

Table 1. Intervention characteristics of studies to manage diabetes among migrants and ethnic minorities living in industrialized countries

Author, (Year), Country	Study design	Duration	Study population	Country of study conducted	Study Population, age and sex	Intervention group	Control Group
Lorig et al 2008, USA	RCT	18 months	Spanish-speaking adults with type 2 diabetes	USA	Total: 567; Mean age: Int. 52.9 (13.2); Cont: 52.8 (13.4). Female 57.1% and 67.2%	6-week community-based, peer-led SDSMP, followed by 15 months monthly automated telephone messages The SDSMP was a 6-week program offered 2.5 h weekly by two peer leaders. Programs were held in community settings and group sizes ranged from 10 to 15 including participants' family member and friends Participants were given their choice of listening or not listening to 90 minutes vignettes about various aspects of diabetes, and each of 15 vignettes was offered twice over 15 months	Usual care
Thom et al., 2013, USA	RCT	6 months	Low income English and Spanish speaking adults with Diabetes	USA	Coaching arm (n=145) vs. usual care (n=151) arm: Age: 56.3 (10.3) vs 54.1 (10.4); Female: 51.4% vs 53.0%	Potential peer coaches attended 36 hours of training over 8 weeks in either English or Spanish Coaches helped patients design action plans to achieve goals chosen by the patient. Coaching sessions were telephone contacted at least twice a month and 2 or more in-person contacts over 6 months	Usual care
Safford et al., 2013, USA	RCT	12 months	African American adults with T2DM of under-resourced areas in US	USA	Baseline: 360 Mean age: Int 59.2, Cont. 61.9 years. Female: 75.3%, African American: 87.4%	Intervention participants were paired with peer coaches; received telephone interactions weekly for the first 8 weeks, then monthly for a total of 10 months	Received a 1-hour diabetes ed. class and a personalized diabetes report card at baseline
Lujan et al., 2007, USA	RCT	6 months	Mexican American adults with diabetes	USA	Total 149 (Int 75, Con 74); Mean age: 58 years; Female: 81%	Promotoras were bilingual clinic employees who had received 60 hours of training on diabetes self-management. A team of 2 promotoras delivered 8 weekly 2-hour, participative group classes and telephone follow-up	Received usual one-on-one patient education by the clinic staff
Long et al., 2012, USA	RCT	3 weeks	African American Veterans with uncontrolled diabetes	USA	Int vs. Con. Total: Int. 38, Cont. 39. Age: 60 vs 60, Females: 0.0% vs 8.0%.	Those matched with the peer mentor received support from peers in terms of goal setting, dealing with diabetes, getting support and managing with diabetes and its' associated conditions. Telephone calls were also encouraged between peer mentor and mentee in order to discuss managing with diabetes.	Usual care

Culica et al., 2008, USA	Quasi-experimental design	12 months	Patients of all ethnic backgrounds were included	USA	Full participants in CoDE: 36; Partial participants in CoDE: 19 Total: Female (64%); Age range: 18-45 yrs 40%; >45 yrs 60%	Full participants were those who attended all seven visits specified in the protocols for the CoDE program Three 60-minute individual education visits, followed by 60-minute quarterly assessment and case management visits Bilingual CHWs were responsible for delivery of the entire intervention	Partial participants were patients who attended visits 1 through 3 and visit 7 and missed any of quarterly follow up visit 4 thru 6.
Kangovi et al., 2017, USA	RCT	6 months	African American and Hispanic	USA	Total 302; Age: 56.3 years; Sex: Female >75%;	Goal setting plus: The goal-setting group received CHW led discussion took about 3–5 minutes to perform during scheduled primary care appointments, with no extra dedicated time.	Goal setting alone: Patients randomized to collaborative goal-setting alone received usual care
Frosch et al., 2011, USA	RCT	6 months	Poorly managed African American and Latino T2DM patients	USA	Total 201. Age: 56.7 (8.3) vs 54.3 (8.9); Males: 46 vs 57;	Received intervention package consisting of a 24-minute video behaviour support intervention with a workbook and 5 sessions of telephone coaching by a trained diabetes nurse or a 20-page brochure developed by the National Diabetes Education Program	Usual care
Lima et al., 2017, Spain	Clustered RCT	12 months	Patients with type 2 diabetes with low educational level Caucasian and Romany/ others	Spain	Total: 184; Int: 90; Con: 94 Female: 55.43%; Mean age: 61.04 vs. 62.27	GPs consistently using a diabetes self-management record sheet (DSMRS) as part of the consultation patients were offered a take home copy of the DSMRS and encouraged to discuss it with their relatives	GPs allocated to the control group provided standard care
Tsimikas et al., 2011, USA	Clustered RCT	10 months	Low-income 207 Mexican Americans with type 2 diabetes	USA	Mean age: Int vs. Con: 52.2 vs. 49.2; Female: 66.3% vs 74.8;	Participants (n = 104) attended eight weekly, 2-h DSM classes and subsequent monthly support groups, led by a trained peer educator	Control participants (n = 103) continued their usual medical care at the clinics
Keyserling et al., 2002, USA	RCT	12 months	African American women with diagnosed T2DM in: clinics only; clinics or community or minimal intervention	USA	Mean age: 58.5, 59.8, 59.2 years respectively; Gender: all females. 175 (88%) at 6 months and 167 (84%) participants completed PA assessment	Groups A and B received the clinic-based component, which included individual counselling visits at months 1, 2, 3, and 4. In addition, group A also received the community-based component, which consisted of two group sessions and monthly telephone calls from a peer counsellor. Group A participants continued to receive monthly phone calls from a peer counsellor	Minimal intervention participants received educational materials for diabetes self-management.

Brown et al., 2002, USA	RCT	9 months	Mexican Americans with type 2 diabetes	USA	Total: 252 (Female 50%); Mean age: Int. 54.7; Con. 53.3	Instructional sessions on nutrition, self-monitoring of blood glucose, exercise, and other self-care topics and support group sessions to promote behaviour changes	Usual care
Brown et al., 2005, USA	RCT	12 months	Mexican Americans with type 2 diabetes	USA	Total: 216; (Female: 130, Male: 86); Mean age: Compressed: 49.6 Extended: 49.6	Compressed: eight weekly 2-h educational sessions followed by support sessions held at 3, 6, and 12 months	Extended: series of 12 weekly 2-h sessions of DM self-management, followed by 14 2-h support group sessions
O'Hare et al., 2004, UK	Cluster RCT	12 months	South Asians residing in Coventry and Birmingham UK	UK	Total 182 (Female: 85; Male 97) vs. 179 (Female 91, Male 88)	The diabetes nurse and trained bilingual link worker provided educational sessions and support to patients with DM when they visited the health clinic.	Routine care by practice nurse and practices
Bellary et al., 2008, UK	Cluster RCT	24 months	South Asians residing in Coventry and Birmingham UK	UK	Total: 868 (Female: 396; Male 472); vs. 617 (Female: 313; Male: 304)	The diabetes nurse and trained bilingual link worker provided educational sessions and support to patients with DM at 9 practices.	Routine care by practice nurse and practices at 12 practices
Middelkoop et al., 2001, Netherlands	RCT	6 months	South Asians from Surinam with type 2 diabetes	Netherlands	Total: 113 (Int. 53, Waitlist 60); Female: 56; Male: 57; Mean age: 51.7 vs. 54.8 years.	Specialist diabetes nurse and a dietitian provided intensive guidance on general diabetes information and healthy cooking for 3 months, followed by continuous support educational support for 3 months.	Usual care to those in the wait-list group.
Islam et al., 2018, USA	RCT	6 months	Bangladeshi migrants with Type 2 diabetes	USA	Total: 279 (Int 145, Control 134; Female: 135, Male: 144; Mean age: 54.2 vs. 55.6 years	Trained community health workers provided five 2-hour monthly group educational sessions and two one-on-one visits lasting ~90 min each. The intervention content was culturally and linguistically adapted for Bangladeshi community members	The Control group received only the first educational group session focused on introduction to diabetes.

RCT: Randomized controlled trial; Int.: Intervention; Cont.: Control; DM: Diabetes mellitus; T2DM: Type 2 diabetes mellitus; PA: Physical activity; CHW: Community health worker