

APPENDIX B. STUDY CHARACTERISTICS TABLE

For full study citations, please refer to the report’s main reference list.

Study Country Veteran?	Condition Setting Duration	Intervention Strategies Used	Theoretical Orientation Therapeutic Model	Comparator	Outcomes Abstracted	Risk of Bias Funding Source
Annesi, 2011 ²² USA No	Obesity Community 6 months	Six 1-hour individual meetings with YMCA “Coach Approach” trained wellness specialist + at-home exercise prescription (3/week for 24 weeks for total of 72 sessions) Goal-setting, self-monitoring, and chronic disease education	Social cognitive theory Self-efficacy (Bandura)	6 individual meetings with standard- trained fitness specialist + 72 at-home exercise sessions Problem-solving, structured, supervised exercise, chronic disease education	Self-efficacy	High YMCA
Appel, 2011 ²³ USA No	Obesity Primary care 96 weeks (everyone had in-person baseline and end-of-treatment measures)	Coaching in-person (group/individual) weekly for first 12 weeks, monthly (group/individual) next 12 weeks, then either in-person or phone for last 72 weeks by trained, supervised health professional + website and email Goal-setting, self-monitoring, problem-solving, chronic disease education, and “learning modules online”	Social cognitive theory Behavioral self-management Motivational interviewing	(1) Coaching support delivered remotely by phone, study-specific website, and email (2) Self-directed weight loss using website (baseline and 96-week follow-up)	Weight change BMI	Unclear NIH: NHLBI
Blackberry, 2013 ²⁴ Australia No	Type 2 diabetes Primary care 18 months	1 in-person baseline assessment, then 8 structured phone sessions on self-management of diabetes with coaching by trained, supervised general practice nurse; written session summaries provided to patient and primary care physician Self-monitoring and “coaching on patient-provider communication”	NR NR	After 1 in-person baseline assessment, usual care was provided including referrals to dietitians and other diabetes specialists	A1c Weight change Self-efficacy	Low Australian National Health and Medical Research Council

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Bostrom, 2016 ²⁵ Sweden No	Systemic lupus erythematosus Rheumatology clinic 12 months	(1) 0-3 months: Individual, in-person 1-hour coaching by physiotherapist at study start, 6 weeks, and 12 weeks; general education, supervised aerobic exercise, loan and use of heart rate monitor, and use of physical activity diary (2) 4-12 months: Some physical activity supervision, heart rate monitor, and diary None	Social cognitive theory Behavior theory model	Usual care at rheumatology clinic, but patients in control group were asked not to change their activity level during the study	Physical activity	Low Swedish Rheumatism Association and Vardal Foundation, Karolinska (Univ) Institute
Brodin, 2008 ²⁶ Sweden No	Rheumatoid arthritis Rheumatology clinics 12 months	Phone support after 1 week, moving to once monthly by physical therapist coach; physical function tests every 3 months to encourage adherence to graded activity goals, feedback given Goal-setting, problem-solving, chronic disease education	Cognitive behavioral therapy NR	Usual care (no description given other than “control group”)	Physical activity	High Government, Swedish Research Council, the Vardal Foundation, the Swedish Rheumatism Association
Browning, 2014 ²⁷ China No	Type 2 diabetes Community Health Center 12 months	Health coaching by nurse via in- person + phone (both 2/month for first 3 months) diminishing over next 9 months; maximum contact was 19 phone and 18 in-person sessions Not reported	Transtheoretical model/ stages of change Motivational interviewing	Usual care provided by family physician where patients were typically referred to diabetes specialists or to Traditional Chinese Medicine practitioners	A1c BMI	Unclear Government and private foundation
Cinar, 2014 ²⁸ Turkey No	Type 2 diabetes Hospital clinics 13 months	In addition to standard health education, 2 in-person individual visits + single 10- to 20-minute phone call within first 3 weeks; 1 in-person + 1 call in next 6 months; 1 in-person + 1 call in last 6 months, for up to 7 total contacts with the behavioral health specialist coach Self-monitoring, chronic disease education	NR NR	Health education consisting of 3 seminars on oral health and diabetes management	A1c	Unclear Government, International Research Fund

Study Country Veteran?	Condition Setting Duration	Intervention Strategies Used	Theoretical Orientation Therapeutic Model	Comparator	Outcomes Abstracted	Risk of Bias Funding Source
Damschroder, 2014 ²⁹ USA Yes	Obesity VA medical centers 12 months	ASPIRE-Group: Coaching via in-person 90-minute group sessions with a specially trained lifestyle coach for 1/week for 3 months, then 2/month for 6 months, then 60-minute sessions 1/month for last 3 months Goal-setting, self-monitoring, problem-solving, chronic disease education	Unclear Problem-solving therapy	(1) ASPIRE-Phone: Coaching via phone for 30 minutes, 1 time/week for 3 months, then 20 minutes for remaining time (2 times/month for 6 months decreasing to 1 time/month for last 3 months) (2) Standard VA MOVE! program	Weight change BMI Physical activity Diet	High VA
Frosch, 2011 ²¹ USA No	Type 2 diabetes Primary care Duration NR	Phone coaching by trained nurse diabetes educator, 5 sessions total: first session for 60 minutes; sessions 2-3 for 30 minutes, sessions 4-5 for 15 minutes Goal-setting, self-monitoring, problem-solving, chronic disease education	NR Motivational interviewing	Education brochure on diabetes management; no other strategies employed	A1c BMI Physical activity Diet Medication adherence	Unclear NIA/NIH, private foundation
Glasgow, 2003 ³⁰ USA No	Type 2 diabetes Primary care 10 month (40 weeks)	Internet-based basic information + either (1) tailored self-management (computer-mediated access to trained professional coach approximately twice weekly or (2) peer support via online forum and newsletters Goal-setting, self-monitoring, chronic disease education	Self-efficacy theory NR	In-home training to use website providing chronic disease education without additional support	A1c Physical activity Diet	High NIH: NIDDK
Hawkes, 2013 ³¹ Australia No	Colorectal cancer Cancer registry 6 months	11 health coaching sessions biweekly for 5 months via phone by nurse, behavioral specialist, or health educator (average duration of call, 31.5 minutes) + handbook + motivational postcards + pedometer Goal-setting, self-monitoring, chronic disease education	NR Acceptance and commitment therapy	Usual care + educational brochures on understanding colorectal cancer, cutting cancer risk, diet, and physical activity + quarterly mailed educational newsletter	BMI Physical activity Diet Smoking	Unclear Australian government (cancer division of health branch)

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Holland, 2005 ³² USA No	Mixed: at least one chronic condition; unspecified Community 12 months	In-person meeting with nurse at baseline and 6 months, minimum 4 health coaching calls in between, 12 monthly newsletters, fitness program Goal-setting, chronic disease education, counseling with MSW, if depressed	NR NR	Usual care; controls were not recontacted by the program until the anniversary date of their initial interview for follow-up	BMI Physical activity	Unclear Private foundation
Karhula, 2015 ³³ Finland No	Mixed population (type 2 diabetes and CVD) Community integrative care 12 months	One coaching phone call from employee trained in Pfizer coaching model every 4-6 weeks (target=12 total); length of call approximately 30 minutes and emphasized problem-solving skills + monitoring of weight, blood glucose, SBP, and/or step count dependent on diagnosis via mobile application Problem-solving, self-monitoring	Wagner's chronic care Pfizer's health coaching model	Usual care; no further details or description of control group given	A1c (diabetes only) Weight (diabetes and CVD separately)	Unclear Government, European Commission, Industry
Kim, 2015 ³⁴ USA No	Type 2 Diabetes Community 13-14 months	Six 2-hour group sessions over 6 weeks, then monthly coaching calls for 1 year from trained nurses or community health workers; calls ranged 15-45 minutes Goal-setting, self-monitoring, problem-solving, chronic disease education	Precede-Proceed Motivational interviewing, problem-solving therapy	Waitlist; no further details given other than control was oversampled to assure adequate retention	A1c Self-efficacy	High NIH: NIDDK
Knittle, 2015 ³⁵ Netherlands No	Rheumatoid arthritis Specialty clinics 18 weeks	2 in-person, individual coaching sessions with rheumatology nurse, 40-60 minutes, at weeks 4 and 5; 3 followup phone calls, 20 minutes, weeks 6, 12, and 18 Goal-setting, self-monitoring, problem-solving, chronic disease education	Health Belief Model, self-regulation theory Motivational interviewing, problem-solving therapy, self-regulation theory	Education via 1 in-person group session with nurse	Physical activity Self-efficacy Functional status	Unclear Private foundation

Study Country Veteran?	Condition Setting Duration	Intervention Strategies Used	Theoretical Orientation Therapeutic Model	Comparator	Outcomes Abstracted	Risk of Bias Funding Source
Lin, 2013 ¹⁶ USA No	Hypertension Primary care 18 months total (5 months group intervention)	Weekly small groups for 20 weeks with trained health educators and dieticians + manual; strategies to manage weight and blood pressure via DASH diet, increase exercise; and coaching strategies; during and after group intervention, a peer educator phoned participants monthly for a total of 18 calls Goal-setting, self-monitoring, problem-solving, chronic disease education	Transtheoretical Model / Stages of Change; Social-Cognitive Theory Motivational interviewing, problem-solving therapy	Usual care was an individual visit with interventionist to receive advice + written materials on lifestyle modification for blood pressure control consistent with JNC-7 guidelines	SBP Diet	Low NIH
Luley, 2014 ³⁶ Germany No	Metabolic syndrome Community setting 12 months	1 basic education session + monthly health coaching call from trained physician or nurse, each approximately 20 minutes + accelerometer (data transmitted to coach as basis for phone calls) None reported	NR NR	After 1 basic education session that included an explanation of importance of physical activity and diet, patients were randomized, then control group left	BMI	High German Federal Ministry of Education and Research
Ma, 2013 ³⁷ (Companion study, Azar, 2013 ³⁸) USA No	Obesity Primary care 15 months (60 weeks)	Lifestyle Balance of 2 weekly, in-person group sessions (90-120 minutes) using goal-setting, with food tastings and 30-45 minutes of guided exercise led by coach-dietician followed by 12-month maintenance phase; personalized email from coach monthly Goal-setting, self-monitoring, problem-solving, chronic disease education, structured exercise, relapse prevention	NR NR	(1) Self-led via DVD and email correspondence with coach/RD that used goal-setting, self-monitoring, and chronic disease education (2) Usual care; no further details given	Weight BMI	Low NIH: NIDDK, private foundation

Study Country Veteran?	Condition Setting Duration	Intervention Strategies Used	Theoretical Orientation Therapeutic Model	Comparator	Outcomes Abstracted	Risk of Bias Funding Source
McMurray, 2002 ³⁹ USA No	End stage renal disease + diabetes Dialysis unit 1 year (52 weeks)	Minimum of monthly (for peritoneal patients) in-person, individual sessions with diabetes care manager for motivational coaching; weekly contact as needed by phone with manager, social worker, registered dietician, or registered nurse to cover self-management and diabetes care; maximum of 3 times/week (for hemodialysis patients) Problem-solving	NR NR	Usual care at a standard dialysis unit	A1c	Unclear National Kidney Foundation
Nishita, 2013 ⁴⁰ USA No	Type 2 diabetes Community workplace setting 12 months	Average of ten 1-hour in-person, individual sessions with certified health coach and four 45-minute sessions with pharmacist over intervention year Goal-setting, self-monitoring, problem-solving, chronic disease education	Health belief model, self-determination theory Motivational interviewing, problem- solving therapy	Usual care; no further details given	A1c BMI Self-efficacy	Unclear Centers for Medicare and Medicaid Services
Patja, 2012 ⁴¹ Finland No	Mixed: Type 2 diabetes, CVD, CHF Primary care and hospital 12 months	Monthly phone calls with nurse coach (initial duration averaging 60 minutes, decreasing to 30 minutes over time); call completion averaged 10-11 calls over year; optional followup calls were rarely utilized Goal-setting, self-monitoring, chronic disease education	Self-regulation theory Motivational interviewing	Usual care; article states “control arm” and, with no other details given, usual care is assumed because of recruitment sites used	A1c (diabetes only) SBP (CVD only)	High Government: Finland Innovation Fund, industry
Pearson, 2013 ¹⁹ (Companion study, Pearson 2012 ⁴²) Canada No	Obesity University 12 weeks	Phone coaching sessions with certified health coach 1 time/week for 12 weeks; average length of call was 45 minutes Goal-setting, problem-solving	NR Motivational Interviewing and CBT	Scripted education-based phone lessons using cognitive behavioral therapy principles from LEARN manual 1/week for 12 weeks; average length of call was 30-45 minutes Goal-setting, self-monitoring, problem-solving, social support and chronic disease management	Weight change Diet	High Social Sciences and Humanities Research Council of Canada

Study Country Veteran?	Condition Setting Duration	Intervention Strategies Used	Theoretical Orientation Therapeutic Model	Comparator	Outcomes Abstracted	Risk of Bias Funding Source
Pinto, 2015 ⁴³ USA No	Breast cancer Community, private practices and hospitals 12 weeks	Health coaching by peer educator via phone 1/week for 12 weeks; average call length was 18 minutes + pedometer + heart rate monitor + physical activity tipsheets Goal-setting, self-monitoring, problem-solving, chronic disease education	Transtheoretical model/ stages of change, social cognitive theory NR	Attention control: phone contact with peer educator 1/week for 12 weeks, but topics centered on breast cancer, not physical activity	Physical activity	High NIH
Ruggiero, 2010 ⁴⁴ USA No	Type 2 diabetes Primary care 6 months	2 in-person, individual contacts (<30 minutes) with certified medical assistant trained in diabetes self-care coaching at baseline and 3 months + 4 monthly phone contacts (<15 minutes) in between clinic visits Goal-setting, self-monitoring, problem-solving, chronic disease education	Transtheoretical model NR	Usual care with physician + basic diabetes education handbook developed by health system staff	A1c	Unclear NIA, NIH
Ruggiero, 2014 ²⁰ USA No	Type 2 diabetes Primary care 12 months	Quarterly in-person, individual coaching sessions with specially trained certified medical assistants for 30 minutes at clinic appointments; up to 8 monthly phone calls, 15 minutes, between in-person contacts Goal-setting, self-monitoring, chronic disease education	Transtheoretical model/ stages of change, empowerment theory Motivational interviewing	Enhanced treatment as usual; quarterly physician check-ups; referrals to specialty care (eg, podiatrist, endocrinologist) when necessary; basic education provided by "Diabetes: You're in Control" educational booklet	A1c Diet Physical Activity	High NIH
Sacco, 2009 ⁴⁵ USA No	Type 2 diabetes Primary care 6 months	Coaching call weekly for 3 months (from supervised psychology undergraduate), then every other week for 3 months; average duration of initial call was 54 minutes decreasing to 15-20 minutes Goal-setting, self-monitoring, problem-solving	Social cognitive theory Problem-solving therapy	Control group received treatment as usual from a board-certified endocrinologist	A1c Physical activity Diet Self-efficacy	Unclear Private foundation

Study Country Veteran?	Condition Setting Duration	Intervention Strategies Used	Theoretical Orientation Therapeutic Model	Comparator	Outcomes Abstracted	Risk of Bias Funding Source
Safford, 2015 ⁴⁶ USA No	Type 2 diabetes Primary care 40 weeks	1-hour group diabetes education class + one 5-10 minute individual counseling session to go over baseline “diabetes report cards,” then peer coaches phoned weekly for the first 2 months and at least monthly for the next 8 months Goal-setting, self-monitoring, chronic disease education	Health belief model, social cognitive theory and chronic care model NR	1-hour group diabetes education class + 5-10 minute counseling session on a “diabetes report card” showing baseline labs at enrollment	A1c BMI	High American Academy of Family Physicians
Sandroff, 2014 ⁴⁷ USA No	Multiple sclerosis National registry and databases from previous studies over past 5 years 6 months	Coaching (discipline of coach not reported) via internet and 15, one-on-one video sessions (eg, Skype) for 6 months decreasing in frequency over time (from weekly to monthly) Goal-setting, self-monitoring, problem-solving	Social cognitive theory NR	Waitlist	Physical Activity Functional status	High National Multiple Sclerosis Society
Sherwood, 2010 ⁴⁸ USA No	Obesity Community and university 20 weeks	DIAL: 2 active arms (same intervention for different durations: 10 sessions or 20 sessions) providing weekly telephone calls with coach (discipline not reported) lasting about 10-20 minutes + pedometer + logbook; calls followed a prescribed sequence in study manual adapted to fit into 10 or 20 lessons None reported	NR NR	Self-directed program participants were sent copy of manual, pedometer, and logbook but were not recontacted until time for follow-up measures	Weight change (kg) Physical activity	High Government grant
Thom, 2013 ⁴⁹ (Companion study, Moskowitz, 2103 ⁵⁰) USA No	Type 2 diabetes Primary care 6 months (26 weeks)	12-14 sessions of coaching by a peer educator (individual or phone at discretion of subject) with goals of phone contact at least twice/month and 2 or more in-person contacts over 6 months Goal-setting, self-monitoring	NR NR	Usual care included all services normally available, including a nutritionist and diabetes educator via referral from their primary care physician	A1c BMI	unclear Private foundation

Study Country Veteran?	Condition Setting Duration	Intervention Strategies Used	Theoretical Orientation Therapeutic Model	Comparator	Outcomes Abstracted	Risk of Bias Funding Source
Turner, 2012 ⁵¹ USA No	Hypertension Primary care 6 months (26 weeks)	Phone calls every other month at 1, 3, and 5 months (duration not reported); on alternate months (2 and 4), office-based, in-person, individual counseling sessions (15-30 minutes each) with a peer educator as coach Goal-setting, self-monitoring, problem-solving	Theory of planned behavior Motivational interviewing, problem-solving therapy	Usual care at urban academic general medicine practices	SBP 4-year Framingham Score	Low Private foundation
Vale, 2002 ⁵² Australia No	CAD/CVD NR (most likely cardiology) 6 months (24 weeks)	5 coaching phone calls from dietician, with first call within 2 weeks of randomization; then 3 calls, one every 6 weeks; the fifth call at 24 weeks (to schedule the 6-month assessment); duration of calls varied Self-monitoring, chronic disease education	NR NR	Usual care; no further details given	Total cholesterol	Unclear Industry
Vale, 2003 ⁵³ Australia No	CAD/CVD Specialist clinic: cardiology 6 months	5 coaching phone calls from nurse or dietician, with first call within 2 weeks of randomization; then 3 calls, one every 6 weeks; the fifth call at 24 weeks (to schedule the 6-month assessment); duration of calls varied Self-monitoring, chronic disease education	NR NR	Usual care; no further details given	SBP Weight change BMI Diet Smoking	Low Private foundation, industry
Van der Wulp, 2012 ⁵⁴ Netherlands No	Type 2 diabetes Primary care 3 months	3 in-person, individual health coaching sessions, monthly, with trained peer educator using goal-setting; duration of session not reported Goal-setting	Social cognitive theory Motivational interviewing	Usual care from general practitioner based on the Dutch guidelines for type 2 diabetes	Self-efficacy Physical activity	Unclear Private foundation
Varney, 2014 ⁵⁵ Australia No	Type 2 diabetes Diabetes clinic 6 months	Initial coaching call within 2 weeks of randomization followed by at least monthly phone calls (range 4-9 sessions) from dietician coach; duration average 45 minutes initially, then 20 minutes for follow-up calls Goal-setting, self-monitoring, problem-solving	NR Problem-solving therapy	Control group accessed usual care services, including a diabetes clinic staffed by endocrinologists, diabetes educators, and dietitians; patients typically attend the clinic at least monthly, with general practitioner visits occurring as needed	A1c Weight (kg) BMI Physical activity	High Private foundation

Study Country Veteran?	Condition Setting Duration	Intervention Strategies Used	Theoretical Orientation Therapeutic Model	Comparator	Outcomes Abstracted	Risk of Bias Funding Source
Wadden, 2011 ⁵⁶ USA No	Obesity Primary care 24 months (104 weeks)	(1) Coaching only: primary care visits plus 10-15 minute in-person, individual coaching sessions; 2 during the first month, then monthly for 11 months with a trained medical assistant; in months 13-24, coaching could be done by phone every other month (2) Enhanced coaching: as above + choice of meal replacements or weight loss medication Goal-setting, self-monitoring	NR NR	Usual care consisting of quarterly PCP visits that included education about weight management for 5-7 minutes each visit	BMI Weight loss	Unclear NIH: NHLBI
Wayne, 2015 ⁵⁷ Canada No	Type 2 Diabetes Primary care 6 months (26 weeks)	Weekly health coach sessions + exercise education program with smartphone wellness mobile application; components included support for health goals and goal achievement; self-monitoring; discussion of meals, exercise, blood glucose and mood; duration of session 37 (±22) minutes/week; also health coach co-monitored patient's input to mobile application Goal-setting, self-monitoring, structured exercise	NR NR	Weekly health coach sessions + exercise education program <u>without</u> smartphone application; components included support for health goals and goal achievement; self-monitoring; discussion of meals, exercise, blood glucose, and mood; session duration 39 (±28) minutes/week	A1c BMI Weight (kg)	Unclear Government
Whittemore, 2004 ⁵⁸ USA No	Type 2 Diabetes Outpatient diabetes education center 6 months	6 in-person, individual coaching sessions with a trained nurse: first 3 every 2 weeks; then 2 monthly; last session 3 months after first 5 sessions with phone contacts in between sessions 5 and 6 Goal-setting, self-monitoring, problem-solving, chronic disease education	NR Problem-solving therapy	Standard diabetes care, defined as regular visits with a primary care physician at approximately 3- to 4-month intervals; all women randomized to the control condition were invited to participate in the nurse-coaching intervention at the end of the study	A1c BMI Diet Physical Activity	High NIH: NINR

Study Country Veteran?	Condition Setting Duration	Intervention Strategies Used	Theoretical Orientation Therapeutic Model	Comparator	Outcomes Abstracted	Risk of Bias Funding Source
Willard-Grace, 2015 ⁵⁹ (Companion study, Thom, 2015 ⁶⁰) USA No	Mixed: diabetes, hypertension, elevated lipids Primary care 12 months	5 in-person, individual coaching sessions at baseline, 3, 6, 9, and 12 months with a trained medical assistant as well as monthly follow-ups by phone; total 16 sessions Goal-setting, self-monitoring	NR NR	Patients randomized to usual care had access to any resources available at the clinic, including visits with their clinician, diabetes educators, nutritionists, chronic care nurses, and educational classes	A1c SBP LDL Medication adherence	Unclear Private foundation
Wolever, 2010 ⁶¹ USA No	Type 2 diabetes Community & registry 22 weeks (5-6 months)	8 calls weekly for first 2 months, then 4 calls biweekly for 2 months; final call 1 month later for total of 14, 30-minute sessions with a trained social worker or medical assistant in psychology coach Goal-setting, problem-solving, chronic disease education	NR Motivational interviewing, mindfulness	Usual care; randomized to the control group received no materials or correspondence during the 6-month period	A1c Medication adherence Physical activity	Unclear Industry
Young, 2014 ⁶² USA No	Type 2 Diabetes Primary care and community Timing unclear: 9-18 weeks	1 in-person, individual session with a nurse coach followed by 5 health coaching sessions via phone or video-conferencing, about once every 2 weeks; average duration of sessions was 30 minutes Goal-setting, self-monitoring	NR Motivational interviewing	Usual care consisted of the services and care available at the rural clinic where the participant received healthcare	Self-efficacy	Unclear NIH: NIDDK, NCATS

Abbreviations: ANCOVA=analysis of covariance, ANOVA=analysis of variance, BMI=body mass index, CI=confidence interval, A1c=glycosylated hemoglobin, JNC=Joint National Committee on Prevention, LDL=low-density lipoprotein-cholesterol., MD=mean difference, MI-via-CALC=Motivational Interview via Co-Active Life Coaching, NCATS=National Center for Advancing Translational Sciences, NHLBI=National Heart, Lung, and Blood Institute, NIDDK=National Institute for Diabetes and Digestive and Kidney Diseases, NIH=National Institutes of Health, NINR=National Institute of Nursing Research, NR=not reported, SBP=systolic blood pressure, SE=standard error, SMD=standardized mean difference