “at-risk” scores based on family history of diabetes, body mass index (BMI), and other factors; between 18 and 75 y.o.</p> <p>Exclusion: Previously been diagnosed with diabetes by a health professional; had serious health problems (e.g., terminal illness); had participated in a previous cardiovascular disease study</p> <p>Recruitment: Two neighborhoods (Richmond Hills and South Ozone Park located in the southwestern portion of the borough of Queens) selected due to high concentration of the target community; neighborhoods were also demographically similar</p> <p>CHWs recruited participants at health fairs and cultural fairs at gurdwaras (Sikh religious institutions) and other community settings between March 2012 and May 2013</p> <p>Reported Baseline Demographics [Intervention Participants n=59]: Mean age (SD): 46.3 (11.6)</p>	<p>CHW Activities: Six CHW-facilitated interactive group sessions of approximately 2 h in length and included the following topics: diabetes prevention, nutrition, physical activity, diabetes complications and other cardiovascular diseases, stress and family support, and access to health care.</p> <p>Sessions held every 3 weeks in a convenient community setting. Treatment group participants also received follow-up phone calls from the CHWs (two calls after sessions one through five for a total of 10 calls over the 6-month intervention period), during which individualized challenges, strategies, and action plans for improving diet and physical activity and reducing stress were discussed</p> <p>CHW Core Roles: Bridging/cultural mediation between communities and the health care system + Providing culturally appropriate and accessible health education and information + Providing informal counseling and social support + Building individual and community capacity</p> <p>CHW Models of Care Met: Screening and health education provider</p> <p>CHW Characteristics: # CHWs involved in intervention: 6 Matching: Language (Bilingual Sikh Asian Indian) + Race/ethnicity (Sikh Asian Indian CHWs) Payment: Yes, but unclear (Table 1 states that CHWs were hired by CBO)</p>	<p>Sample Size: n=102 for analysis, Loss to follow-up: 23.4% (intervention)</p> <p>Weight-Related Outcomes: Change in avg weight (SD), lbs Baseline Intervention (n=54): 160.2 (27.7) Control (n=48): 174.8 (23.2) 6 month follow-up Intervention (n=54): 155.4 (25.4) Control (n=48): 173.7 (19.3) Change in mean difference: -3.7 lbs p=0.10</p> <p>Change in avg BMI (SD), kg/m² Baseline Intervention (n=54): 27.8 (4.2) Control (n=48): 28.6 (3.0) 6 month follow-up Intervention (n=54): 27.0 (4.0) Control (n=48): 28.5 (2.7) Change in mean difference: -0.70 kg/m² p=0.08</p> <p>Change in weight circumference (SD), in Baseline Intervention (n=49): 36.7 (5.9) Control (n=40): 36.7 (3.4) 6 month follow-up Intervention (n=49): 34.6 (4.2) Control (n=40): 35.4 (2.8) Change in mean difference: -0.80 in p=0.39</p> <p>Glycemic Outcomes:</p>

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors

** Health behavior outcomes provided in Appendix (below)

Study Details	Population Characteristics	Intervention + Comparison Description	Health Outcomes* and Summary
<p>Disparities, and National Center for Advancing Translational Sciences, NIH</p> <p>Applicability: Community Sikh Asian Indian female population</p>	<p>Sex: Female 96.1% Race/ethnicity: 100% Sikh Asian Indian Education: <HS: 16.2% HS graduate + some college: 58.1% College graduate: 25.7% Low income: NR Medicaid: NR Medicare: NR No health insurance: 13% Unemployed: NR</p> <p>Reported Risk Factors [Intervention Participants]: BMI (SD): 28.2 (4.0) kg/m²</p>	<p>Educational background: NR Years of experience: NR Supervisor: Bilingual Asian Indian CHW supervisor at the community-based organization (United Sikhs) Training: CHW supervisor participated in training focused on community-based research and disease prevention and management. CHW supervisor and study staff subsequently trained 3 additional study CHWs on the study protocol, delivery, and curriculum. All study staff attended approximately 30 h of additional trainings on mental health, motivational interviewing, basic action planning, and other related topics</p> <p>Other Provider(s): NA</p> <p>Other Provider(s) Activities: NA</p> <p>Community Partners Involved: Community-based participatory Research (CBPR); New York University, Gurdwaras, UNITED SIKHS</p> <p>Comparison Group: Two similar neighborhoods located in the southwestern portion of the borough of Queens selected as treatment and control.</p> <p>Control received standard care, including seeking preventive and acute care from their usual healthcare source as needed. Received the full intervention after serving as a control for the 6-month study period.</p>	<p>Change in fasting blood glucose (SD), mg/dL Baseline Intervention (n=50): 114.5 (36.8) Control (n=40): 111.3 (22.0) 6 month follow-up Intervention (n=50): 88.9 (16.5) Control (n=40): 113.0 (12.0) Change in mean difference: -27.3 mg/dL p<0.01</p> <p>CVD Risk Factors: Proportion of with controlled BP, % Baseline Intervention (n=51): 70.6 Control (n=47): 70.2 6 month follow-up Intervention (n=51): 96.1 Control (n=47): 95.7 Change in mean difference: 0 % P=NA</p> <p>Change in SBP (SD), mmHg Baseline Intervention (n=51): 131.6 (16.6) Control (n=47): 128.0 (19.6) 6 month follow-up Intervention (n=51): 118.2 (10.6) Control (n=47): 112.1 (12.0) Change in mean difference: 2.5 mmHg p=0.47</p> <p>Change in DBP (SD), mmHg Baseline Intervention (n=51): 83.1 (8.6) Control (n=47): 86.0 (10.5) 6 month follow-up Intervention (n=51): 78.0 (7.4) Control (n=47): 79.9 (5.6)</p>

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors
** Health behavior outcomes provided in Appendix (below)

Study Details	Population Characteristics	Intervention + Comparison Description	Health Outcomes* and Summary
			<p>Change in mean difference: 1.0 mmHg p=0.61</p> <p>Change in avg total cholesterol (SD), mmHg Baseline Intervention (n=46): 144.7 (35.7) Control (n=40): 138.5 (34.4) 6 month follow-up Intervention (n=46): 168.7 (30.5) Control (n=40): 137.3 (30.8) Change in mean difference: 25.2 mmHg p<0.01</p> <p>Additional Outcomes**: PA + Nutrition + Diabetes knowledge</p> <p>Summary: CHW-delivered community-based participatory research among Sikh Asian Indian community significantly improved glucose, diabetes knowledge, portion control, and physical activity.</p>
<p>Author(s): Katula et al. 2013</p> <p>Location: Winston-Salem, North Carolina</p> <p>Setting(s): Parks and recreation centers</p> <p>Scale: 301 participants randomized and assigned, 150 to enhanced usual care group (control) and the other 151 to the lifestyle weight loss group (intervention)</p>	<p>Inclusion: ≥21 y.o. who reside or work in Forsyth County, NC; able to read/understand English at or above level sufficient to comprehend recruitment and intervention materials; BMI ≥25 kg/m² and <40 kg/m²; fasting blood glucose ≥95 mg/dL and ≤ 125 mg/dL following at least 8-h fast</p> <p>Exclusion: Currently involved in supervised program for weight</p>	<p>CHW Activities: CHW conducted group sessions during Phase 1 (mos 1–6), and all sessions; during Phase 2 (mos 7– 24), participants received two scheduled contacts with CHW each month, one group session and one phone contact.</p> <p>Group sessions consisted of 8–12 participants and conducted at community sites (e.g., parks and recreation centers) with arrangements facilitated by study staff</p>	<p>Sample Size: n=301 for analysis, Loss to follow-up at 18 months: 17% of the LWL participants and 12% of the UCC participants At 24-month: 16% of the LWL participants and 11% of the UCC participants Completion rate (at 24 mo): 84% (control: 89%)</p> <p><i>Intent-to-treat analyses of between-group differences used</i></p>

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors

** Health behavior outcomes provided in Appendix (below)

Study Details	Population Characteristics	Intervention + Comparison Description	Health Outcomes* and Summary
<p>Design: Group RCT</p> <p>Intervention Duration: 24 months. Phase 1: weekly group sessions during months 1-6. Phase 2: two scheduled contacts with CHW each month (one group session, one phone contact) months 7-24</p> <p>Quality of Execution: Good</p> <p>Limitation(s): 0</p> <p>Funding: National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)</p> <p>Applicability: Community Prediabetes population</p>	<p>loss; clinical hx of diabetes 2, or newly diagnosed diabetes 2 at screening; clinical hx of CVD occurring within past 6 mos; uncontrolled high blood pressure: BP \geq160/100; Pregnancy, breast feeding, or planning pregnancy within 2 years; chronic use of medicine known to significantly affect glucose metabolism, e.g., corticosteroids; other chronic disease likely to limit lifespan to less than 2-3 yrs; inability or unwillingness to give informed consent</p> <p>Recruitment: Identified from referrals from primary care clinics, community and worksite screenings organized by the study team, and community-based recruitment via mass mailing and group presentations to community and civic groups.</p> <p>Reported Baseline Demographics [Intervention Participants n=151]: Mean age (SD): 57.3 (10.1) Sex: Female 57.6% Race/ethnicity: White non-Hispanic 73.5%; Black/AA 25.8%; Other/refused 0.7% Education: \leqHS: 19.2% Associate degree or other: 32.5% Bachelor’s degree: 24.5% Beyond bachelor’s degree: 23.8%</p>	<p>All participants received 3 personalized consultations with an RD (during mos 1, 3, and 6).</p> <p>CHWs conduct intervention group sessions, manage group participants, and perform data entry of participant body weights obtained at each group session.</p> <p>CHW Core Roles: Providing culturally appropriate information and health education + Advocating for individual and community needs</p> <p>CHW Models of Care Met: Screening and health education provider + Outreach/enrollment/information agent</p> <p>CHW Characteristics: # CHWs involved in intervention: 10 CHW matched to population by: Personal experience Payment: CHWs are compensated \$100/wk for their participation in the intensive phase and \$200/mo in the maintenance phase. Educational background: 80% (8/10 reported some education beyond high school) Years of experience: NR Supervisor: Two registered dietitians supervise CHWs and provide graphical and verbal feedback that can be shared with participants. CHW Monitoring Board functions as working group of the Intervention Committee to provide ongoing support and to monitor the activities of the CHWs.</p>	<p><i>averages of 18- and 24-month measures of outcomes</i></p> <p>Weight-Related Outcomes: Change in avg weight (SD), lbs Baseline Intervention (n=151): 208.07 (2.65) Control (n=150): 208.07 (2.65) 24 month follow-up Intervention (n=151): 195.4 (1.12) Control (n=150): 204.6 (1.10) Change in mean difference: -16 lbs p=NR</p> <p>Change in avg BMI (SD), kg/m² Baseline Intervention (n=151): 32.85 (0.32) Control (n=150): 32.6 (0.34) 24 month follow-up Intervention (n=150): 31.0 (0.18) Control (n=150): 32.42 (0.18) Change in mean difference: -1.69 kg/m² p<0.001</p> <p>Change in weight circumference (SD), in Baseline mean Intervention (n=151): 41.31 (0.3) Control (n=150): 41.1 (0.34) 24 month follow-up Intervention (n=150): 31.0 (0.18) Control (n=150): 41.06 (0.19) Change in mean difference: -1.50 in p<0.001</p> <p>Progression type 2 diabetes Diabetes incidence, n</p>

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors

** Health behavior outcomes provided in Appendix (below)

Study Details	Population Characteristics	Intervention + Comparison Description	Health Outcomes* and Summary
	<p>Low income: NR Medicaid: NR Medicare: NR Health insurance: NR Unemployed: NR</p> <p>Reported Risk Factors [Intervention Participants]: BMI (SD): 32.8 (3.9) kg/m²</p>	<p>Registered dietitian observed each CHW conduct their first 4 sessions and provided feedback and coaching. Training: CHW training consisted of didactic instruction on study protocol, intervention philosophy, goals, and procedures, weight loss (energy balance), physical activity basics, nutrition basics, group facilitation, cognitive-behavioral principles, participant monitoring and tool box methods, data entry. 6-9 weeks of experiential learning, didactic instruction. Dietitian observed each CHW conduct their first four sessions and provided feedback and coaching</p> <p>Other Provider(s): Registered dietitians</p> <p>Other Provider(s) Activities: RDs trained CHWs and are responsible for the implementation and monitoring of the intervention.</p> <p>Community Partners Involved: Wake Forest University</p> <p>Comparison Group: Enhanced usual care condition (UCC) compared to 24-month lifestyle weight-loss program (LWL). UCC receives two individual sessions with an RD nutritionist during the first 3 months that involved discussions of basic aspects of healthy eating and activity to support healthy living. Also received a monthly newsletter that focused on healthy lifestyle and community resources.</p>	<p>Baseline Intervention (n=151): 0 Control (n=150): 0 24 month follow-up Intervention (n=150): 4 Control (n=150): 11 Change in mean difference: -7 p=0.10</p> <p>Diabetes prevalence, % Baseline Intervention (n=151): 0 Control (n=150): 13 24 month follow-up Intervention (n=150): 0 Control (n=150): 29 Change in mean difference: -16% p=NR</p> <p>Glycemic Outcomes: Change in fasting blood glucose (SD), mg/dL Baseline Intervention (n=151): 105.37 (1.02) Control (n=150): 105.7 (0.82) 24 month follow-up Intervention (n=151): 103.1 (0.81) Control (n=150): 107.44 (0.79) Change in mean difference: -4.01 mg/dL p<0.001</p> <p>Change in insulin levels (SD), μU/mL Baseline Intervention (n=151): 16.67 (0.79) Control (n=150): 16.7 (0.81) 24 month follow-up Intervention (n=150): 11.4 (0.77)</p>

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors

** Health behavior outcomes provided in Appendix (below)

Diabetes: Community Health Workers – Evidence Table, Studies with Greatest Suitability of Study Design

Study Details	Population Characteristics	Intervention + Comparison Description	Health Outcomes* and Summary
			<p>Control (n=150): 14.38 (0.76) Change in mean difference: - 2.94 μU/mL p=0.006</p> <p>Change in insulin resistance (HOMA IR scale [fasting insulin X fasting glucose]/22.5) (SD), units Baseline Intervention (n=151): 4.44 (0.24) Control (n=150): 3.0 (0.25) 24 month follow-up Intervention (n=150): 4.5 (0.23) Control (n=150): 3.96 (0.25) Change in mean difference: - 0.96 units p=0.006</p> <p>Additional Outcomes**: Weight-related outcomes</p> <p>Summary: CHW-delivered lifestyle program among participants with prediabetes significantly improved weight, BMI, waist circumference, glucose, insulin, insulin resistance and weight loss (%). Diabetes incidence after 24 months was not significantly different between control and intervention groups.</p>
<p>Author(s): Kieffer et al. 2014</p> <p>Location: Detroit, Michigan</p> <p>Setting(s): Community-based centers Federally qualified health centers (FQHCs), Clinics for Nutrition Program for Women, Infants, and Children (WIC)</p>	<p>Inclusion: Pregnant Latinas ≥18 y.o.; <20wks gestation; living in SW Detroit</p> <p>Exclusion: NR</p> <p>Recruitment: Pregnant Latina women recruited through FQHCs, WIC clinics, community organizations</p>	<p>CHW Activities: CHW delivered, home and group-based education intervention over 11 weeks for pregnant Latinas culturally tailored, Spanish-language Healthy Mothers on the Move (MOMs) intervention offered home visits, group classes, related activities, and social support.</p>	<p>Sample Size: n=275 for analysis</p> <p>Completion rate: 84.2% (control: 87.1%)</p> <p>Additional Outcomes**: Nutrition outcomes collected and evaluated in using food frequency questionnaire (no outcomes on weight, PA, diabetes)</p>

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors

** Health behavior outcomes provided in Appendix (below)

Study Details	Population Characteristics	Intervention + Comparison Description	Health Outcomes* and Summary
<p>Scale: 278 participants randomized into groups 275 participants at analysis (intervention: 139, comparison: 136)</p> <p>Design: Group RCT</p> <p>Intervention Duration: 11 wks</p> <p>Quality of Execution: Fair</p> <p>Limitation(s): 4 <i>Sampling (1)</i> Potential bias in voluntary recruitment of study participants from community</p> <p><i>Measurement (1)</i> Self-reported dietary outcomes subject to bias with different recall periods at baseline and intervention end</p> <p><i>Interpretation of results (2)</i> Session attendance was modest (6.2 of 9 group sessions)</p> <p>Comparison group received group education on pregnancy including some information on healthy eating and exercise</p> <p>Funding: NIH-National Institute of Diabetes and Digestive Kidney Diseases; CDC</p> <p>Applicability: Pregnant Hispanic women living in low income communities (urban)</p>	<p>Reported Baseline Demographics [Intervention Participants n=275]: Mean age: 27.3 Sex: Female 100% Race/ethnicity: Hispanic 100% Born in Mexico 87.3% Education: 9.1 years Low income: Food stamps last 6 mos 14.6%; WIC past 6 mos 81.8% Medicaid: 93.5% Medicare: NR Health insurance: NR Unemployed: Occupation-homemaker 90.6%</p> <p>Baseline: pre-randomization (recall past year) End: Last intervention session (recall past 3 mo)</p> <p>Reported Risk Factors [Intervention Participants]: BMI: 24.2 kg/m²</p>	<p>Trained CHWs delivered pregnancy and lifestyle education (diet and physical activity) over 11 weeks with 2 home visits; 9 group sessions (15-20 minutes each). Participants provided informational and emotional social support from CHWs and peers.</p> <p>CHW Core Roles: Providing culturally appropriate information and health education + Providing informal counseling and social support + Building individual and community capacity</p> <p>CHW Models of Care Met: Screening and health education provider</p> <p>CHW Characteristics: # CHWs involved in intervention: NR CHW matched to population by: Language + Location Payment: NR Educational background: NR Years of experience: NR Supervisor: NR CHW performance evaluation: NR Recruitment: NR Training: Trained to deliver program curriculum</p> <p>Other Provider(s): NA</p> <p>Other Provider(s) Activities: NA</p> <p>Community Partners Involved: This study was conducted using Community-based Participatory Research (CBPR)</p>	<p>Overall results summary (unadjusted intervention effects): significant intervention effect found for vegetable consumption, intake of added sugar, total fat, saturated fat, percentage of total calories from saturated fat, solid fats, and added sugars. No intervention effect observed for total calories, fruit, or percentage of calories from added sugar</p> <p>Summary: CHW-delivered curriculum combined with CHW and peer support led to healthier eating among pregnant Latinas in urban Detroit.</p>

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors

** Health behavior outcomes provided in Appendix (below)

Study Details	Population Characteristics	Intervention + Comparison Description	Health Outcomes* and Summary
		<p>Comparison Group: Minimal intervention group received 3 group pregnancy meetings from professional staff focused on pregnancy and infant care. Materials on healthy eating and exercise were also provided</p>	
<p>Author(s): Ockene et al. 2012</p> <p>Location: Massachusetts</p> <p>Setting(s): Community, Lawrence Senior Center</p> <p>Scale: 312 participants eligible and randomized/ assigned into 2 groups (Intervention: 162, comparison: 150); number of CHWs: 3; number of settings: 2 (center + home)</p> <p>Design: Group RCT</p> <p>Intervention duration: 12 months</p> <p>Quality of Execution: Good</p> <p>Limitation(s): 1 <i>Description (1)</i> Control group poorly described</p> <p>Funding: National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)</p> <p>Applicability: Community Latino population at increased diabetes risk</p>	<p>Inclusion: Latino; ≥25 y.o; BMI ≥24 kg/m² and ≥30% likelihood of developing diabetes in 7.5 years as predicted by Stern equation; each pre-eligible individual's PCP was mailed a medical clearance form that reviewed the eligibility criteria, and asked for the PCP's permission for the individual to participate</p> <p>Exclusion: Fasting glucose of 126 mg/dL or greater; clinically diagnosed diabetes; presence of a psychiatric illness which limits ability to participate; no telephone, inability to walk unaided or walk five city blocks (1/4 mile) without stopping; medical condition likely to limit lifespan; taking a medication or having a medical condition that interfered with the assessment for diabetes, or having an endocrine disorder that alters blood sugar</p> <p>Recruitment: Greater Lawrence Family Health Center (GLFHC) patient panel identifying potentially eligible patients who received a mailed letter of invitation, and then telephone</p>	<p>CHW Activities: CHW-led group-based intervention with 13 group sessions and 3 individual home visits including social learning theory and patient-centered counseling</p> <p>Duration of first group session was 1.5 hrs and remaining group sessions were 1 hr. First individual visit was 1 hr and the last 2 were 30 min each.</p> <p>Intent to increase awareness of diabetes prevention strategies, foster positive diabetes prevention attitudes and promote healthy lifestyle behaviors in Latino population using literacy-sensitive and culturally-tailored strategies and material.</p> <p>CHW Core Roles: Providing culturally appropriate and accessible health education and information + Building individual and community capacity</p> <p>CHW Models of Care Met: Screening and health education provider + Outreach/enrollment/information agent</p> <p>CHW Characteristics: # CHWs involved in intervention: 3 CHW matched to population by: Language (Spanish) + Location Payment: NR</p>	<p>Sample Size: n= 289 for analysis; 12 month loss to follow up: 6.8% dropped out of the intervention group and 4.7% dropped out of the control group.</p> <p>Weight-Related Outcomes: Change in avg weight (SD), lbs Baseline Intervention (n=162): 190.19 (31.9) Control (n=150): 191.16 (36.3) 12 month follow-up Intervention (n=147): NR Control (n=142): NR Change in mean difference: -2.5 (-4.25, -0.75) lbs p=0.004</p> <p>Change in avg BMI (SD), kg/m² Baseline Intervention (n=162): 33.57 (5.1) Control (n=150): 34.18 (5.9) 12 month follow-up Intervention (n=147): NR Control (n=142): NR Change in mean difference -0.46 kg/m² (-0.76, -0.14) p=0.004</p> <p>Progression Type 2 Diabetes: Diabetes incidence, n Baseline Intervention (n=162): 0</p>

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors

** Health behavior outcomes provided in Appendix (below)

Study Details	Population Characteristics	Intervention + Comparison Description	Health Outcomes* and Summary
	<p>recruitment calls from the study community coordinators.</p> <p>Screening query of the current GLFHC database to identify potentially eligible Latino patients screening invitation letters were created, signed by the patient's primary care physician (PCP) and the community-PI. Patients were eliminated by their PCPs if deemed ineligible or a poor study candidate.</p> <p>Reported Baseline Demographics [Intervention Participants n=162]: Mean age (SD): 51.37 (± 10.9) years Sex: Female 72.2% Race/ethnicity: Hispanic 100% (60% of Dominican origin and 40% Puerto Rican) Education: >HS 60.6% Low income: NR Medicaid: NR Medicare: NR Health insurance: NR Unemployed: 55.0%</p> <p>Reported Risk Factors [Intervention Participants]: BMI (SD): 33.57 (5.1) kg/m²</p>	<p>Educational background: Post-high school education and all had some previous undergraduate education in nutrition (none were registered dietitians) Years of experience: NR Supervisor: Behavioral psychologist, senior registered dietitian CHW performance evaluation: NR Recruitment: NR Training: Received theoretical background and motivational counseling principles, nutritional and exercise aspects of the intervention, practical strategies to facilitate behavior change, and group management skills. Training included role-playing and mock intervention sessions and led by a behavioral psychologist and a senior registered dietitian. Booster training sessions scheduled semiannually</p> <p>Other Provider(s): NA</p> <p>Other Provider(s) Activities: NA</p> <p>Community Partners Involved: University of Massachusetts, Greater Lawrence Family Health Center, Lawrence Council on Aging/Senior Center, YWCA of Greater Lawrence, Mayor's Health Task Force</p> <p>Comparison Group: Comparison group received usual care</p>	<p>Control (n=150): 0 12 month follow-up Intervention (n=147): 2 Control (n=142): 5 Change in mean difference: -3 p=NR</p> <p>Glycemic Outcomes: Change in HbA1c (SD), % Baseline Intervention (n=162): 5.76 (0.3) Control (n=150): 5.77 (0.4) 12 month follow-up Intervention (n=147): NR Control (n=142): NR Change in mean difference: -0.07% (-0.10, -0.04) p=0.009</p> <p>Change in fasting blood glucose (SD), mg/dL Baseline Intervention (n=162): 104.41 (11.9) Control (n=150): 105.61 (12.3) 12 month follow-up Intervention (n=147): NR Control (n=142): NR Change in mean difference: 1.0 mg/dL (-2.0, 3.5) p=0.62</p> <p>Change in insulin levels (SD), μU/mL Baseline Intervention (n=162): 20.10 (13.5) Control (n=150): 19.90 (13.8) 12 month follow-up Intervention (n=147): NR Control (n=142): NR</p>

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors

** Health behavior outcomes provided in Appendix (below)

Study Details	Population Characteristics	Intervention + Comparison Description	Health Outcomes* and Summary
			<p>Change in mean difference: - 1.25 μU/mL (-3.01, 0.57) p=0.16</p> <p>Change in insulin resistance (HOMA IR scale [fasting insulin X fasting glucose]/22.5) (SD), units</p> <p>Baseline Intervention (n=162): 5.24 (3.8) Control (n=150): 5.21 (3.8)</p> <p>12 month follow-up Intervention (n=147): NR Control (n=142): NR</p> <p>Change in mean difference: - 0.28 units (-0.76, 0.20) p=0.03</p> <p>Additional Outcomes**: PA + Nutrition + Mental health</p> <p>Summary: CHW-delivered community-based, literacy-sensitive, and culturally tailored lifestyle intervention on weight loss and diabetes risk reduction among low-income, Spanish-speaking Latinos at increased diabetes risk. The intervention significantly resulted in weight loss, improved HbA1c, and improved insulin resistance in a high-risk Latino population.</p>
<p>Author(s): Parikh et al. 2010</p> <p>Location: East Harlem in NYC</p> <p>Setting(s): Community sites</p> <p>Scale: n=99 [intervention (n=50) and control (n=49)]</p>	<p>Inclusion: Individuals aged 18 or older, resided in east Harlem, spoke English or Spanish; overweight and not currently pregnant, did not have diabetes and did not use glucose-altering medications, and were able to participate a group session.</p>	<p>CHW Activities: Project HEED’s curriculum (modified Healthy Eating Active Lifestyles project) followed self-efficacy theory; contained simple, actionable messages; easily taught by lay leasers; and focused on enhancing self-efficacy to make lifestyle changes;</p>	<p>Sample Size: Sample size of 99 at baseline, 72 at follow up; attrition rate 27.3%.</p> <p>Completion rate: 70% (control: 75.5%)</p> <p>Weight-Related Outcomes:</p>

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors

** Health behavior outcomes provided in Appendix (below)

Study Details	Population Characteristics	Intervention + Comparison Description	Health Outcomes* and Summary
<p>Design: Group RCT (pilot study)</p> <p>Intervention Duration: 10 weeks</p> <p>Quality of Execution: Fair</p> <p>Limitation(s): 3 <i>Sampling (1)</i> Low consent rate of 45%.</p> <p><i>Measurement (1)</i> Participation bias-control group informed if they had prediabetes.</p> <p><i>Data Analysis (1)</i> Did not control for loss at follow up (no ITT).</p> <p>Funding: National Center on Minority Health and Health Disparities and the New York State Dept. of Health Diabetes Prevention and Control Program.</p> <p>Applicability: Hispanic women at risk for diabetes</p>	<p>Exclusion: Participants with normal glucose level</p> <p>Recruitment: Several strategies were applied for recruitment at community sites, for example community leaders championed the study and spearheaded recruitment.</p> <p>Reported Baseline Demographics [Intervention Participants n=50]: Mean Age (SD): 46 Sex: 86% Female Race/ethnicity: African American: 12% Hispanic: 86% Education: < high school: 54% Low income: <15,000: 48% 15,000-30,000: 20% >30,000: 6% Medicaid/Medicare: NR No health insurance: 50% Unemployed: 66%</p> <p>Reported Risk Factors [Intervention Participants]: Obese: 68% Overweight: 26% Diabetes: 13% Prediabetes: 58%</p>	<p>and the curriculum consisted of eight 1.5-hour sessions over 10 weeks.</p> <p>CHW Core Roles Met: Providing culturally appropriate information and health education + bridging/cultural mediation between communities and the health and social services</p> <p>CHW Models of Care Met: Screening and health education provider</p> <p>CHW Characteristics: CHW matched to population by: Language + Race/ethnicity Payment: NR Educational background: NR Years of experience: NR Supervisor: NR CHW performance evaluation: NR Recruitment: NR Training: NR</p> <p>Other Provider(s): NR</p> <p>Other Provider(s) Activities: NR</p> <p>Community Partners Involved: Community and academic partners in East Harlem in NYC formed a community Action Board (20 leasers, activists, and residents) with created 5 sub-committees to develop a community-driven, culturally appropriate, and scientifically sound diabetes prevention intervention.</p> <p>Comparison Group: delayed intervention in a year</p>	<p>Change in weight (SD), lbs Baseline Intervention (n=50) :174 (39) Comparison (n=49): 162 (27) 12 month follow-up Intervention (n=35): NR Comparison (n=37): NR Change in mean difference: -4.8 lbs p=0.01</p> <p>Change in waist circumference (SD), in Baseline Intervention (n=50): 40 (4) Comparison (n=49): 39 (4) 12 month follow-up Intervention (n=35): NR Comparison (n=37): NR Change in mean difference: -1.4 in p=0.05</p> <p>Glycemic Outcomes: Change in progression to type 2 diabetes 12 month follow-up Intervention (n=35): 0.36 person-year Comparison (n=37): 0.33 person-year Change in difference: 0.03 person-year</p> <p>Change in HbA1c (SD), % Baseline Intervention (n=50): 5.6 (0.3) Comparison (n=49): 5.6 (0.2) 12 month follow-up intervention (n=35): NR Comparison (n=37): NR</p>

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors

** Health behavior outcomes provided in Appendix (below)

Study Details	Population Characteristics	Intervention + Comparison Description	Health Outcomes* and Summary
			<p>Change in mean difference: 0% p=0.13</p> <p>Change in fasting blood glucose (SD), mg/dL</p> <p>Baseline Intervention (n=50): 104 (9.6) Comparison (n=49): 102 (9.5)</p> <p>12 month follow-up Intervention (n=35) :NR Comparison (n=37) :NR</p> <p>Change in mean difference: -1 mg/dL p=0.83</p> <p>CVD Risk Factors: Change in DBP (SD), mmHg</p> <p>Baseline Intervention (n=50): 70.0 (7.0) Comparison (n=49): 73.0 (10.0)</p> <p>12 month follow-up Intervention (n=35): NR Comparison (n=37): NR</p> <p>Change in mean difference = -2.0 mmHg p=0.31</p> <p>Change in SBP (SD), mmHg</p> <p>Baseline Intervention (n=50): 112 (13) Comparison (n=49): 115 (20)</p> <p>12 month follow-up Intervention (n=35) :NR Comparison (n=37): NR</p> <p>Change in mean difference: 6.0 mmHg p=0.13</p> <p>Change in LDL (SD), mg/dL</p> <p>Baseline Intervention (n=50): 109 (32)</p>

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors

** Health behavior outcomes provided in Appendix (below)

Study Details	Population Characteristics	Intervention + Comparison Description	Health Outcomes* and Summary
			<p>Comparison (n=49): 103 (33) 12 month follow-up Intervention (n=35): NR Comparison (n=37): NR Change in mean difference: -5.0 mg/dL p=0.42</p> <p>Additional Outcomes**: PA + Nutrition</p> <p>Summary: A community-driven approach to diabetes prevention in a high-risk community showed a decrease in weight related outcomes among Hispanic and Black populations.</p>
<p>Author(s): Simmons et al. 1997</p> <p>Location: New Zealand</p> <p>Setting(s): 2 Seventh Day Adventist church</p> <p>Scale: Open prospective study comparing lifestyle changes in two complete Western Samoan church congregations in South Auckland.</p> <p>Design: Before-after with comparison group</p> <p>Quality of Execution: Fair</p> <p>Limitation(s): 4 <i>Sampling (1)</i> Inclusion/exclusion criteria weren't well described. Researchers chose sites based on convenience</p>	<p>Inclusion: You and adults (age range from 14-80 in intervention group); being a member of the two chosen churches. The pastor of the church was also responsible for another church approximately 3 km away and invited the SADP into the second church. The pastor accepted the second church as a control group for the study on the understanding that the second church would receive the intervention on completion of the pilot.</p> <p>Exclusion: Not being a member of the two chosen SDA churches.</p> <p>Recruitment: Church members identified by pastor and Health and</p>	<p>CHW Activities: Samoan community diabetes educator was main presenter at diabetes awareness sessions and also acted as interpreter for the English speaking sections. Samoan health worker, trained as an aerobics instructor, led exercise sessions with assistance from church members involved.</p> <p>Further practical assistance was given in the form of cooking demonstrations provided by staff from the SADP, local health promotion services and the wife of the minister (who was a home economics educator). Two blocks of four sessions were provided. Diabetes support group included informal diabetes community educator/nurse specialist sessions. Intervention church began participating in the national SDA annual 'Health Week' for the first time. Included diabetes awareness session</p>	<p>Sample Size: At the first assessment, there were 78 participants in the intervention group, 144 in the control group. At the second assessment, there were 50 participants in the intervention group, 92 in the control group.</p> <p>Completion rate: 64%</p> <p>Weight-Related Outcomes: Change in weight (SD), lbs Baseline Intervention (n=50): 184.31 (33.95) Comparison (n=92): 193.35 (43.87) 24 month follow-up Intervention (n=50): 184.53 (31.75) Comparison (n=92): 200.18 (46.08) Change in mean difference: - 6.61 lbs</p>

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors

** Health behavior outcomes provided in Appendix (below)

Study Details	Population Characteristics	Intervention + Comparison Description	Health Outcomes* and Summary
<p><i>Interpretation of Results (3)</i> 50 out of 78 (64%) participants completed study</p> <p>Pastor wasn't blinded to study group allocation</p> <p>Authors reported control group were disappointed they were not to receive intervention and started their own exercise program</p> <p>Funding: Exercise program: Reduced membership fees were negotiated with a local gymnasium. An application was made to a local trust which provided exercise equipment to be owned by the church.</p> <p>Additional material support: Loterries Board, North Health, South Auckland Health, Boehringer Mannheim, ASB Trust, Novo Nordisk, Eli Lilly, Tegal, New Zealand Dairy Board and Sanitarium</p> <p>Applicability: Samoan population Church-based intervention</p>	<p>Temperance Committee, who also continuously encouraged congregants to participate in the program. The program started for both churches with baseline assessments between September and December 1993 and repeat assessments were completed in April 1996.</p> <p>Reported Baseline Demographics [Intervention Participants n=67]: Mean age (SD): 37 (16) Sex: Female 66% Race/ethnicity: 100% Native Hawaiian or Pacific Islander (Western Samoans) Education: 74% educated to secondary school or above Low income: NR Medicaid/Medicare: NR No health insurance: NR Unemployed: NR</p> <p>Reported Risk Factors [Intervention Participants]: Smoking status at baseline: 3% Participants with diabetes at baseline: 10%</p>	<p>and cooking demonstration (carried out by wife of minister)</p> <p>CHW Core Roles Met: Providing culturally appropriate and accessible health education and information + Providing informal counseling and social support + Building individual and community capacity</p> <p>CHW Models of Care Met: Screening and health education provider</p> <p>CHW Characteristics: CHW matched to population by: Race/ethnicity Payment: NR Educational background: NR Years of experience: NR Supervisor: NR CHW performance evaluation: NR Recruitment: NR Training: Unclear. One trained in diabetes fieldwork techniques and then as a community diabetes educator over a 12 month period before program began. Other was trained as an aerobics instructor. All training was certified and undertaken at local tertiary institutions.</p> <p>Other Provider(s): Diabetes nurse</p> <p>Other Provider(s) Activities: Diabetes nurse was main presenter at diabetes awareness sessions</p> <p>Community Partners Involved:</p>	<p>p=0.05</p> <p>Change in BMI (SD), kg/m² Baseline Intervention (n=50): 31.2 (5.7) Comparison (n=92): 32.1 (7.5) 24 month follow-up Intervention (n=50): 31.2 (5.3) Comparison (n=92): 33.2 (7.7) Change in mean difference: -1.1 kg/m² p=0.06</p> <p>Change in waist circumference (SD), in Baseline Intervention (n=50): 37.4 (5.12) Comparison (n=92): 35.83 (6.69) 24 month follow-up Intervention (n=50): 36.22 (4.72) Comparison (n=92): 37.01 (6.69) Change in mean difference: -2.36 in p=0.05</p> <p>Glycemic Outcomes: NR</p> <p>CVD Risk Factors: Change in DBP (SD), mmHg Baseline Intervention (n=216): 83.0 (12.7) Comparison (n=264): 82.3 (13.0) 12 month follow-up Intervention (n=261): 77.4 (12.5) Comparison (n=264): 79.7 (12.6) Change in mean difference: -3.1 mmHg p=0.013</p> <p>Additional Outcomes**: PA</p>

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors

** Health behavior outcomes provided in Appendix (below)

Study Details	Population Characteristics	Intervention + Comparison Description	Health Outcomes* and Summary
		<p>2 Seventh Day Adventist churches, South Auckland Diabetes Project</p> <p>Comparison Group: Second SDA church run by the same pastor as first church</p>	<p>Summary: A CHW delivered 2-year pilot church-base diabetes risk reduction program on major lifestyle predictors of future type 2 diabetes demonstrated significant improvements waist circumference, increase in diabetes knowledge, and increase in the proportion exercising regularly.</p>
<p>Author(s): Wilson et al. 2015</p> <p>Location: Union Pacific Railroad Mechanical Group</p> <p>Setting(s): Six worksites of a large transportation company</p> <p>Scale: Eligible employees: Intervention:1518, Control: 1301; baseline intervention: 459, baseline control: 457; for analysis 362 workers (intervention 227, control 135)</p> <p>Design: Group RCT</p> <p>Intervention Duration: 6 months</p> <p>Quality of Execution: Fair</p> <p>Limitation(s): 3 <i>Sampling (1)</i> Participation rate below 50% Potential bias in worksite-wide recruitment</p>	<p>Inclusion: All employees of Union Pacific Railroad Mechanical Group sites eligible; special attention was made to encourage employees with BMI over 27 to participate which consisted approximately 70% of employee population.</p> <p>Exclusion: NR</p> <p>Recruitment: All employees at sites eligible to participate, although DPP originally targeted to prediabetic individuals. Encouraged employees with BMI>27 to participate. From the six worksites; site size ranged from 232 to 933 employees</p> <p>Reported Baseline Demographics [Intervention Participants n=459]: Mean age : 44 Sex: Female 5.4% Race/ethnicity: White 71.60%</p>	<p>CHW Activities: CHW = health coach Health coaches in Fuel Your Life (FYL) followed lay health worker model; were coworkers (or colleagues) who were respected and trusted, and participants themselves; responsible for providing basic information, answering simple questions, providing encouragement and support, and referring participants to the site coordinator or research team</p> <p>CHW Core Roles Met: Providing culturally appropriate information and health education</p> <p>CHW Models of Care Met: Screening and health education provider</p> <p>CHW Characteristics: CHW matched to population by: NR Payment: Incentive for encouraging participation in the study Educational background: NR Years of experience: NR Supervisor: Nurse (site coordinator) CHW performance evaluation: NR</p>	<p>Sample Size: 6 worksites paired and randomly assigned (n=2819 employees). 459 in intervention group completed baseline measures, 227 completed measures at least twice and was analyzed. 457 in control group completed baseline measures, 135 completed measures at least twice and was analyzed. Completion rate (intervention group): 49.5% Completion rate (intervention + control): 39.5%</p> <p>Weight-Related Outcomes: Change in BMI, kg/m² Baseline Intervention (n= 227): 31.9 (5.4) Comparison (n=135) 29.9 (5.6) 12 month follow-up Intervention (n= 227): 31.8 (5.8) Comparison (n=135):30.2 (5.5) Abs change in mean difference: -0.4 kg/m² p=NS</p> <p>Change in body weight (SD), lbs</p>

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors

** Health behavior outcomes provided in Appendix (below)

Study Details	Population Characteristics	Intervention + Comparison Description	Health Outcomes* and Summary
<p><i>Interpretation of Results (1)</i> Didn't report/collect data on participants' existing conditions (diabetes, heart disease etc). Also didn't exclude-potential bias</p> <p><i>Other (1)</i> Table 2 stratifies within control and intervention group among specific outcomes and not others? Outcomes comparable?</p> <p>Funding: Centers Disease Control and Prevention (CDC) grant: Improving Public Health Practice Through Translation Research</p> <p>Applicability: Males in Worksite-based intervention</p>	<p>Black/African-American:17.50% Hispanic/Latino:12.20 % Other:1.5% Education: Some HS: 1.0% HS graduate or GED: 7.5% Some college or technical/vocational training: 55.0% Associate degree: 20.5% Bachelor degree and above: 7.0% Low income: \$0-\$20,000: 1.0% \$20,001-\$40,000: 5.2% \$40,001-\$60,000: 40.7% \$60,001-\$100,000: 38.7% \$100,001: 14.4% Medicaid/Medicare: NR No health insurance: NR Unemployed: 0%</p> <p>Reported Risk Factors [Intervention Participants n=459]: Obese: 59.4% Overweight: 32.9% High blood pressure: NR Diabetes: NR Heart disease: NR</p>	<p>Recruitment: NR Training: Health coaches participated in a 1-hour training session and received a coaching manual</p> <p>Other Provider(s): Occupational nurse + master's-level dietitian or health educator</p> <p>Other Provider(s) Activities: Occupational nurse: site coordinator at each site responsible for facilitating data collection, providing assistance in program implementation (hanging posters biweekly, leading sessions during safety meetings, serving as a resource to the health coaches, and supporting participants), conducting the maintenance phase Site coordinators conducted six group sessions (10 minutes each) and made weekly announcements in safety meetings through the first 6 months of the program. Master's-level dietitian or health educator: discussed participant's weight loss and physical activity goals (7% body weight loss and 150 minutes of physical activity a week) and daily dietary fat intake goal. Instructed participants to measure daily fat intake</p> <p>Community Partners Involved: University of Georgia</p> <p>Comparison Group: The control sites had no planned intervention but may have had health and safety activities ongoing as part of their normal operations.</p>	<p>Baseline Intervention (n= 227): 220.1 (44.9) Comparison (n=135) 201.4 (45.0)</p> <p>12 month follow-up Intervention (n= 227): 218.5 (46.4) Comparison (n=135):204.5 (46.0)</p> <p>Abs change in mean difference: -4.7 lbs p=NS</p> <p>Glycemic Outcomes: NR</p> <p>CVD Risk Factors: NR</p> <p>Additional Outcomes**: PA + Nutrition</p> <p>Summary: CHW-delivered lifestyle program among worksite employees of large transportation company showed that intervention group maintained weight whereas control participants gained weight, resulting in statistically significant difference between groups. FYL was not effective for promoting weight loss, but effective for helping workers maintain weight over 12-month period.</p> <p>FYL translation of the DPP, a low intensity approach, was not effective for weight loss but was effective for weight maintenance across a worksite population</p>

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors

** Health behavior outcomes provided in Appendix (below)

APPENDIX - Health Behavior Outcomes

Results from Physical Activity Outcomes in Included Studies

Author (s) (Suitability of Design)	Outcome Name	Baseline	Last Follow-Up	Change in Physical Activity Outcome (Diff. in diff of means OR absolute pct pt change)
Duggan et al. 2014 (Greatest)	Change in weekly frequency of any leisure-time PA, times/wk	Intervention (n=159): 5.2 times/wk Comparison (n=143): 5.0 times/wk	3 mos Intervention (n=159): 6.7 times/wk Comparison (n=143): 6.1 times/wk	+0.4 times/wk (p=0.29) Favorable direction
Faridi et al. 2010 (Greatest)	7-Day PAR (duration, intensity and energy expenditure) Change in physical activity self-efficacy score, score unit	NR	12 mos Intervention (n=83): 0.2 score unit Control (n=78): 0.4 score unit	-0.2 score unit (p=0.84) Unfavorable direction
Faridi et al. 2010 (Greatest)	7-Day PAR Change in energy expenditure, kcal/kg/wk	NR	12 mos Intervention(n=83) :14.8 kcal/kg/wk Control (n=78): 131.3 kcal/kg/wk	-116.6 kcal/kg/wk (p=0.004) Unfavorable direction
Faridi et al. 2010 (Greatest)	7-Day PAR increased physical activity level in past 3 months, %	NR	12 mos Intervention (n=83): 20% Control (n=78): 25%	-5 pct pts (p=NR) Unfavorable direction
Islam et al. 2013 (Greatest)	Proportion with sustained physical activity for ≥10 min, %	Intervention (n=21): 73.2% Comparison (n=14): 84.6%	6 mos Intervention (n=21): 73.2% Comparison (n=14): 71.4%	+13.2 pct pts (p=NR) Favorable direction
Islam et al. 2014 (Greatest)	Proportion participating in any physical activity, %	Intervention (n=53): 3.8% Comparison (n=38): 39.5%	6 mos Intervention (n=53): 88.7% Comparison (n=38): 50.0%	+74.4 pct pts (p=NA) Favorable direction
Ockene et al. 2012 (Greatest)	Leisure-time physical activity, min/wk	Intervention (n=162): 247.5 min/wk Comparison (n=150): 251.1 min/wk	12 mos NR	+3.3 min/wk (p=0.82) Favorable direction
Parikh et al. 2010 (Greatest)	Change in leisure time physical activity, h/wk	Intervention (n=50): 4 h/wk Comparison (n=49): 3.9 h/wk	12 mos Intervention (n=35): NR Comparison (n=37): NR	-0.4 h/wk (p=0.72) Unfavorable direction
Simmons et al. 1997 (Greatest)	Change in number of days per week exercised, d/wk	Intervention (n=50): 2 d/wk Comparison (n=92): 2.5 d/wk	24 mos Intervention (n=50): 2.5 d/wk Comparison (n=92): 2 d/wk	+1 d/wk (p<0.05) Favorable direction
Simmons et al. 1997 (Greatest)	Proportion exercising 3+ days per week, %	Intervention (n=50): 33% Comparison (n=92): 48%	24 mos Intervention (n=50): 48% Comparison (n=92): 40%	+30 pct pts (p<0.05) Favorable direction

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors

** Health behavior outcomes provided in Appendix (below)

Diabetes: Community Health Workers – Evidence Table, Studies with Greatest Suitability of Study Design

Author (s) (Suitability of Design)	Outcome Name	Baseline	Last Follow-Up	Change in Physical Activity Outcome (Diff. in diff of means OR absolute pct pt change)
Wilson et al. 2015 (Greatest)	Change in physical activity-metabolic equivalent of task, min/wk	Intervention (n=459): 4,072 min/wk Comparison (n=459): 4,447 min/wk	12 mos Intervention (n=227): 4,166 min/wk Comparison (n=135): 4,750 min/wk	-209 min/wk (p=NR) Favorable direction
Wilson et al. 2015 (Greatest)	Change in physical activity-sitting, min/wk	Intervention (n=459): 338 min/wk Comparison (n=459): 281 min/wk	12 mos Intervention (n=227): 237 min/wk Comparison (n=135): 254 min/wk	-74 min/wk (p=NR) Favorable direction

Results from Nutrition Outcomes in Included Studies

Author (s) (Suitability of Design)	Outcome Name	Baseline	Last Follow-Up	Change in Nutrition Outcome (Diff. in diff of means OR absolute pct pt change)
Duggan et al. 2014 (Greatest)	Change in consumption of fruits and vegetables, soft drinks	NR	3 mos NR	Observed no significant change in fruit and vegetable consumption, or in soft drink consumption Null
Faridi et al. 2010 (Greatest)	Food Frequency Questionnaire (John Hopkins Weight Management Center) nutrition self-efficacy, score unit	NR	12 mos Intervention (n=83): 0.3 (4.7) score unit Control (n=78): 0.6 (2.8) score unit	-0.3 score unit (p=0.5858) Unfavorable direction
Islam et al. 2013 (Greatest)	Proportion that drank soda or sweet drinks less than once a week, %	Intervention (n=21): 55.0% Comparison (n=14): 42.9%	6 mos Intervention (n=21): 71.4% Comparison (n=14): 50.0%	+9.3 pct pts (p=NR) Unfavorable direction
Islam et al. 2013 (Greatest)	Proportion that often/almost always ate fruits, instead of drinks or snacks that contain high amounts of sugar, %	Intervention (n=21): 52.4% Comparison (n=14): 57.2%	6 mos Intervention (n=21): 70.0% Comparison (n=14): 28.5%	+46.3 pct pts (p=NR) Favorable direction
Islam et al. 2013 (Greatest)	Proportion that often/almost always ate brown rice in past week	Intervention (n=21): 52.4% Comparison (n=14): 78.6%	6 mos Intervention (n=21): 90.0% Comparison (n=14): 71.4%	+44.8 pct pts (p=NR) Favorable direction
Islam et al. 2014 (Greatest)	Proportion of participants often/almost always eating brown rice	Intervention (n=40): 5% Comparison (n=26): 0%	6 mos Intervention (n=40): 25% Comparison (n=26): 0%	+20.0 pct pts (p=NA) Favorable direction

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors

** Health behavior outcomes provided in Appendix (below)

Diabetes: Community Health Workers – Evidence Table, Studies with Greatest Suitability of Study Design

Author (s) (Suitability of Design)	Outcome Name	Baseline	Last Follow-Up	Change in Nutrition Outcome (Diff. in diff of means OR absolute pct pt change)
Islam et al. 2014 (Greatest)	Change in average portion control size, score unit	Intervention (n=49): 1.8 Comparison (n=46): 2.9	6 mos Intervention (n=49): 3.6 Comparison (n=46): 2.7	+2.0 pct pts (p<0.01) Unfavorable direction
Kieffer et al. 2014 (Greatest)	Calories, kcal	Intervention (n=139): 2194.9 kcal Comparison (n=136): 2338.7 kcal	3 mos NR	-7.3 kcal (-16.5, 2.9) (p=0.152) Favorable direction
Kieffer et al. 2014 (Greatest)	Fruit, servings/d	Intervention (n=139): 4.2 servings/d Comparison (n=136): 4.6 servings/d	3 mos NR	+3.3 servings/d (-11.5, 20.5) (p=0.681) Favorable direction
Kieffer et al. 2014 (Greatest)	Vegetable, servings/d	Intervention (n=139): 2.3 servings/d Comparison (n=136): 2.6 servings/d	3 mos NR	+41.9 servings/d (19.2, 68.8) (p<0.001) Favorable direction
Ockene et al. 2012 (Greatest)	Change in energy intake, kcal/d	Intervention (n=162): 1546.8 kcal/d Comparison (n=150): 1531.6 kcal/d	12 mos NR	-30.1 kcal/d (p=0.57) Favorable direction
Ockene et al. 2012 (Greatest)	Change in energy from fat, %	Intervention (n=162): 26.5% Comparison (n=150): 25.8%	12 mos NR	-1.8 pct pts (p=0.04) Favorable direction
Ockene et al. 2012 (Greatest)	Change in energy from saturated fat, %	Intervention (n=162): 8.5% Comparison (n=150): 8.2%	12 mos NR	-0.6 pct pts (p=0.08) Favorable direction
Ockene et al. 2012 (Greatest)	Change in energy from carbohydrate, %	Intervention (n=162): 55.4% Comparison (n=150): 55.9%	12 mos NR	+1.7 pct pts (p=0.08) Unfavorable direction
Ockene et al. 2012 (Greatest)	Change in energy from protein, %	Intervention (n=162): 17.6 % Comparison (n=150): 17.5 %	12 mos NR	+0.02 pct pts (p=0.97) Unfavorable direction
Ockene et al. 2012 (Greatest)	Change in total fiber intake, grams/d	Intervention (n=162): 15.7 grams/d Comparison (n=150): 15.7 grams /d	12 mos NR	+2.0 grams/d (p=0.07) Favorable direction
Parikh et al. 2010 (Greatest)	Change of fat intake, servings/d	Intervention (n=50): 2.5 servings/d Comparison (n=49): 2.4 servings/d	12 mos Intervention (n=35): NR Comparison (n=37): NR	-0.1 servings/d (p=0.32) Unfavorable direction
Parikh et al. 2010 (Greatest)	Change of juice intake, servings/d	Intervention (n=50): 1.0 servings/d Comparison (n=49): 0.5 servings/d	12 mos Intervention (n=35): NR Comparison (n=37): NR	+1.0 servings/d (p=0.05) Favorable direction

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors

** Health behavior outcomes provided in Appendix (below)

Diabetes: Community Health Workers – Evidence Table, Studies with Greatest Suitability of Study Design

Author (s) (Suitability of Design)	Outcome Name	Baseline	Last Follow-Up	Change in Nutrition Outcome (Diff. in diff of means OR absolute pct pt change)
Parikh et al. 2010 (Greatest)	Change of fruit intake, servings/d	Intervention (n=50): 0.8 servings/d Comparison (n=49): 0.9 servings/d	12 mos Intervention (n=35): NR Comparison (n=37): NR	+0.1servings/d (p=0.43) Favorable direction
Parikh et al. 2010 (Greatest)	Change of lettuce salad intake, servings/d	Intervention (n=50): 0.4 servings/d Comparison (n=49): 0.4 servings/d	12 mos Intervention (n=35): NR Comparison (n=37): NR	-0.4 servings/d (p=0.24) Unfavorable direction
Parikh et al. 2010 (Greatest)	Change of soda intake, servings/d	Intervention (n=50): 0.8 servings/d Comparison (n=49): 0.3 servings/d	12 mos Intervention (n=35): NR Comparison (n=37): NR	-0.06 servings/d (p=0.07) Unfavorable direction
Parikh et al. 2010 (Greatest)	Change of diet soda intake, servings/d	Intervention (n=50): 0.2 servings/d Comparison (n=49): 0.04 servings/d	12 mos Intervention (n=35): NR Comparison (n=37): NR	-0.02 servings/d (p=0.84) Unfavorable direction
Simmons et al. 1997 (Greatest)	7 item fat score, %	Intervention (n=50):77% Comparison (n=92): 72%	24 mos Intervention (n=50): 64% Comparison (n=92): 76%	-17 pct pts (p<0.01) Favorable direction
Simmons et al. 1997 (Greatest)	High fat preparation-Milk, %	Intervention (n=50):73% Comparison (n=92): 71%	24 mos Intervention (n=50): 68% Comparison (n=92): 74%	-11 pct pts (p<0.05) Favorable direction
Simmons et al. 1997 (Greatest)	High fat preparation-Eggs, %	Intervention (n=50):70% Comparison (n=92): 67%	24 mos Intervention (n=50): 68% Comparison (n=92): 74%	-26 pct pts (p<0.01) Favorable direction
Simmons et al. 1997 (Greatest)	High fat preparation-Chops, %	Intervention (n=50):64% Comparison (n=92): 70%	24 mos Intervention (n=50): 63% Comparison (n=92): 84%	-15 pct pts (p<0.01) Favorable direction
Simmons et al. 1997 (Greatest)	High fat preparation-Chicken, %	Intervention (n=50):81% Comparison (n=92): 74%	24 mos Intervention (n=50): 60% Comparison (n=92): 85%	-32 pct pts (p=0.001) Favorable direction
Simmons et al. 1997 (Greatest)	High fat preparation-Spread, %	Intervention (n=50):98% Comparison (n=92): 99%	24 mos Intervention (n=50): 100% Comparison (n=92): 95%	-2 pct pts (p=NS) Unfavorable direction
Simmons et al. 1997 (Greatest)	Do not cut fat off meat, %	Intervention (n=50):53% Comparison (n=92): 45%	24 mos Intervention (n=50): 6% Comparison (n=92): 38%	-40 pct pts (p<0.001) Favorable direction
Simmons et al. 1997 (Greatest)	Do not cut skin of chicken, %	Intervention (n=50):85% Comparison (n=92):77%	24 mos Intervention (n=50): 76% Comparison (n=92): 73%	-5 pct pts (p=NS) Favorable direction

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors

** Health behavior outcomes provided in Appendix (below)

Diabetes: Community Health Workers – Evidence Table, Studies with Greatest Suitability of Study Design

Author (s) (Suitability of Design)	Outcome Name	Baseline	Last Follow-Up	Change in Nutrition Outcome (Diff. in diff of means OR absolute pct pt change)
Wilson et al. 2015 (Greatest)	Change in diet-calories from fat, %	Intervention (n=459): 32.9% Comparison (n=459): 32.8%	12 mos Intervention (n=227): 32.8% Comparison (n=135): 31.7%	+1 pct pts (p=NR) Unfavorable direction
Wilson et al. 2015 (Greatest)	Change in diet-fruit, servings/d	Intervention (n=459): 0.7 servings/d Comparison (n=459): 0.9 servings/d	12 mos Intervention (n=227): 0.8 servings/d Comparison (n=135): 0.9 servings/d	-0.04 servings/d (p=NR) Unfavorable direction
Wilson et al. 2015 (Greatest)	Change in diet-vegetable, servings/d	Intervention (n=459): 0.7 servings/d Comparison (n=459): 0.8 servings/d	12 mos Intervention (n=227): 0.7 servings/d Comparison (n=135): 0.9 servings/d	-0.08 servings/d (p=NR) Unfavorable direction

Results from Additional Outcomes in Included Studies

Author (s) (Suitability of Design)	Outcome Name	Baseline	End of Intervention	Change in nutrition outcome (Diff. in diff of means OR absolute pct pt change)
Islam et al. 2013 (Greatest)	Change in diabetes knowledge, score unit	Intervention (n=21): 9.2 score unit Comparison (n=14): 9.9 score unit	6 mos Intervention (n=21): 10.9 score unit Comparison (n=14): 9.6 score unit	+2.0 score unit (p=0.03) Favorable direction
Islam et al. 2013 (Greatest)	Measurement of mental health improvement (GAD-2), score unit	Intervention (n=21): 1.3 score unit Comparison (n=14): 0.6 score unit	6 mos Intervention (n=21): 0.8 score unit Comparison (n=14): 0.9 score unit	-0.8 score unit (p=0.15) Favorable direction
Islam et al. 2013 (Greatest)	Measurement of mental health improvement (PHQ-2), score unit	Intervention (n=21): 1.2 score unit Comparison (n=14): 0.9 score unit	6 mos Intervention (n=21): 1.1 score unit Comparison (n=14): 1.2 score unit	-0.4 score unit (p=0.43) Favorable direction
Islam et al. 2014 (Greatest)	Change in avg score in ADA diabetes knowledge scale, score unit	Intervention (n=51): 3.6 score unit Comparison (n=44): 3.5 score unit	6 mos Intervention (n=51): 6.5 score unit Comparison (n=44): 4.9 score unit	+1.5 score unit (p<0.01) Favorable direction
Islam et al. 2014 (Greatest)	Change in avg score in Michigan diabetes knowledge scale, score unit	Intervention (n=50): 1.1 score unit Comparison (n=45): 2.1 score unit	6 mos Intervention (n=50): 3.2 score unit Comparison (n=45): 3.1 score unit	+1.1 score unit (p<0.01) Favorable direction
Katula et al. 2013 (Greatest)	Change in weight loss, %	Intervention (n=151): 0% Control (n=150): 0%	24 mos Intervention (n=151): -5.4% Control (n=150): -0.8%	-4.6 pct pts (p<0.001) Favorable direction

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors

** Health behavior outcomes provided in Appendix (below)

Diabetes: Community Health Workers – Evidence Table, Studies with Greatest Suitability of Study Design

Author (s) (Suitability of Design)	Outcome Name	Baseline	End of Intervention	Change in nutrition outcome (Diff. in diff of means OR absolute pct pt change)
Katula et al. 2013 (Greatest)	Proportion of those whose weight at 12 and 24 mo were \geq 5% below baseline weight, %	Intervention (n=151): 0% Control (n=150): 0%	24 mos Intervention (n=151): 46.5% Control (n=150): 15.0%	+31.5 pct pts (p<0.001) Favorable direction
Katula et al. 2013 (Greatest)	Proportion of those whose weight at 12 and 24 mo were \geq 10% below baseline weight, %	Intervention (n=151): 0% Control (n=150): 0%	24 mos Intervention (n=151): 21.3% Control (n=150): 5.3%	+16.0 pct pts (p<0.001) Favorable direction
Ockene et al. 2012 (Greatest)	Mental Health depression CES-D score, score unit	Intervention (n=162): 16.4 score unit Comparison (n=150): 15.2 score unit	12 mos NR	0 score unit (p=0.98) Null
Wilson et al. 2015 (Greatest)	Mean change in support for healthy eating, score unit	Intervention (n=459): 2.8 score unit Comparison (n=459): 2.9 score unit	12 mos Intervention (n=227): 3.0 score unit Comparison (n=135): 3.2 score unit	-0.2 score unit (p=NR) Unfavorable direction
Wilson et al. 2015 (Greatest)	Mean change in support for exercise, score unit	Intervention (n=459): 2.8 score unit Comparison (n=459): 2.9 score unit	12 mos Intervention (n=227): 3.1 score unit Comparison (n=135): 3.0 score unit	+0.09 score unit (p=NR) Favorable direction
Wilson et al. 2015 (Greatest)	Mean change in support for weight management, score unit	Intervention (n=459): 2.7 score unit Comparison (n=459): 2.6 score unit	12 mos Intervention (n=227): 2.9 score unit Comparison (n=135): 2.8 score unit	+0.02 score unit (p=NR) Favorable direction

* Health outcomes include: weight-related outcomes, glycemic outcomes, and CVD risk factors

** Health behavior outcomes provided in Appendix (below)