Appendix 8 (as supplied by the authors)

Results for studies investigating health behavior outcomes (n = 9)

Study (design)	Disease cluster	Type of intervention (intervention vs. comparator)	Intervention component combination	Specific outcome	Description of results	Effect measure (95% CI; between-group p-value)			
Compliance: Medication behaviour and adherence $(n = 5)$									
Lin 2003 RCT; 6-month follow-up	TEAM AT Care: IMPACT- DP (Improving Mood- Promoting Access to Collaborative Treatment: Depression with Arthritis vs. Usual care Organ 2013 CVD + DM Care: IMPACT- DP (Improving Mood- Promoting Access to Collaborative Treatment: Depression with Arthritis vs. Usual care CM + CP + ED + SM			Antidepressant use	Antidepressant use increased from baseline to follow-up in the intervention group (43% to 66%) compared with control group (47% to 52%)	66% vs. 52%; p < 0.001* Not reported			
Morgan 2013 RCT; 6-month follow-up				Taking antidepressants	Neither group showed statistically significant changes in the number of patients taking antidepressant medications from baseline to follow-up				
Williams 2004 RCT; 12-month follow-up	DEP + DM	Coordination of care: IMPACT-DP (Improving Mood – Promoting Access to Collaborative Treatment: Diabetes and depression) vs. Usual care	CP + DM + ED + TEAM	Antidepressant use	At follow-up, patients in the intervention group were significantly more likely to use antidepressants or psychotherapy than were patients in the usual care group	82% vs. 61%; p<0.001*			
				Mean number of months using antidepressants	At follow-up, patients in the intervention group reported antidepressant use for a mean 6.6 (SD +/-4.9) months of the 12-month study period compared with those in the usual care group: mean 4.6 months (SD +/-5.2)	6.6 (SD 4.9) vs. 4.6 (SD 5.2); p<0.001*			
Bowles 2009 RCT; 2- and 3- month follow-up	One of the distribution and health technology (Telemedicine): Telephone (inperson visits + telephone) vs. TM (inperson visits + TM) vs. Control (inperson visits) Control (inperson visits) Only) There was a significant interaction between nursing visits and medication behave a significant interaction between nursing visits and medication behave a significantly more declined. There was a significant interaction between nursing visits and medication behave a significantly more declined. There was a significant interaction between nursing visits and medication behave a significant interaction between nursing visits and medication behave a significant interaction between nursing visits and medication behave a significant interaction between nursing visits and medication behave a significant interaction between nursing visits and medication behave a significant interaction between nursing visits and medication behave a significant interaction between nursing visits and medication behave a significant interaction between nursing visits and medication behave a significant interaction between nursing visits and medication behave a significant interaction between nursing visits and medication behave a significant interaction between nursing visits and medication behave a significant interaction between nursing visits and medication behave a significant interaction behave a significant interaction between nursing visits and medication behave a significant interaction between nursing visits and medication behave a significant interaction between nursing visits and medication behave a significant interaction behave a significan		There was a significant interaction between nursing visits and medication behavior. Behaviour scores declined significantly more in the telephone and TM group than in the control group, particularly in those who had more in-	p = 0.01*					
Williams A 2012a RCT; 10-month follow-up	DM + CKD	Self- management: Medication Self- Management Intervention vs. Usual care	DM + ED +SM	Adherence to prescribed medications	There was no difference between groups for adherence to prescribed medications using pill counts	Mean adherence rate for Intervention vs. Control: 58.4% vs. 66%; p = 0.162			

Appendix to: Kastner M, Cardoso R, Lai Y, et al. Effectiveness of interventions for managing multiple high-burden chronic diseases in older adults: a systematic review and meta-analysis. *CMAJ* 2018. doi: 10.1503/cmaj.171391

Lin 2003	DEP +	Coordination of	CM + DM +	Mental health	Mental	health	47% vs 16%; p	< 0.001*
RCT; 6-month follow-up	AT	care: IMPACT-DP (Improving Mood- Promoting Access to Collaborative Treatment: Depression with Arthritis vs. Usual care	TEAM	service use or psychotherapy	service use or psychotherapy increased more in the intervention group (8% at baseline to 47% follow-up) than the usual care group (7% at baseline to 16% at follow-up)			
Morgan 2013 RCT; 6-month follow-up	CVD + DM	Coordination of care: TrueBlue Model of Collaborative Care (nurse-led collaborative care) vs. Control	CM + CP + ED + SM	Attends mental health worker	More patients in the intervention group attended a mental health worker at follow-up than control patients		23% vs 10%; p = 0.044*	
Williams 2004 RCT; 12-month follow-up	DEP + DM	Coordination of care: IMPACT-DP (Improving Mood – Promoting Access to Collaborative Treatment: Diabetes and depression) vs. Usual care	CP + DM + ED + TEAM	Mental health specialty visit or psychotherapy	The intervention group reported significantly more mental health specialty visits or psychotherapy during the previous 3 months than usual care		43% vs. 16%; p < 0.001*	
Martin-Lesende I, 2013 RCT; 12-month follow-up	CHF + COPD	Information and health technology (Telemedicine): Home TM vs. Standard care	ED + TM	Telephone contacts between patients and health professionals Home nursing visits	Intervention group patients had more telephone contacts with health professionals than those in control group Intervention group patients had fewer home nursing visits,		Mean 22.6 (SD 16.1) vs. mean 8 (SD (7.2); p = 0.001* Mean 15.3 (SD 11.6) vs. mean 25.4 (SD 26.3); p = 0.3603	
					but groups did not differ			
ealth enhancing lifesty	le or behav			n=4)				
Morgan 2013 RCT; 6-month follow-up	DM + CVD	Coordination of care: TrueBlue Model of Collaborative Care (nurse-led collaborative care) vs. Control			CM + CP + ED + SM	Exercises 30 min/day	A significantly greater number of patients exercised in the intervention group compared with controls	60% vs. 29%; 0.001*
White KM, 2012 RCT; 6-week follow- up	DM + CVD	Extended-Theory	Cognitive-behavioural: Extended-Theory of Planned Behavior Intervention vs. Control			Physical activity (1- week)	For the intervention participants, there was evidence of significant short-term improvement in self-reported physical activity behaviour	Significant tim by-condition effects for intention (p = 0.002)*, perceived behavioural control (p = 0.036)*, and subjective norm (p < 0.001)*

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					Physical activity (6-	and degree of planning to engage in such activities after the conclusion of the intervention sessions; participants in the control condition maintained only moderate levels of planning and activity during this time Intervention participants	Data not provided.
	William Anna	DM.		CD	weeks)	did not report any significant improvement (or maintenance) in their level of planning and self-reported behaviour at the 6-week post-intervention follow-up	
	Williams 2004 RCT; 12-month follow-up	DM + DEP	Coordination of care: IMPACT-DP (Improving Mood – Promoting Access to Collaborative Treatment: Diabetes and depression) vs. Usual care	CP + DM + ED + TEAM	Exercise days	Patient in the intervention group showed a significantly greater increase in exercise days at 12 months:	Between group difference 0.50; CI 0.12 to 0.89; p = 0.01*
	Becker A 2011 Mixed-methods; 6- week follow-up	DM + CVD	Information and health technology: Computer-based Counseling system (CBCS)	ED + SM	Attitude toward physical activity: change in cognitive components (2 scales from 0 to 8 on how participants feel and what they think when they visualize doing regular	There was a significant positive change in the affective attitude component from baseline to follow-up There was a significant positive change in the cognitive affective attitude component	Baseline mean: 6.25 (SD 2.18); follow-up mean: 6.65 (SD 1.81); Z -2.469; p < 0.05* Baseline mean: 7.09 (SD 1.46); follow-up mean: 7.27 (SD 1.40); p < 0.05*
			ossion Inventory: DCS — shysical component score of		physical activity)	from baseline to follow-up.	a of the SE 26: DUO 0

^{**}QOL = quality of life; BDI = Beck Depression Inventory; PCS = physical component score of the SF-36; MCS = mental component score of the SF-36; PHQ-9 = patient health questionnaire; HSCL-20 = Hopkins symptom checklist; PAID = problem areas in diabetes scale; BPI = brief pain inventory; ALF = aggregate locomotor function; BP = blood pressure; DMSES = diabetes self-efficacy scale; SDSCA = summary of diabetes self-care activities; HAM-D = Hamilton depression rating scale; PFSDQ-M = pulmonary functional status and dyspnea questionnaire – modified; BDOC = bed days of care; OARS multidimensional

functional assessment = objective tools that measure cognitive status and functional level and two subjective tools that measure patient satisfaction with care and self-rated health status; EBASD = even briefer assessment scale for depression; CSDD = Cornell Scale for Depression in Dementia; GDS = geriatric depression scale; RAID = rating anxiety in dementia; BEHAVE-AD = ; OSPRSO = Omaha System Problem Rating Scale for Outcomes; SDS = Sheehan Disability Scale; CHF = congestive heart failure; COPD = chronic obstructive pulmonary disease; DEP = depression; DEM = dementia; AT = arthritis; OA = osteoarthritis; CKD = chronic kidney disease; DM = diabetes; CVD = cardiovascular disease †Effect size measured using Cohen's d (0.8 = large effect; 0.5 = medium effect; 0.2 = small effect)