Table S1: Search Strategies

Database	Search strategy	Limitations
SCOPUS	(TITLE-ABS-KEY ("frail*" OR "frail elderly" OR "frailty")) AND (TITLE-ABS-KEY (("general practitioners," OR " general practitioner" OR " family physician," OR "primary care" OR " primary medical care"))) AND (TITLE-ABS-KEY ("interventions" OR " intervention study" " OR "models" OR " model" OR "strategy" OR "strategies " OR "project" OR "projects"))	Tool OR Tools Guidance OR Guideline Policy OR Policies OR Healthcare policies
EMBASE	frail OR frail elderly OR frailty . [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word] AND general practitioners OR general practitioner OR family physician OR primary care OR primary medical care . [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word] AND interventions OR intervention study OR models or model OR strategy OR strategies OR project OR projects . [mp=title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word]	Same limitation were used
Cochrane library	• PICO Advanced search Elderly – Population AND Primary healthcare services – Intervention AND Frailty – Outcome • Search manager engine was used and the Mesh function was activated Frail older adult And primary healthcare services And intervention	
Note	SCOPUS treat singular as plural so we do not have to add it both in our search terms	

Mesh term	(“frail*” or “frail elderly” or “frailty” or “ frailty syndrome” or “frail elders” or “ Frail older adult”) and (“general practitioners” or “ general practitioner” or “family physician” or “primary care” or “ primary medical care”), and (“interventions” or “intervention study” or “models” or “model” or “strategy” or “strategies” or “project” or “projects”). Basic Boolean operators (i.e. AND, OR) were used in the search strategy.

Table S2: First data extraction tool

Title	
Authors	
Primary outcomes	
Sample size	
Intervention	
Results	
Major limitations/challenges	
Facilitators	
Year	
Setting	
Study location	
Secondary outcomes	
Population	
Other outcomes	
Define frailty	
Theory/theories underpinning interventions	

Table S3: ICMO extraction tool

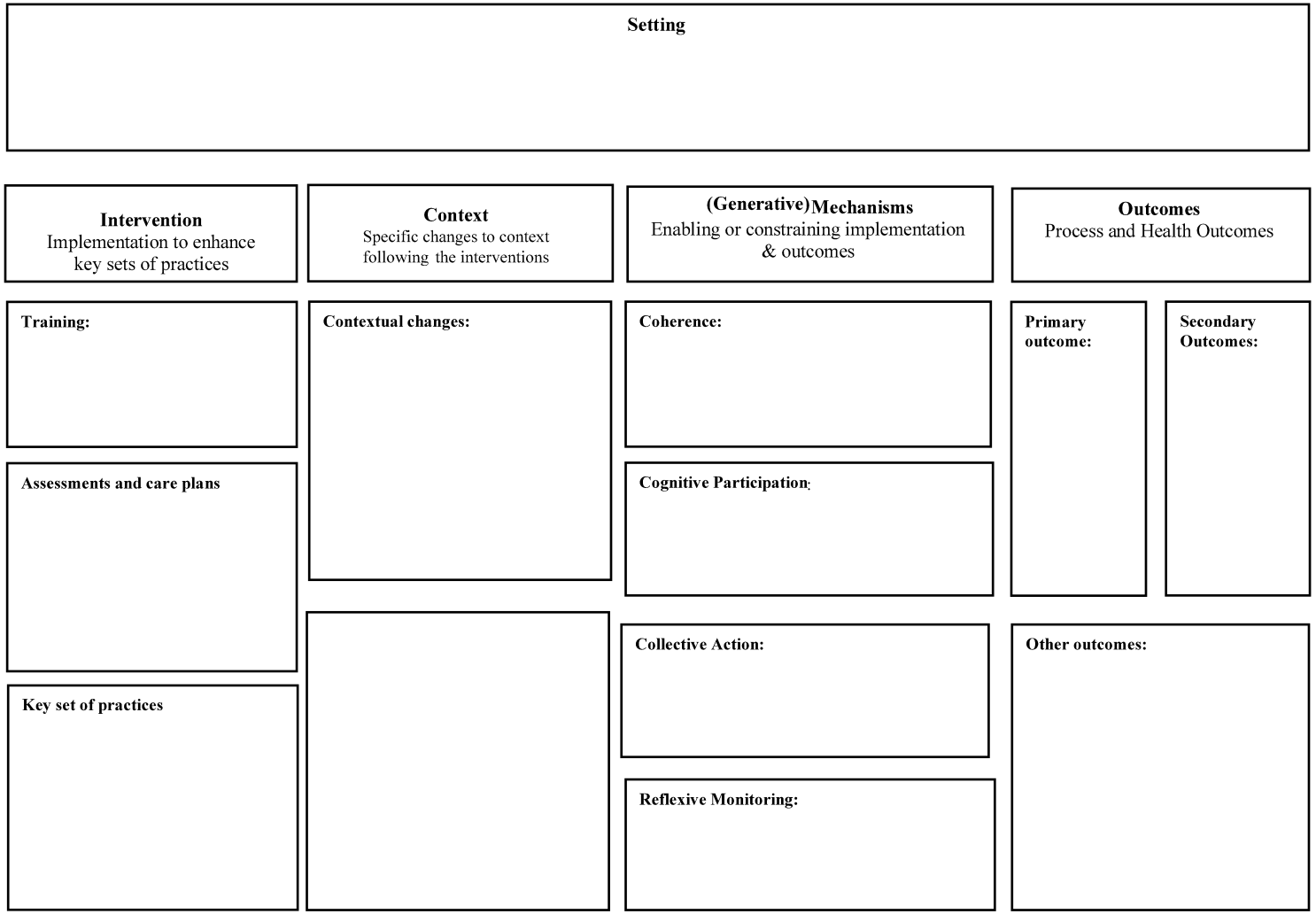

Table S4: NPT questions guidance

NPT component	Questions
Coherence (i.e., meaning and sense-making by participants)	Was the intervention easy to describe and or implement?
	Did participants understand what tasks/practice/action require of them?
	Did it have a clear purpose for all relevant participants? Was it clear for frail elderly people?
	Were the benefits of a particular practice/task (e.g. care planning frailty) valued by all participants? Did all participants see its potential value?
	What benefits did the intervention bring and to whom?
	Was there being an understanding of how to implement the new requirement?
	Did a particular task fit with the overall goals and activity of the practice?
Cognitive participation (i.e., commitment and engagement by participants)	Did professionals believe they included the correct people to drive forward the implementation?
	Did participants engage with other staff within or across organization to implement the interventions?
	Who was actively engage to plan/ prepare working with the interventions?
	Did they be prepared to invest time, energy and work in it?
	Whether the participants can undertake their roles and tasks, whether any barriers and facilitators were encountered to deliver care for frail patients based on the interventions?
	Did the practice team undertake work to arrange a shared contribution to implement interventions? If so, what was the work?
Collective Action (i.e., the work participants do to make the	How did the intervention affect the work of participants? What did professionals need to do to make the interventions work?
	How did the interventions affect the patient and professional consultation?
	What impact did the intervention have on the job responsibility? How did the interventions fit with other things that professionals need to do in the same settings?

intervention function)	Did the staff intake extensive training before they can use it? What did the professionals do to become skilled and resourced users?
	How was the intervention linked to organisational structure (e.g. practice meeting, using guidance, following existing model)?
	How was a particular task (e.g. visiting patient at home) resourced? What resources (financial, policy, staffing) were available to support interventions implementing or working?
Reflexive Monitoring (i.e., participants reflect on or appraise the intervention)	How were participants likely to perceive the intervention once it had been in use for a while?
	Had implementing the intervention been adapted based on experiences? If so, how?
	Was it be clear what effects the intervention has had for patients or professionals?
	Did participants share feedback about a particular practice with others? If so, what was discussed?
	Had the organisation developed strategies of keeping up to date with a approach to managing a set of practices?
	Could the existing practices be changed to sustain interventions working?

Table S5: Quality assessment result

Title	Interventions	Author	Rigour
A community program of integrated care for frail older adults: Agil Barcelona	Designing a multidisciplinary intervention in the community, including a) multi-modal physical activity (PA) sessions, b) promotion of adherence to a Mediterranean diet c) health education and d) medication review.	L M Pérez et al. (2019)	4
A multifactorial interdisciplinary intervention reduces frailty in older people: randomized trial	Multifactorial interdisciplinary interventions (including nutritional supplementation, referral to psychiatrist, encourage social engagement, physiotherapy sessions and performed a home exercise program)	Ian D Cameron et al. (2013)	4
Effects of a primary care-based multifactorial intervention on physical and cognitive function in frail, elderly individuals: A randomized controlled trial	A multifactorial interventions including (a structure physical activity conducted by physiotherapists – intake of hyperproteic nutritional shake which was daily for 6 weeks, memory workshops and medication review).	Laura Romera-Liebana et al. (2018)	4
A Multicomponent Exercise Intervention that Reverses Frailty and Improves Cognition, Emotion, and Social Networking in the Community-Dwelling Frail Elderly: A Randomized Clinical Trial	A combined program of endurance, strength, coordination, balance and flexibility exercise that have the potential to impact a variety of functional performance measure. Those in the intervention group performed 65 minutes of daily activities, 5 days per week for 24 weeks.	Francisco José TarazonaSantabalbina et al. (2016)	3
Effects of a Home-Based and Volunteer-Administered Physical Training, Nutritional, and Social Support Program on Malnutrition and Frailty in Older Persons: A Randomized Controlled Trial	Physical training and nutrition intervention of the first group versus only social support intervention of the second group.	Eva Luger Et al. (2016)	3
A Study on Effects of Acupressure Among the Frail Elderly in the Community Dwellings	A 15 minutes structured acupressure protocol with specific acupoints and applications technique will be performed on the elderly participants twice a week by the research team in YCHSS centers. The caregiver of the elderly will be trained and perform the same acupressure protocol on the elderly at 2 additional occasions during the week.	Clara W.C. Chan et al. (2017)	4
Effects of a multifactorial intervention comprising resistance exercise, nutritional and psychosocial programs on frailty and functional health in community-dwelling	Multifactorial intervention (resistance exercise, nutritional education and psychosocial programs).	Satoshi Seino et al (2017)	3

older adults: a randomized, controlled, cross-over trial			
Nurse-led home visitation programme to improve health-related quality of life and reduce disability among potentially frail community-dwelling older people in general practice: A theory-based process evaluation	GOLD home visitation program – home visit for conducting CGA and a tailored care and treatment, multidisciplinary care management, and targeted intervention and follow-up.	Mandy M N Stijnen et al. (2014)	5
Prevention of adverse health trajectories in a vulnerable elderly population through nurse home visits: A randomized controlled trial	Visiting program including a proactive home visits by trained nurse to do the assessment and then designed and executed a care plan.	Hein P J van Hout et al. (2010)	4
A nurse-led interdisciplinary primary care approach to prevent disability among community-dwelling frail older people: A large-scale process evaluation.	Nurse led interdisciplinary approach - frail older people and their informal caregiver, if available, receive a home visit by the practice nurse who does a multidimensional assessment focusing on existing problems in performing daily activities and on risk factors for disability. After the home visit, the general practitioner and practice nurse discuss whether additional assessments by other inpatient or outpatient healthcare professionals are needed. On the basis of the assessment phase, a preliminary treatment plan is formulated. During a second home visit by the practice nurse, a final treatment plan is formulated.	Metzelthin SF et al. (2013)	5
Effectiveness of interdisciplinary primary care approach to reduce disability in community dwelling frail older people: Cluster randomised controlled trial.		Slike Metzelthin et al. (2013)	4
Reducing disability in communitydwelling frail older people: Costeffectiveness study alongside a cluster randomised controlled trial		Metzelthin et al. (2015)	4
Implementing care programmes for frail older people: A project management perspective.		Jill Bindelsa et al. (2014)	3
Cost-Effectiveness of a Chronic Care Model for Frail Older Adults in Primary Care: Economic Evaluation Alongside a Stepped-Wedge Cluster-Randomized Trial.	Nurse led - Geriatirc Care model (GCM) – nurses conduct a multi-dimensional geriatric assessment, PN write a care plan after each assessment in consultation with the primary care professionals , later in a second visit nurses discuses care plan with the older person. Second visit – nurses provide information on guideline concordant management and treatment options to be involved	Karen M. van Leeuwen et al. (2015)	3
From concept to content: assessing the implementation fidelity of a chronic care		Maaike E Muntinga et al. (2015)	3

model for frail, older people who live at home.	in decision making – at all times; older person's wishes remained central. Review of actions listed on care plan with patient		
Expanding access to pain care for frail, older people in primary care: A crosssectional study		Maaike E Muntinga et al. (2016)	3

Effectiveness of a Geriatric Care Model for frail older adults in primary care: Results from a stepped wedge cluster randomized trial.		Emiel O.Hoogendijk et al. (2016)	4
Quality of primary care delivery and productive interactions among community-living frail older persons and their general practitioners and practice nurses	Older persons are screened for frailty by the geriatric nurse or practice nurse during a home visit, each frail older person is discussed in multidisciplinary consultation, the practice team discusses and agrees upon (self-management) interventions, the care plan is discussed with the frail older patient, finally. Finally, follow-up of the frail older person was provided by a multidisciplinary team.	Lotte Vestigens et al. (2019)	4
Chronic Care Clinics: A randomized controlled trial of a model of primary care for frail older adults.	Patients invited to, An extended (30 minutes) visit to the patient's physician and team nurse dedicated to developing a shared treatment plan that emphasized the reduction of disability; A session with the pharmacist (15 minutes), held in the primary care examination room, ; A patient self management group session (45 minutes), led by a team nurse or social worker, and The provision of health status assessment information to the practice team at the time of the CCC visits.	E.A. Coleman et al. (1999)	3

Implementation of an innovative webbased conference table for communitydwelling frail older people, their informal caregivers and professionals: a process evaluation.	The ZWIP consists of information about the frail older person's health, functioning and social situation, contact information about professionals involved in their care, and care-related goals formulated by or with the frail older person, a secure messaging system for communication between the frail older person and one or more professionals or between professionals, and tailored educational materials for the frail older person and informal caregiver.	Sarah HM Robben et al. (2012)	5
The short-term effects of an integrated care model for the frail elderly on health, quality of life, health care use and satisfaction with care	The general practitioners detected frailty, elderly patients were visited by their nurse who assessed their health, the assessment was discussed in a multidisciplinary meeting, a multidisciplinary treatment plan was then formulated in consultation with the elderly person and his or her informal caregiver(s).	Wilhelmina Mijntje Looman et al. (2014)	4

Cost-effectiveness of a multidisciplinary intervention model for communitydwelling frail older people	The model used problem based selection procedure performed by GPs rather than population screening to identify patients eligible. A geriatric specialist nurse visited the patient at home. Up to six visits for additional geriatric evaluation and management were planned within the next 3 months. Starting off from a wide multidimensional assessment, the intervention team developed an individualized, integrated treatment plan for each patient.	René J F Melis Et al. (2008)	4
Multicomponent program to reduce functional decline in frail elderly people: A cluster controlled trial.	CareWell primary care program - Proactive, individually tailored care plans were formulated for each participant; these plans were based on individual health-related goals and needs as assessed with the EASY-Care TOS. Care plans were revised during the team meetings at least every 6 months and stored in the information portal.	Franca G.H. Ruikes et al. (2016)	3
Cost-Effectiveness of a Proactive Primary Care Program for Frail Older People: A Cluster-Randomized Controlled Trial	In first group, there was no trained registered nurse to deliver the additional steps of the proactive care program. In the second group, the frailty screening was followed by the	Nienke Bleijenberg RN et al. (2017)	3

Frail Older Adults' Experiences With a Proactive, Nurse-Led Primary Care Program	nurse-led care intervention. Patients who were identified as frail received a home-based Comprehensive Geriatric Assessment, followed by evidence-based care planning, care coordination and follow-up.	Bleijenberg, N et al. (2015)	5
Integrated care at home reduces unnecessary hospitalizations of community-dwelling frail older adults: a prospective controlled trial.	The intervention received an additional home geriatric assessment by community geriatrics unit (GCU)	Laura Di Pollona et al. (2017)	3
Nurse home visits with or without alert buttons versus usual care in the frail elderly: a randomized controlled trial	After screening , participants were allocated to the control NV + AB (nurse home visits including alert button) or NV alone (nurse home visits alone). Participants in the intervention group received weekly visits from a nurse over a period of 9 months. This group of patients was also able to contact their nurses on whenever they felt the need by pressing the alert button, but the other group did not include emergency care or technological support via the alert button.	Jesus Favela et al (2013)	3
Reversing Frailty Levels in Primary Care Using the CARES Model	Providers teams were trained in using the comprehensive geriatric assessment (CGA)	Olga Theou et al. (2017)	3
	frailty levels among patients, the CGA was used to inform the creation of a wellness plan to identify goals most important to the patients, and patients were paired with a free-of-charge, telephone-based health coach for a period of up to six months.		
Impact on hospital admissions of an integrated primary care model for very frail elderly patients	The nurse performed a home-based comprehensive geriatric assessment, developed an individualized care plan, coordinated all the required services during the follow-up. Nurses and primary care physician received support as needed from geriatricians participating.	de Stampa et al. (2014)	4
Total score in (%)			73%

Table S6: An overview of the 29 frailty interventions for primary care

Title	Author	Screening strategy	Final sample size	Setting	Intervention	Findings	Themes of group discussion
Specific assessment and management frailty needs							
A multifactorial interdisciplinary intervention reduces frailty in older people: randomized trial	Ian D Cameron et al. (2013)	Adults aged 70 years or older with three or more of the CHS frailty criteria; not usually living in a residential aged care facility, without moderate or severe cognitive impairment.	216/241	Sydney, Australia	Multifactorial interdisciplinary interventions (including nutritional supplementation, referral to psychiatrist, encourage social engagement, physiotherapy sessions and performed a home exercise program).	The intervention reduced frailty and improved mobility in older people who met the CHS frailty criteria – The benefit of the intervention was not evident at 3- month follow-up and became apparent only at 12 months.	Early link between the identified needs and healthcare services.
Effects of a primary care-based multifactorial intervention on physical and cognitive function in frail, elderly individuals: A randomized controlled trial	Laura Romera-Liebana et al. (2018)	Screening criteria set gait time between 10 and 30 seconds in the (TGUGT); scored (MEC-35 Lobo) ≥18 points (no severe cognitive impairment); and Fried modified crit eria.	267/352	Barcelona	A multifactorial interventions including (a structure physical activity conducted by physiotherapists – intake of hypercritic nutritional shake which was daily for 6 weeks, memory workshops and medication review).	After 3 and 18 months, adjusted means difference between groups showed significant improvements for the intervention group in all comparisons: Short Physical Performance Battery improved, handgrip strength, functional reach, and number of prescriptions decreased.	Significant improvement were still observed at 18 months. High level of adherence. Clarity on what they were trying to do.

A Multicomponent Exercise Intervention that Reverses Frailty and Improves Cognition, Emotion, and Social Networking in the Community-Dwelling Frail Elderly: A Randomized Clinical Trial	Francisco José Tarazona-Santabalbina et al. (2016)	Participants were randomized a volunteer who were sedentary, with a gait speed lower than 0.8 meters per second and frail (met at least 3 of the frailty phenotype criteria).	100 who were eligible – no more data available.	Valencia, Spain	A combined program of endurance, strength, coordination, balance and flexibility exercise that have the potential to impact a variety of functional performance measure. Those in the intervention group performed 65 minutes of daily activities, 5 days per week for 24 weeks.	The MEP was very effective in improving the PPT (P<.001), SPPB(P¼.007), and in lowering of the frailty score assessed by Linda Fried's criteria and Edmonton. The statistical analysis showed that in 31.4% of the intervention group, frailty was reversed after the exercise training program.	Limited paper – there was not clear enough data on how the frailty intervention was implemented.
Effects of a Home-Based and Volunteer-Administered Physical Training, Nutritional, and Social Support Program on Malnutrition and Frailty in Older Persons: A Randomized Controlled Trial	Eva Luger Et al. (2016)	The screening criteria for recruitment were persons at risk of malnutrition or malnourished persons, according to the (MNA-SF), rail, according to the Frailty Instrument for Primary Care of the (SHARE-FI).	66/80	Vienna, Austria	Physical training and nutrition intervention of the first group versus only social support intervention of the second group.	Improved in nutritional score and frailty status in both groups after 12 weeks.	Social support alone improved patients' health.

A Study on Effects of Acupressure Among the Frail Elderly in the Community Dwellings	Clara W.C. Chan et al. (2017)	The screening procedure included participants were scored 5 or above in the (TFI). They were also physically fit to sit on a chair and cognitively competent to understand instructions from the practitioner and to sign the consent form.	79/108	Hong Kong	A 15 minutes structured acupressure protocol with specific acupoints and applications technique will be performed on the elderly participants twice a week by the research team in YCHSS centers. The caregiver of the elderly will be trained and perform the same acupressure protocol on the elderly at 2 additional occasions during the week.	The treatment group showed improvement in all measurements in comparing to the control group i.e. physical score, sleep quality, pain intensity.	Flexible as it could be implemented at home. Patients satisfaction. Caregiver involvement. Address and reduce the pain may encourage the patients to implement the intervention.

Effects of a multifactorial intervention comprising resistance exercise, nutritional and psychosocial programs on frailty and functional health in communitydwelling older adults: a randomized, controlled, cross-over trial	Satoshi Seino et al (2017)	Screening criteria a score of 2 or higher on the (CL15).	67/77	Japan	Multifactorial intervention (resistance exercise, nutritional education and psychosocial programs).	The interventions had a significant reductions in Check-List 15 score, frailty prevalence, Timed Up and Go test , and Geriatric Depression Score, and improvements in the Dietary Variety Score, and protein and micronutrient intakes at 3 months, all of which, excluding protein and micronutrient intakes, persisted at 6 months.	Social capital highly linked to health outcomes in the frail population. Included a clear purpose from the beginning on what they want to achieve. There was a design to align needs to care.
Comprehensive assessment and management of frailty needs							

Nurse-led home visitation programme to improve health-related quality of life and reduce disability among potentially frail community-dwelling older people in general practice: A theory-based process evaluation	Mandy M N Stijnen et al. (2014)	Aged 75 years or older from GPs system, practices were purposefully select older people who had not been in contact for consultation for more than 6 months before the start of the study.	24 General practices (14 GPs and 13 PNs)	Netherl ands	GOLD home visitation program – home visit for conducting CGA and a tailored care and treatment, multidisciplinary care management and targeted intervention and follow-up.	Acceptable but there were barriers and challenges to fully implement the proposed plan.	Assessment was time consuming. Patients appreciated nurses visits and work.
Prevention of adverse health trajectories in a vulnerable elderly population through nurse home visits: A randomized controlled trial	Hein P J van Hout et al. (2010)	A score in the lowest quartile on at least two of six self-reported functional health domains (COOPWONCA charts), defined frail health.	617/658	Nertherl ands	Visiting program including a proactive home visits by trained nurse to do the assessment and then designed and executed a care plan.	No effects of home visits by nurses in vulnerable older persons.	How did the professionals link between needs and care was not clear.
A nurse-led interdisciplinary primary care approach	Metzelthin SF et al. (2013)	Older people (≥ 70 years) and (score ≥5 on	6 GP practices GPs = 12	Netherl ands	Nurse led interdisciplinary approach - frail older	Professionals and frail elderly were satisfied.	Time pressures was affecting the implementation
to prevent disability among communitydwelling frail older people: A large-scale process evaluation.		GFI).	Nurses = 7 OT= 6 PT= 20 Frail = 194		people and their informal caregiver, if available, receive a home visit by the practice nurse who does a multidimensional assessment focusing on existing problems in performing daily activities and on risk factors for disability. After the home visit, the general practitioner and		processes and the main elements of the interventions. The need was identified but then was not clear who has the skill to manage the needs. Building a trusting relationship with
Effectiveness of interdisciplinary primary care approach to reduce disability in community dwelling frail older people:	Slike Metzelthin et al. (2013)		270 /346	Netherl ands		No different with regards to disability	

Cluster randomised controlled trial.					practice nurse discuss whether additional assessments by other inpatient or outpatient healthcare professionals are needed. On the basis of the assessment phase, a preliminary treatment plan is formulated. During a second home visit by the practice nurse, a final treatment plan is formulated.		patients consumed time. Lack of clarity on having an early purpose on what they were trying to achieve.
Reducing disability in community-dwelling frail older people: Costeffectiveness study alongside a cluster randomised controlled trial	Metzelthin et al. (2015)		270/346	Netherl ands		The intervention under study led to an increase in healthcare utilization and related costs without providing any beneficial effects.	
Implementing care programmes for frail older people: A project management perspective.	Jill Bindelsa et al. (2014)		interview in 2009 (n=10) and in 2012 (n=13) and a focus group in 2012 (n=5)	Netherl ands		Successful in two regions – in third region there was a level of uncertainty. Issued that influenced the implementation were the quality of the collaboration between institutions, the adaptation to existing structures , project leadership and securing future funding.	
Cost-Effectiveness of a Chronic Care Model for Frail Older Adults in Primary Care: Economic Evaluation Alongside a Stepped-Wedge Cluster-Randomized Trial.	Karen M. van Leeuwen et al. (2015)	First, primary care physicians considered older people to be frail based on the loss of resources in the physical domain and/or the	782/1147	Netherl ands	Nurse led - Geriatirc Care model (GCM) – nurses conduct a multidimensional geriatric assessment, nurses write a care plan after each assessment in	No significant different in costs	Adherence to the GCM was high for most elements of the intervention – but did not monitor the extent to which the

From concept to content: assessing the implementation fidelity of a chronic care model for frail, older people who live at home.	Maaike E Muntinga et al. (2015)	psychosocial domain, or polypharmacy then older adults aged 65 and over, who had a PRISMA-7 score of 3 or more were eligible to participate.	1147	Netherl ands	consultation with the primary care professionals , later in a second visit nurses discuses care plan with the older person. Second visit – nurses provide information on guideline concordant management and treatment options to be involved in decision making – at all times; older person's wishes remained central. Review of actions listed on care plan with patient	level of adherence varied between professionals, which most likely can be attributed to professional's individual characteristics and circumstances.	actions in the care plans were carried out as intended. It was not clear whether limited use of the care plans may service as an alternative explanation for the lack of effectiveness of the GCM
Expanding access to pain care for frail, older people in primary care: A crosssectional study	Maaike E Muntinga et al. (2016)		781/ 1147	Netherl ands		A large share of people's pain complaints had already been identified by a primary care physician prior to the CGA.	
Effectiveness of a Geriatric Care Model for frail older adults in primary care: Results from a stepped wedge cluster randomized trial.	Emiel O.Hoogendijk et al. (2016)		782/1147	Netherl ands		No significant differences between the GCM and usual care group, better maintenance of ADL activity but no significant And No significant effects of the intervention on total and acute hospital admissions.	
Quality of primary care delivery and productive interactions among community-living frail older persons and their general practitioners and practice nurses	Lotte Vestigens et al. (2019)	Screening by suing a TFI score of 5 or higher (range 0–15) were identified as frail.	358/464	Netherl ands	Older persons are screened for frailty by the geriatric nurse or practice nurse during a home visit, each frail older person is discussed in multidisciplinary consultation, the practice team discusses and agrees upon (selfmanagement)	No significant different between groups to overall perceived quality of primary care.	Focus on screening but then there was no time to follow up.

					interventions, the care plan is discussed with the frail older patient, finally. Finally, followup of the frail older person was provided by a multidisciplinary team.		
Chronic Care Clinics: A randomized controlled trial of a model of primary care for frail older adults.	E.A. Coleman et al. (1999)	The chronic Disease Score used to identify frail participants, then physicians were using their experience to select the participants .	127/169	Seattle	Patients invited to, An extended (30 minutes) visit to the patient's physician and team nurse dedicated to developing a shared treatment plan that emphasized the reduction of disability; A session with the pharmacist (15 minutes), held in the primary care examination room, ; A patient self management group session (45 minutes), led by a team nurse or social worker, and The provision of health status assessment information to the practice team at the time of the CCC visits.	After 24 months, no significant improvements in frequency of incontinence, proportion with falls, depression scores, physical function scores, or prescriptions for high risk medications were demonstrated. The costs were not significantly different between groups.	Uncertainty in using the time, the professionals were creating time and recourses but they were not sure for what purpose.

Implementation of an innovative web-based conference table for community-dwelling frail older people, their informal caregivers and professionals: a process evaluation.	Sarah HM Robben et al. (2012)	Participants of the study were community-dwelling frail older people, who were patients of participating general practices	290 frail older people, 169 professionals participated in the ZWIP	Netherlands	The ZWIP consists of information about the frail older person's health, functioning and social situation, contact information about professionals	Overall positive but included several limitations mainly frail older population are likely to face some level of difficulties in engaging with e- health intervention.	Technology might not be a type of intervention used by frail older people.
		in the province of Gelderland or Noord-Brabant, the Netherlands; their informal care-givers; and healthcare and welfare professionals involved in their care.			involved in their care, and care-related goals formulated by or with the frail older person, a secure messaging system for communication between the frail older person and one or more professionals or between professionals, and tailored educational materials for the frail older person and informal caregiver.		

The short-term effects of an integrated care model for the frail elderly on health, quality of life, health care use and satisfaction with care	Wilhelmina Mijntje Looman et al. (2014)	Frailty was screened with the (GFI)- The score ranges from 0 to 15. Elderly with a score of 4 or more were considered as being frail.	417/446	Netherl nads	The general practitioners detected frailty, elderly patients were visited by their nurse who assessed their health, the assessment was discussed in a multidisciplinary meeting, a multidisciplinary treatment plan was then formulated in consultation with the elderly person and his or her informal caregiver(s).	It has a little effect on health, care usage, and satisfaction with care in the frail elderly. The only significant effect was found for one dimension of the ICECAP. The frail elderly in the experimental group felt that they were better able to receive the love and friendship they desired than the frail elderly in the control group.	Social and non healthcare factors resulted a big effect on outcomes. Lack of evidence about active involvement of patients.
Cost-effectiveness of a multidisciplinary intervention model for community-dwelling frail older people	René J F Melis Et al. (2008)	Physicians screened for frailty and referral older patients to the interventions. They had one or more limitations in cognition,	131/151	Netherl ands	The model used problem based selection procedure performed by GPs rather than population screening to identify patients eligible. A geriatric specialist nurse visited the patient	The new interventions is cost-effective at reasonable costs	Time and costs consuming – but it might make sense to understand problem and then set the recommendations.

		(instrumental) activities of daily living, or mental well-being.			at home. Up to six visits for additional geriatric evaluation and management were planned within the next 3 months. Starting off from a wide multidimensional assessment, the intervention team developed an individualized, integrated treatment plan for each patient.		Patient engaged on clear plan and when they understand the purpose. Better adherence of GPs in medical problems.
Multicomponent program to reduce functional decline in frail elderly people: A cluster controlled trial.	Franca G.H. Ruikes et al. (2016)	Community-dwelling frail elderly people aged ≥70 years were identified with the EASYCare two-step older persons screening instrument.	369/536	Netherl ands	CareWell primary care program - Proactive, individually tailored care plans were formulated for each participant; these plans were based on individual healthrelated goals and needs as assessed with the EASY-Care TOS. Care plans were revised during the team meetings at least every 6 months and stored in the information portal.	No beneficial effects of the program among frail elderly people.	It was not clear how professionals engage with each other – who was actively engage in the plan.

Cost-Effectiveness of a Proactive Primary Care Program for Frail Older People: A Cluster-Randomized Controlled Trial	Nienke Bleijenberg RN et al. (2017)	First, a software application identified patients at risk for frailty by screening routine (EMR) data from general practices. Patients aged 60 years and older were	2489/ 3092	Netherl ands	In first group, there was no trained registered nurse to deliver the additional steps of the proactive care program. In the second group, the frailty screening was followed by the nurse-led care intervention. Patients	The probability of cost effectiveness of screening plus nurse care versus GP care was 55% , frailty screening followed by the nurse led care is less cost effective than frailty screening followed by GP care. Adding the nurse led to	Early involvement of patient was not clear Nurses did not address some of the clinical needs e.g. social care.
		included in a quarterly report when they met at least 1 of the following criteria: a frailty index ≥0.20, polypharmacy of ≥5 medications in chronic use, or a consultation gap. 2. After the frailty screening based on EMR data, patients at risk received Groningen Frailty Indicator to measure the level of frailty.			who were identified as frail received a homebased Comprehensive Geriatric Assessment, followed by evidencebased care planning, care coordination and follow-up.	frailty screening had a low probability to cost effect.	Resources of collaboration was always an issues.
Frail Older Adults' Experiences With a Proactive, Nurse-Led Primary Care Program	Bleijenberg, N et al. (2015)		11 interviews of participants who received nurse led approach.	Netherl ands		The results regarding the perception and appreciation of this type of care showed a somewhat different perspective, most older adults appreciate the proactive care provided by RN, but only when this care was needed.	

Integrated care at home reduces unnecessary hospitalizations of community-dwelling frail older adults: a prospective controlled trial.	Laura Di Pollona et al. (2017)	Screened for frailty by one of four alarms or risk factors (impaired cognition, falls, social isolation, or frailty of the informal caregiver support) detected by the RAI-HC.	153/301	Geneva	The intervention received an additional home geriatric assessment by community geriatrics unit (GCU).	The intervention reduced the rate of hospitalizations after the first year, decreased unnecessary hospitalizations due to social problem, lowered the rate of emergency room visits after the first year, and increased the proportion of patients dying at home.	Better linkage between geriatric and primary care – linkage with geriatrician may help to direct the patients on how to use the resources.
Nurse home visits with or without alert buttons versus usual care in the frail elderly: a randomized controlled trial	Jesus Favela et al (2013)	Patients were aged over 60 years with a frailty index score higher than 0.14.	115/133	Mexico	After screening , participants were allocated to the control NV + AB (nurse home visits including alert button) or NV alone (nurse home visits alone). Participants in the intervention group received weekly visits from a nurse over a period of 9 months. This group of patients was also able to contact their nurses on whenever they felt the need by pressing the alert button, but the other group did not include emergency care or technological support via the alert button.	The NV+AB group reported improvement in almost all components of frailty phenotype and even when these changes were slight, a visiting nurse combined with technology that produces a sense of security in the patient could diminish the level of risk.	Unclear how the technology helped to have a positive effect on frailty scores.

Reversing Frailty Levels in Primary Care Using the CARES Model	Olga Theou et al. (2017)	Older people were screened for frailty by using both CFS and FI.	26/51	Canada	Providers teams were trained in using the comprehensive geriatric assessment (CGA) frailty levels among patients, the CGA was used to inform the creation of a wellness plan to identify goals most important to the patients, and patients were paired with a freeof-charge, telephone-based health coach for a period of up to six months.	Change in frailty scores between baseline and follow up after six months.	There was emphasis between patients and processionals defining the plan together but it was not clear when intervention was implemented Concern was emphasized regarding the length of CGA especially the paper format.
Impact on hospital admissions of an integrated primary care model for very frail elderly patients	de Stampa et al. (2014)	Using the Contact Assessment (CA) tool- Persons with a score of 6 or more were defined	219/428	Paris	The nurse performed a home-based comprehensive geriatric assessment, developed an individualized care	The risk of having at least one unplanned hospital admission decreased at one year and the planned hospital	Hospital geriatrician can direct the transition , and provided more care coordination.
		as having complex needs with a mix of medical, psychological, social conditions and functional impairments.			plan, coordinated all the required services during the follow-up. Nurses and primary care physician received support as needed from geriatricians participating.	admissions rate increased, without a significant change in total hospital admissions	
A community program of integrated care for frail older adults: Agil Barcelona	L M Pérez et al. (2019)	Individuals aged ≥80 years presenting at leas t one sign of frailty (i.e. slow gai :	112/134 (The total number who completed the	Spain	Designing a multidisciplinary intervention in the community, including a) multi-modal physical	The reported improvement of physical function was statistically and clinically significant. The benefits were	Clarity in the alignment between the assessment and management the needs, socialization

		speed, weakness, memory complaints, involuntary weight loss, poo social support). GFI was used to support the identification processes.	intervention out of the total who recruited)		activity (PA) sessions, b) promotion of adherence to a Mediterranean diet c) health education and d) medication review.	consistent across different initial frailty degrees, from milder to more advanced.	was also encouraged with exercise.

(CHS) Cardiovascular Health Study
(CL15) Check-List 15
(GFI) Groningen Frailty indicator
(TGUGT) Get-up-and-Go test
(MEC-35 Lobo) Mini-Examination Cognitive of Lobo
(MNA-SF) Mini Nutritional Assessment short form
(PRISMA) Program of Research to Integrate Services for the Maintenance of Autonomy
COOP_WONCA
(RAI-HC) Resident Assessment Instrument Home Care
(SHARE-FI) Survey of Health, Ageing, and Retirement in Europe (TFI)
Tilburg Frailty Indicator

Supplementary file 1: A list of additional studies

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