

**Supplementary File 2:** Description of each health literacy intervention and key study findings

<b>Author</b>	<b>Intervention</b>	<b>Key findings</b>
<b><i>Building social support for health</i></b>		
Aliabad et al., 2014	Training of individual patients over three face to face sessions. Used the Health Action Process Approach (HAPA) which focuses on translation of action plans into behaviour and promotion of social support to prevent relapse. Patients' partners participated in a session to discuss ways to increase social support for health such as exercising together.	At 4-months, the intervention significantly improved all social cognitive factors, family support and physical activity compared with the UG (p<0.001)
Colella et al., 2018	Men in the IG were matched with a peer volunteer based on age (+/-5 years), who phoned the participant 3-4 days post discharge and then weekly for 6 weeks. Peers all had CABG previously, all completed a training session on skills required for telephone support. IG also received usual pre-discharge education and routine follow up appointments.	No difference between groups in depression (p=0.49) or social support scores (p=0.94) at 12- weeks; the intervention group had significantly lower health care use (p<0.05)
Duan et al., 2018	8-week online intervention based on the HAPA approach. The intervention aimed to improve physical activity and fruit/vegetable consumption, including through strategies to harness existing social supports, or if none, strategies to develop a social support network to prevent relapse.	Intervention group reported significantly less decrease in physical activity and fruit and vegetable consumption post-intervention than the control group (p<0.05). No significant intervention effect on social support.

Furze et al., 2012	An angina self-management program, facilitated by lay workers with experience in heart disease. Included a workbook and relaxation program, introduced in a 45min interview during which behavioural goals were introduced. Brief follow-up phone calls or home visits from the lay workers who were trained and managed by a community CR nurse with regular group and individual supervision.	No significant differences in angina frequency between both groups at 6-month follow-up
Lynggaard et al., 2017	All patients attended 8-week CR program. The IG also had individual interviews to clarify their needs, with group education sessions then tailored to these needs. Experienced former CR patients participated as co-educators and narrators in all of the education sessions and in one exercise training session per week.	The intervention group had higher adherence at cardiac rehabilitation in terms of exercise training and education (OR=1.48; 95% CI:1.07-2.05,p=0.018)
O'Brien et al., 2014	40 minute individualised education session on appropriate management of ACS symptoms and the need to inform someone else of symptoms. Patients nominated a person they would notify if symptoms arose; this person could also attend the education session. Action plans were practiced using role play.	There was a significant effect of the intervention on mean knowledge (p<0.001), attitudes (p=0.003) and belief (p<0.001) scores at 3 and 12 months.
Mohammadpourhodki et al., 2019	Two face-to-face education sessions for patients 72 hours post-MI. Education provided by trained peers (patients with previous MI and no history of anxiety). Content of education sessions not described.	At 30-day follow-up, anxiety score was significantly lower in the intervention group compared to the control group (p=0.001)

Sabzmakan et al., 2010	9-week training program based on the PRECEDE Model (Predisposing, Reinforcing, and Enabling factors). The model encourages self-help behaviours including creating social support networks. Patients and partners were divided into three groups for education about CAD; patients also attempted to establish social support systems.	Self-help behaviours significantly increased in the intervention group at 2-months compared to the control group ( $p < 0.001$ ).
Sakakibara et al., 2017	10-week 'Healing Circles' program via a mobile device. Participants accessed the program when they felt a need to connect with others. Six to nine participants were assigned to the same "Circle-of-Friends" to share information, ask questions and "Challenge" each other in heart healthy tasks.	After 10 weeks of using the intervention, significant improvements in health behaviours, self-monitoring, social support, and social integration (all $p < 0.05$ )
Varaei et al., 2014	Two 1-hour education sessions provided by peers to patients over two consecutive days before CABG surgery. Peers received three training sessions, including communication skills (i.e. non-verbal behaviours, active listening and ability to receive and send clear communication messages). Sessions were held in the hospital.	Cardiac self-efficacy in the intervention group was higher in all three follow-up points (5 days, 4 weeks & 8 months ( $p < 0.001$ )); the intervention group had a lower re-admission rate (10.3% vs 39.3%, $p = 0.011$ )

### *Empowerment for people with low health literacy*

No studies were identified within this category

<i>Improving the interaction between patients and the health system/health professionals</i>		
Bates et al., 2014	Patients and their caregiver received education from the patient educator using the teach-back method. The IG was also assisted by the patient educator to make follow-up appointments 1–2 days prior to the patient's discharge.	30-day readmission rates in the pre- and post-intervention groups were 25.8% and 12.0%, respectively (p=0.02); majority of participants perceived a positive experience of care
Dontje et al., 2013	A Nurse-led group education session reinforced participants' knowledge about treatment options for CAD and defined the Shared Decision-Making (SDM) process. Participants completed an Encounter Planning guide, then scheduled a SDM visit with their provider, and took their Encounter guides as a cue to remind the provider to focus on SDM for CAD.	Post-intervention, patients gained knowledge of options and confidence in participating in shared decision making with providers
Lau-Walker et al., 2016	A Personalised Patient Educational Protocol (PPEP) was used to facilitate nurse-patient interaction. The PPEP has two components: first, patients state their illness beliefs so that nurses can tailor discussion on health behaviour change. The second is designed to get patients to adopt a problem solving approach to management of their symptoms. This structure increases patients' confidence to discuss concerns with clinicians after discharge.	At 3-months, the only improvement was in the Illness Belief component 'Understanding' (p=0.021) and the 'General Health' component of the quality of life survey (p=0.041)
Lee et al., 2019	An electronic-based patient and family education (PFE) system was systemically embedded in the hospital information system for CAD patients, aiming to increase the opportunity for frequent, multifaceted interactions during the PFE process, improving communication between patients and providers.	The intervention group was prescribed more guideline-recommended drugs post-intervention than the control group (39.3% vs 14.5%, p<0.001)

Fors et al., 2015	A patient-centred care approach emphasising the partnership between patients and health professionals. Professionals were specially trained in PCC. Included co-creation of a PCC health plan between patient and health professionals, shared decision-making, collaborative revision of the plan, referral and discharge notes shared with the patient.	At 6-months, general self-efficacy improved more in the intervention group compared with the control group (p=0.026), but no differences were seen between groups on re-hospitalisation or death, return to work or prior activity level
<b><i>Building health literacy capacities of professionals</i></b>		
Shen et al., 2018	A train-the-trainer model where community nurses were trained over 2-days in how to educate CHD patients. Topics included CHD risk factors and management, clinical skills training, health behaviour change, and communication skills. The trained nurses were then sent back to their communities where the intervention consisted of distributing individualised health education prescriptions and brochures, organizing health education lectures, and conducting telephone follow-ups.	Nurses' knowledge and self-efficacy improved (p<0.001), as did intervention group patients' self-management behaviours compared to controls (p<0.001)
<b><i>Facilitating access and appropriate use of health services</i></b>		
Hald et al., 2019	The expanded CR intervention consisted of standard CR and a longer phase II course (extra two weeks), more consultations with CR nurses, and sharing of patient's rehabilitation plan with GP. Phase III is like standard CR but also includes referral to 30min preventive GP consultation, referral to activities in the municipal sector and the Danish Heart Association, and telephone follow up at 2 months.	The intervention group had more annual chronic care consultations than the comparison group at 2- and 5-year follow-up. At 10-year follow-up, no significant differences were seen.

Cao et al., 2017	Three phases: (1) Hospitalization: Patients received a treatment plan and self-care advice from a nurse. Teach-back was used to reinforce understanding.(2) Pre-discharge: Individualized discharge plan developed by the cardiologist, nurse, and patient cooperatively, and teach-back used to confirm understanding. (3) Post-discharge: The discharge plan emailed to community nurse <48 h after discharge. 1-week post-discharge, the family doctor and community nurse made structured telephone calls to the patient.	Both 30- and 90-day re-admission rates were significantly lower in the intervention group compared to the control group (5.1% vs 16.1%, p=0.004; 8.5% vs 20.3%, p= 0.005), respectively
<i>Described as a health literacy intervention by study authors</i>		
Eckman et al., 2012	Two intervention groups: (1) Video (30min) plus printed booklet; (2) printed booklet alone ('Living with CHD- Doing Your Part'). The video showed interviews with patients of varying ethnicity and gender who are struggling to live with CAD as they explain their decisions based on their own preferences and values, and physician experts.	At 3-months, there was a trend towards greater knowledge among the intervention group compared with controls (1.4 vs 0.8, p=0.07); The intervention prompted patients to become more involved in their care
Kripalani et al., 2012	For 1 year, patients received refill reminder postcards, illustrated medication schedules, both interventions, or usual care. The medication schedule group received a visual picture of their medication regime, including dosing instructions in plain language, a colour image of each medication, and an icon to indicate its purpose. A pharmacist met with the patient for 5 minutes to explain the tool. Comprehension was confirmed through teach-back. The reminder postcards group had postcards mailed to their home 25 days after their last medication fill..	Post-intervention medication adherence did not differ significantly across treatments: 31.2 % in usual care, 28.3 % with mailed refill reminders, 34.2 % with illustrated medication schedules, and 36.9 % with both interventions

---

Tongpeth et al., 2018	In addition to usual care, the IG received education via the Avatar app on a handheld tablet computer. Topics included heart attack warning signs and action plan, with quizzes The app was developed using the principles of web design for patients with low health literacy. A tablet computer was provided to every IG participant for home use during the -month study period. IG participants also received two follow-up telephone calls, at 1 month and 6 months.	The intervention group had a significant improvement in symptom knowledge, attitudes, and beliefs over the 6-month period ( $p<0.001$ , $p=0.009$ , $p<0.001$ , respectively); and no significant improvement in the usual care group
-----------------------	---	---

---

Abbreviations: ACS=Acute Coronary Syndrome; BDI=Beck Depression Inventory; CABG=Coronary Artery Bypass Grafts; CR=Cardiac rehabilitation; ED=Emergency Department; FVC=Fruit & vegetable Consumption; heiQ=Health Education Impact Questionnaire; IG=Intervention Group; PA=Physical Activity; SSS=Social Support Scale; UG=Usual Care Group