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Supplementary File 2: Appendices

Appendix 1 – Database Search Strategies

Ovid MEDLINE(R) ALL <1946 to Feb 25, 2020>
1   Accidental Falls/
2   (slip* or trip* or stumbl* or tumbl*).tw,kf.
3   (fall* or fell or "fall-related" or "near-fall").tw,kf.
4   or/1-3
5   limit 4 to "all aged (65 and over)"
6   exp Aged/ or geriatrics/
7   (geriatric* or elder* or age* or "of age" or aging or senior* or older adult* or retired or retiree* or elder* or pensioner* or older people or older patient* or gerontology or Sexagenarian* or septuagenarian* or octogenarian or nonagenarian* or centenarian* or sixties or seventies or eighties or nineties).tw,kf.
8   4 and (6 or 7)
9   5 or 8
10   Social Isolation/
11   loneliness/
12   exp social support/
13   (social barrier* or social isolat* or social support* or social car* or psychosocial support* or psycho-social support* or social frailt* or friendship* or "social* connected*" or connectedness or lonely or loneliness or "feel* alone*" or companionship).tw,kf.
14   ((lack or absence or minimi*) adj2 (contact or communication or support*)).tw,kf.
15   or/10-14
16   9 and 15
17   animals/ not humans/
18   16 not 17

PsycINFO <1806 to February Week 4 2020>
1   falls/
2   (slip* or trip* or stumbl* or tumbl*).tw.
3   (fall* or fell or "fall-related" or "near-fall").tw.
4   or/1-3
5   limit 4 to "380   aged <age 65 yrs and older>"
6   (geriatric* or elder* or age* or "of age" or aging or senior* or older adult* or retired or retiree* or elder* or pensioner* or older people or older patient* or gerontology or Sexagenarian* or septuagenarian* or octogenarian or nonagenarian* or centenarian* or sixties or seventies or eighties or nineties).tw.
7   4 and 6
8   5 or 7
9   social isolation/ or loneliness/ or social support/ or friendship/
10   (social barrier* or social isolat* or social support* or social car* or psychosocial support* or psycho-social support* or social frailt* or friendship* or "social* connected*" or connectedness or lonely or loneliness or "feel* alone*" or companionship).tw.
11   ((lack or absence or minimi*) adj2 (contact or communication or support*)).tw.
12   or/9-11
13   8 and 12
14   Limit 13 to human

Embase Classic+Embase <1947 to 2020 February 25>
1   falling/
2   (slip* or trip* or stumbl* or tumbl*).tw.
3   (fall* or fell or "fall-related" or "near-fall").tw.
4   or/1-3
5   limit 4 to aged <65+ years>
6   loneliness/ or social support/ or friendship/
7   exp social isolation/
8   (social barrier* or social isolat* or social support* or social car* or psychosocial support* or psycho-social support* or social frailt* or friendship* or "social* connected*" or connectedness or lonely or loneliness or "feel* alone*" or companionship).tw.
9   ((lack or absence or minimi*) adj2 (contact or communication or support*)).tw.
10   or/6-9
11   5 and 10
12   limit 11 to human

Database: EBM Reviews - Cochrane Database of Systematic Reviews <2005 to February 25, 2020>, EBM Reviews - ACP Journal Club <1991

to February 2020>, EBM Reviews - Cochrane Clinical Answers <February 2020>, EBM Reviews - Database of Abstracts of Reviews of Effects <1st Quarter 2016>

1   (slip* or trip* or stumbl* or tumbl*).mp.
2   (fall* or fell or "fall-related" or "near-fall").mp.
3   1 or 2
4   (geriatric* or elder* or age* or "of age" or aging or senior* or older adult* or retired or retiree* or elder* or pensioner* or older people or older patient* or gerontology or Sexagenarian* or septuagenarian* or octogenarian or nonagenarian* or centenarian* or sixties or seventies or eighties or nineties).mp.
5   3 and 4
6   (social barrier* or social isolat* or social support* or social car* or psychosocial support* or psycho-social support* or social frailt* or friendship* or "social* connected*" or connectedness or lonely or loneliness or "feel* alone*" or companionship).mp.
7   ((lack or absence or minimi*) adj2 (contact or communication or support*)).mp.
8   6 or 7
9   5 and 8

Joanna Briggs Institute EBP Database - <Current to February 25, 2020>

1   (slip* or trip* or stumbl* or tumbl*).mp.
2   (fall* or fell or "fall-related" or "near-fall").mp.
3   1 or 2
4   (geriatric* or elder* or age* or "of age" or aging or senior* or older adult* or retired or retiree* or elder* or pensioner* or older people or older patient* or gerontology or Sexagenarian* or septuagenarian* or octogenarian or nonagenarian* or centenarian* or sixties or seventies or eighties or nineties).mp.
5   3 and 4
6   (social barrier* or social isolation* or social support* or social car* or psychosocial support* or psycho-social support* or social frailt* or friendship* or "social* connected*" or connectedness or lonely or loneliness or "feel* alone*" or companionship).mp.
7   ((lack or absence or minimi*) adj2 (contact or communication or support*)).mp.
8   6 or 7
9   5 and 8

AMED (Allied and Complementary Medicine) <1985 to February 2020>

1   (slip* or trip* or stumbl* or tumbl*).mp.
2   (fall* or fell or "fall-related" or "near-fall").mp.
3   1 or 2
4   (geriatric* or elder* or age* or "of age" or aging or senior* or older adult* or retired or retiree* or elder* or pensioner* or older people or older patient* or gerontology or Sexagenarian* or septuagenarian* or octogenarian or nonagenarian* or centenarian* or sixties or seventies or eighties or nineties).mp.
5   3 and 4
6   (social barrier* or social isolation* or social support* or social car* or psychosocial support* or psycho-social support* or social frailt* or friendship* or "social* connected*" or connectedness or lonely or loneliness or "feel* alone*" or companionship).mp.
7   ((lack or absence or minimi*) adj2 (contact or communication or support*)).mp.
8   6 or 7
9   5 and 8

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Appendix 2 – Study Characteristics

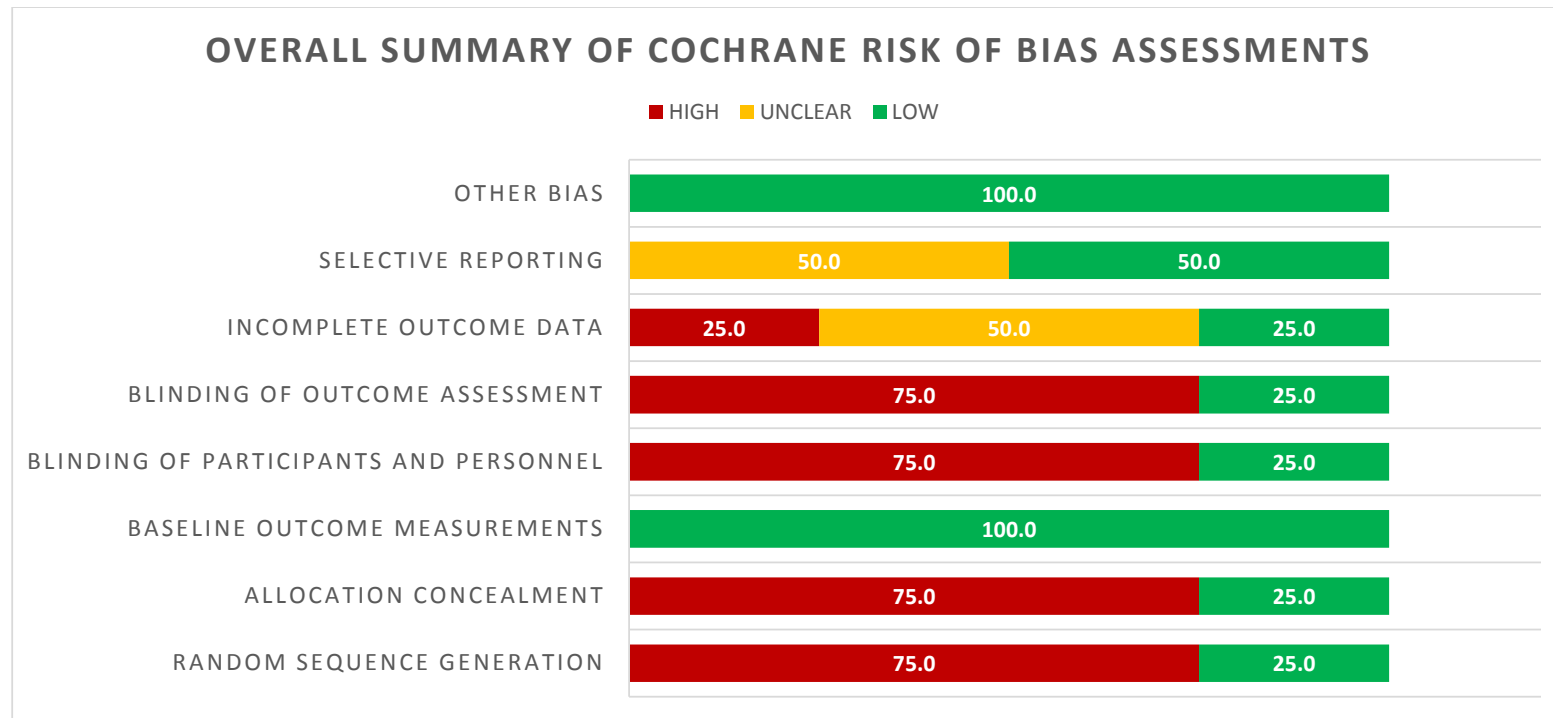| Author, year	Study title	Journal name	Country	Study design	Study duration (months)
Cohen, 2006	The impact of professionally conducted cultural programs on the physical health, mental health, and social functioning of older adults	The Gerontologist	United States	Non-randomized controlled trial	12
Scharlach, 2015	An Integrated Model of Co-ordinated Community-Based Care	The Gerontologist	United States	Uncontrolled before-after study	6
Franse, 2018	The effectiveness of a coordinated preventive care approach for healthy ageing (UHCE) among older persons in five European cities: A pre-post controlled trial	International Journal of Nursing Studies	United Kingdom, Greece, Croatia, the Netherlands, Spain	Quasi-experimental (one site was randomized, four sites were controlled before-after)	12
Dolovich, 2019	Combining volunteers and primary care teamwork to support health goals and needs of older adults: a pragmatic randomized controlled trial	Canadian Medical Association Journal	Canada	Randomized controlled trial	6

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Appendix 3 – Patient Characteristics

DEMOGRAPHICS						
Author, year	**Overall sample size**	**Overall age value**	**Overall age type**	**Overall age variance value**	**Overall age variance type**	**% female***
Cohen, 2006	166	NR (Reported mean age by group: intervention - 79.0 years, comparison - 79.6 years)	NR	NR	NR	NR
Scharlach, 2015	21	76	median	NR	NR	91
Franse, 2018	2325	79.5	mean	5.6	SD	60.8
Dolovich, 2019	312	NR (Reported mean age by group: intervention - 78.1 years, control - 79.1 years)	NR	NR	NR	62.2

SETTING DATA				
Author, year	**Intervention Setting**	**Participants living alone (%)**	**Description of access to caregivers**	**Description of baseline social network**
Cohen, 2006	Community	NR	NR	NR
Scharlach, 2015	Participant homes and community	67	NR	NR
Franse, 2018	Primary care and community settings	38.1	Care use i.e., hours per week receiving help in household work due to health problems and hours per week receiving help in caring for oneself was assessed. Hours/wk household help = control: 1.5 (5.3); intervention 1.0 (3.3).	NR
Dolovich, 2019	Participant homes and primary care	NR	NR	NR

FALLS AND FRAILTY DATA							
Author, year	**Participants with history of falling**	**List of comorbidities**	**Participants with frailty (%)**	**Frailty scale**	**Overall frailty score**	**Overall frailty score type**	**Frailty variance value**	**Frailty variance type**
Cohen, 2006	baseline average falls per person - intervention: 0.40 control: 0.36	NR	NR	NR	NR	NR	NR	NR

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Scharlach, 2015	mean of 1.3 falls at baseline	NR	NR	NR	NR	NR	NR	NR
Franse, 2018	30.2% had a fall in the previous year	NR	20.2	Tilburg Frailty indicator (TFI)	5.1	mean	3.2	SD
Dolovich, 2019	9.3% of participants had experienced 1 or more falls	NR	NR	NR	NR	NR	NR	NR

Abbreviations: NR, not reported; SD, standard deviation

*No studies reported having individuals who do not identify as female or male

Appendix 4 – Overall risk of bias across included studies (n=4)

OVERALL SUMMARY OF COCHRANE RISK OF BIAS ASSESSMENTS

■ HIGH   ■ UNCLEAR   ■ LOW

Category		
OTHER BIAS		100.0 (LOW)
SELECTIVE REPORTING	50.0 (UNCLEAR)	50.0 (LOW)
INCOMPLETE OUTCOME DATA	25.0 (HIGH)	50.0 (UNCLEAR) / 25.0 (LOW)
BLINDING OF OUTCOME ASSESSMENT	75.0 (HIGH)	25.0 (LOW)
BLINDING OF PARTICIPANTS AND PERSONNEL	75.0 (HIGH)	25.0 (LOW)
BASELINE OUTCOME MEASUREMENTS		100.0 (LOW)
ALLOCATION CONCEALMENT	75.0 (HIGH)	25.0 (LOW)
RANDOM SEQUENCE GENERATION	75.0 (HIGH)	25.0 (LOW)

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Appendix 5 – Quality appraisal assessments using Cochrane Risk of Bias tool modified by EPOC

Author, Year	Trial identifier	Random sequence generation	Allocation concealment	Baseline outcome measurements	Blinding of participants and personnel	Blinding of outcome assessment	Incomplete outcome data	Selective reporting	Other bias	Funding details:
Cohen, 2006	NR	High risk	High risk	Low risk	High risk	High risk	Unclear risk	Unclear risk	Low risk	National Endowment for the Arts (lead sponsor); Center for Mental Health Services, Substance Abuse and Mental Health Services Administration, Department of Health and Human Services; National Institute of Mental Health, National Institutes of Health; National Retired Teachers Association/ AARP; International Foundation for Music Research; Stella and Charles Guttman Foundation, New York City.
Scharlach, 2015	NR	High risk	High risk	High risk	High risk	High risk	Unclear risk	Unclear risk	Low risk	The SCAN Foundation
Franse, 2018	NR	High risk	High risk	Low risk	High risk	High risk	High risk	Low risk	Low risk	European Union, CHAFEA, third Health programme, grant number 20131201
Dolovich, 2019	NCT02283723	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk	Low risk	Health Canada (grant no. 6817-06-2013/5570001), Government of Ontario (grant no. 06547 for INSPIRE-PHC), McMaster University & McMaster Family Health Organization

Appendix 6 – Outcome summary table for included studies (n=4)

Author, Year	Treatment arms	History of falls	Results	Text description of effectiveness
Cohen, 2006 *Design: non-RCT*	**Singing in a chorale** (n=90) The intervention consisted of participating in a professionally conducted chorale in which there were weekly singing rehearsals for 30 weeks as well as public performances several times during the intervention period. **Usual activities** (n=76) Participants in the comparison group continued their regular activities as usual, with the study introducing no changes other than the assessments.	Baseline average of 0.40 falls per person in the intervention group, and 0.36 per person in the control group in the past 12 months	**UCLA Loneliness scale III** Baseline: 35.1 (SD, 8.1) Follow-up: 34.6 (SD, 7.9) Baseline: 38.3 (SD, 10.1) Follow-up: 37.0 (SD, 10.3)	Both groups evidenced a slight decrease in loneliness at the 12-month follow-up; however, the decrease in loneliness was greater for the intervention group than for the comparison. Analysis of covariance of the 12-month follow-up assessment continued to demonstrate a marginally significant difference between the two groups, $F(1,126) = 3.08$; $p = .08$.
Scharlach, 2015 *Design: Uncontrolled before-after*	**ElderHelp Concierge Club (CC)** (n=21) Integrated community-based care model that includes comprehensive personal and environmental, assessment, multilevel care co-ordination, a mix of professional and volunteer service providers, and a capitated, income-adjusted fee model. When individuals contact CC for information or services, they receive a brief assessment designed to determine their eligibility for CC services, as well as the type of services they appear to need: information and referral services only (Tier 1), transportation services only, or other CC services including in-home assessment by the CC Intake Specialist (Tiers 2 and 3).	Baseline mean of 1.3 falls over the past 6 months	**Social Isolation (3-item scale)** Baseline: 8.7 (SD, 3.2) Follow-up: 7.0 (SD, 3.8) **Social interaction** *Interact with friends/relatives weekly* Baseline: 76% of participants Follow-up: 100% of participants *Attend monthly meetings* Baseline: 33% of participants Follow-up: 48% of participants	Social isolation did not change significantly; nor did contact with friends and relatives or participation in meetings of organized groups.

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| Franse, 2018

Design: one site randomized, 4 sites controlled before-after design; results combined all sites, so classified as quasi-experimental | **Urban Health Centres Europe (UHCE) approach** (n=986)
Preventive multidimensional health assessment and if person at risk, coordinated care pathways targeted at fall risk, appropriate medication use, loneliness and frailty

Usual Care (n=858)
Usual care included access to their GP | 30.2% of participants experienced a fall in the previous year | **Loneliness (short JG scale)**
Baseline: 0.6 (SD, 0.7)
Follow-up: 0.6 (SD, 0.7)

Baseline: 0.6 (SD, 0.7)
Follow-up: 0.7 (SD, 0.7) | When comparing persons who enrolled in any type of care-pathway with all persons in the control group there was a positive effect on loneliness after adjusting for city clustering, age, gender, living situation, education, and baseline status of outcome (B= -0.18, 95% CI= -0.35 to -0.02). |
| Dolovich, 2019

Design: RCT | **Health TAPESTRY (Health Teams Advancing Patient Experience: STRengthening QualitY) intervention** (n=158)
Trained community volunteers visited patients to collect information on their life and health goals, risks and needs, daily life activities and general health, using structured surveys and unstructured narratives. The volunteers sent a report summarizing patients' goals, alerts, key issues and observations to the primary care interprofessional "huddle" team at the clinics. These interprofessional teams reviewed the reports and then generated, prioritized and acted upon plans of care for how the team, community agencies and volunteers could address clients' goals and health issues, with iterative follow-up

Usual Care (n=154)
The control group received usual care and did not have volunteer visits. There was no restriction on receiving care from the same team members as the intervention group | 9.3% of participants experienced 1 or more falls | **Social network score (DSSI-10)**
Baseline: Mean, 8.84 (SD, 1.52)
Follow-up: Mean, 8.75 (SD, 1.52)

Social satisfaction score (DSSI-10)
Baseline: Mean, 18.89 (SD, 2.41)
Follow-up: Mean, 18.96 (SD, 2.87)

Social network score (DSSI-10)
Baseline: Mean, 8.74 (SD, 1.61)
Follow-up: Mean, 8.69 (SD, 1.53)

Social satisfaction score (DSSI-10)
Baseline: Mean, 19.19 (SD, 2.37)
Follow-up: Mean, 19.04 (SD, 2.76) | There were no statistically significant between-group differences in participant ratings of self-efficacy, quality of life, optimal aging, social support |