

Supplementary File 6: Demographic information of individuals referred to an intermediary

RCTs (N=5)										
Author(s)	Total sample size	Number of referrals to intermediary	Age (<i>mean (SD)</i>)	Gender (% male)	Ethnicity*	Married or co-habiting†	Education (<i>mean (SD)</i>)	Socioeconomic status* (<i>employment status, income, insurance, social class</i>)	Health characteristics (<i>mean (SD)</i>)	Physical activity (<i>mean (SD)</i>)
Stewart et al. 2001	164	81	74.3 (5.9)	30.9	8.6% Minority*	59.3%	18.5% high school or less, 23.5% some college, 28.4% college degree, 7.4% some graduate school, 22.2% graduate degree	14.8% were employed full or part time 15.8% income less than \$20,000, 48.7% had income \$20,000 to \$40,000, 35.5% had income more than \$40,000	42% had HTN 19.8% had ' cardiovascular problems' 8.6% had diabetes 70.4% had arthritis or joint problems 7.4% had asthma, chronic bronchitis or emphysema 11.1% self-reported health status as fair or poor	43.2% were inactive (did not set aside time for exercise)
The CalPERS Health Matters study Tidwell et al. 2004	504	255	73.1 (4.9)	40.0	80.0% White*	60.0%	15.4% low education (high school), 15.4 (2.9) years of education	NR	19.6% had a BMI of 30+ (obese) 21.2% had more than 2 serious conditions 48.8% self-reported health status as fair or good 19.4% took psychoactive medications 38.4% reported difficulty with any	30.6% were inactive (0-15 aerobic physical activity mins/week) 69.4% participating home-based programmes

									ADL/IADL Reported a mean (SD) pain score (0 to 10 = severe) 2.9 (2.5) 13.6% had an emergency department visit prior 12 months	Aerobic activity (minutes per week) 102.3 (104.8), Stretching (minutes per week) 36.3 (53.4)
The RAPID study Ackerman et al. 2015	509	257	50.8 (12.2)	27.2	57.2% African American	NR	NR	63.8% household income less than \$25,000.	BMI 37.1 (8.7)	NR
Arbillaga-Etxarri et al. 2018	407	202	69.0 (9.0)	84.0	NR	NR	NR	14.0% employed 71.0% had low socioeconomic status (UK National Statistics Office Socio-economic Classification III, IV or V)	BMI 28.5 (5.0) 22% were active smokers 63% had CVD 31% had diabetes 38% had MSK diseases The cohort had mild-to-very severe COPD	NR
Novais et al. 2019	364	96	42.3% were aged 70-79*	38.7	NR	55.6% unmarried (no other data reported)	69.7% had 8 years of more of study	70.2% earned more than 3 times the minimum wage	67.6% had 7 or more clinical conditions 7% did not take any medications	NR
Controlled and uncontrolled before-after trials (N=5)										

Author(s)	Total sample size	Number of referrals to intermediary	Age (mean (SD))	Gender (% male)	Ethnicity*	Married/co-habiting†	Education (mean (SD))	Socioeconomic status* (employment status, income, insurance, social class)	Health characteristics (mean (SD))	Physical activity (mean (SD))
Shlay et al. 2011	966	486	56.0 (6.0)	NR	66.0% Hispanic/Latino	NR	NR	76.0% had incomes of 150% or less than the federal poverty level	BMI 33.0 Almost half were active smokers Almost half self-reported a family history of heart disease More than half had hypertension or diabetes Mean FRS was 15.5%	NR
Oddone et al. 2018	417	208	55.3 (12.7)	82.7	47.6% White*	46.2%	99.0% at least high school education	38.0% full- or part-time employed 7.4% reported inadequate income to cover bills at the end of the month	77.4% had a BMI >30 42.3% were active smokers 62% had HTN 26% had diabetes 67.8% self-reported health status as good - excellent Mean health risk assessment generated health age was 60.0 (12.9)	47.6% were inactive
The Men on the Move study Robertson et al.	927	501	82% were aged 40-70*	100.0	98.0% White*	78.0%	48.0% completed third-level education	NR	BMI 30.83 (4.67) 53% had ≥ 2 cardiovascular disease risk factors	84.0% were inactive Time to do one mile 13m.86s (3.13)

2018										
Pescheny et al. 2019	186	448‡	51.2 (15.7)	29.6	NR	NR	NR	17.2% working, 61.8% not working, 21.0% missing	NR	NR
Mays et al. 2020	409	1355‡	76.8 (9.1)	16.9	45.9% Non- Hispanic White or Caucasian	27.6%	85.1% college or higher, 14.9% high school graduate or lower, missing N=6	27.7% income of ≤\$30,000, 36.2% income of ≥\$30,001 or more, 36.2% prefer not to answer	Had 3.5 (2.2) chronic conditions 76.61% self-rated health excellent/very good/good 74.1% were at risk of falls 20.7% acted as caregivers	NR
Pilot/feasibility trials (N=4)										
Author(s)	Total sample size	Number of referrals to intermediary	Age (mean (SD))	Gender (% male)	Ethnicity*	Married/c o- habiting†	Education (mean (SD))	Socioeconomic status* (employment status, income, insurance, social class)	Health characteristics (mean (SD))	Physical activity (mean (SD))
Holtrop et al. 2008	446	797‡	48.4	30.0	78.0% White*	NR	8.0% < high school diploma, 31.0% high school grad or GED, 61.0% > high	54.0% income of \$20,000- \$75,000 12.0% had no insurance	88% had one or more chronic conditions 42% screened positive for depression	NR

							school			
Dunn 2016	20	20	60.1 (19.2)	42.0	NR	NR	NR	NR	BMI 27.6 (5.9) 21% had atrial fibrillation 21% had diabetes 16% had arthritis 5% had asthma, RBBB, PFO, COPD, CVD and PVD respectively	NR
Loskutova et al. 2016	179	179	53.1 (12.2)	26.8	77.1% African American	NR	11.2% high school or less, 20.1% graduated high school, 11.7% some college or technical school, 14.5% college graduate, 1.7% postgraduate or professional, 40.8% unknown or missing	41.3% had public health insurance	74.3% were obese 14.5% were current smokers 65.4% had diabetes	NR

Mackey et al. 2019	58	29	71.8 (6.5)	100.0	55.2% European*	69.0%	65.5% university education or greater	89.7% retired or not working 31.0% annual income of <\$25,000, 41.4% annual income of >\$50,000	BMI 28.4 (5.0) Had 1.83 (1.65) chronic conditions 13.8% had a fall in the last 6 months	37.5% were inactive
Mixed/Other Methods (N=4)										
Author(s)	Total sample size	Number of referrals to intermediary	Age (<i>mean (SD)</i>)	Gender (% <i>male</i>)	Ethnicity*	Married/c o- habiting†	Education (<i>mean (SD)</i>)	Socioeconomic status* (<i>employment status, income, insurance, social class</i>)	Health characteristics (<i>mean (SD)</i>)	Physical activity (<i>mean (SD)</i>)
Trinh et al. 2011	159	159	36.6% were aged 50-59*	32.7	NR	NR	10.9% less than high school, 31.7% completed high school, 39.6% community college or technical vocation school, 17.8% university	NR	NR	NR

Sorkin et al. 2013	185	104 (comprising of pairs of i) mother and ii) daughter)	i) 52.7 (6.9) ii) 27.7 (7.5)	0.0	100.0% Hispanic	i) 66.0% ii) 53.0%	i) 67.0% grade school, 25.0% high school, 8.0% college ii) 6.0% grade school, 69.0% high school, 25.0% college	i) 41.0% income of <\$5000 to \$14,999, 32.0% income of \$15,000 – \$19,999, 27.0% income of \$20,000 - \$59,999 15.0% were food insufficient with hunger ii) 59.0% had income <\$5000 to \$14,999, 16.0% income of \$15,000 – \$19,999, 25.0% income of \$20,000 - \$59,999 16.0% were food insufficient with hunger	i) BMI 34.9 100% had diabetes ii) BMI 35.4	NR
Wellbeing 4 U\$ 2018	1749	1749	The majority were aged 26-35*	34.6	NR	NR	NR	NR	NR	NR

Islington Giving 2019	271	271	69% were aged 55-70 and the rest were >70*	29.0	50.0% White British*	NR	NR	NR	NR	NR
Qualitative (N=3)										
Author(s)	Total sample size	Number of referrals to intermediary	Age (<i>mean (SD)</i>)	Gender (% male)	Ethnicity*	Married/co-habiting†	Education (<i>mean (SD)</i>)	Socioeconomic status* (<i>employment status, income, insurance, social class</i>)	Health characteristics (<i>mean (SD)</i>)	Physical activity (<i>mean (SD)</i>)
Shaw et al. 2012	84	45	69.9 (10.4)	48.8	NR	NR	NR	NR	N=46 had angina N=39 MI N=46 other CHD N=22 had undergone PCI	NR
Moffatt et al. 2017	30	1603‡	62.0	53.0	80.0% White British*	NR	NR	N=4 employed, N=12 unemployed, N=14 retired Occupational social classes (based on current or previous main employment) 2-4 (2=lower	Most had one or more referral long-term condition , had associated mental health issues, low confidence and social isolation*	NR

								managerial, administrative and professional occupation, 3=intermediate occupation, 4=small employers and own account workers) accounted for two-thirds of the sample		
Pescheny et al. 2018	15	10	47.5	10.0	60.0% White British*	70.0%	NR	40.0% unemployed, 20.0% retired, 20.0% full-time employed, 20.0% other	Non-medical needs/psychosocial symptoms were reported such as mental health issues and pain	NR
Total	8049	8855								

Data presented from 21/28 studies as N=7 did not report on any demographic information of people referred to an intermediary. Six studies did not report on a sample of individuals referred to an intermediary [1-6]. These studies were qualitative studies involving healthcare professionals, intermediaries or key stakeholders, or mixed methods evaluations of services. One study reported N=1,249 referrals to an intermediary, but did report any demographic information for these individuals [7]. Demographic details reported for sample referred to intermediary, unless in italics which indicates the total sample. *Reported largest proportion of sample, and/or reported as per author's reporting style. †Reported % married or co-habiting. ‡This figure is larger as these studies only included/reported demographic information on a subset of total individuals referred to an intermediary. §Author information not available. Abbreviations: ADL/IADL – Activities of Daily Living/Instrumental Activities of Daily Living, BMI – body mass index, CalPERS - California Public Employees Retirement System, CHD – coronary heart disease, College of HE – college of higher education, COPD – chronic obstructive pulmonary disorder, CVD – cardiovascular disease, FRS –

Framingham Risk Score, GED - General Educational Development, HTN – hypertension, MI – myocardial infarction, MSK – musculoskeletal, NR – not reported, PCI – percutaneous coronary intervention, PFO – patent foramen ovale, PVD – peripheral vascular disease, RAPID - Reaching Out to Prevent Increases in Diabetes, RBBB – right bundle branch block, RCT – randomised controlled trials.

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