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Effectiveness of integrated person-centered interventions for older people's care: Review of Swedish experiences and experts' perspective

Mariam Kirvalidze[1], Anne-Marie Boström[2,3,4], Ann Liljas[1,5], Megan Doheny[1], Anne Hendry[6,7], Brendan McCormack[8], Laura Fratiglioni[1,9], Sulin Ali[1,5,10], Zahra Ebrahimi[11], Sölve Elmståhl[12], Maria Eriksdotter[3,13], Pascal Gläske[1,5,10], Lena-Karin Gustafsson[14], Åsa Hedberg Rundgren[9], Helena Hvitfeldt[15], Carin Lennartsson[1,16], Lena Marmstål Hammar[17,18], Gunnar H Nilsson[19], Peter Nilsson[20], Joakim Öhlén[11,21], Anna Sandgren[22], Annika Söderman[23], Karl Swedberg[24], Nicoline Vackerberg[25], Davide Liborio Vetrano[1,9], Helle Wijk[11,26,27], Janne Agerholm[1,5] & Amaia Calderón-Larrañaga[1,9]

From the [1]Aging Research Center, Department of Neurobiology, Care Sciences and Society, Karolinska Institutet and Stockholm University, Solna, Sweden; [2]Department of Neurobiology, Care Sciences, and Society, Division of Nursing, Karolinska Institutet, Huddinge, Sweden; [3]Theme Inflammation and Aging, Karolinska University Hospital, Stockholm, Sweden; [4]Research and Development Unit, Stockholms Sjukhem, Stockholm, Sweden; [5]Department of Global Public Health, Karolinska Institutet, Solna, Sweden; [6]International Foundation for Integrated Care (IFIC), Glasgow, Scotland, UK; [7]School of Health and Life Sciences, University of the West of Scotland, Glasgow, Scotland, UK; [8]Faculty of Medicine and Health, Susan Wakil School of Nursing and Midwifery, Sydney Nursing School, The University of Sydney, Sydney, Australia; [9]Stockholm Gerontology Research Center, Stockholm, Sweden; [10]Institute for Sociology, University of Duisburg-Essen, Duisburg, Germany; [11]Institute of Health and Care Sciences, Sahlgrenska Academy, University of Gothenburg Centre for Person-Centred Care – GPCC, Gothenburg, Sweden; [12]Department of Clinical Sciences, Division of Geriatric Medicine, Lund University, Lund, Sweden; [13]Department of Neurobiology, Care Sciences and Society, Division of Clinical Geriatrics, Karolinska Institutet, Huddinge, Sweden; [14]School of Health, Care and Social Welfare, Mälardalen University, Eskilstuna, Sweden; [15]Norrtälje Hospital, Vårdbolaget Tiohundra, Stockholm, Sweden; [16]Swedish Institute for Social Research (SOFI), Stockholm University, Stockholm, Sweden; [17]School of Health, Care and Social Welfare, Mälardalen University, Västerås, Sweden; [18]School of Health and Welfare, Dalarna University, Falun, Sweden; [19]Department of Neurobiology, Care Sciences, and Society, Division of Family Medicine and Primary Care, Karolinska Institutet, Huddinge, Sweden; [20]Myndigheten för vård- och omsorgsanalys, Stockholm, Sweden; [21]Palliative Care Centre, Sahlgrenska University Hospital, Gothenburg, Sweden; [22]Center for Collaborative Palliative Care, Department of Health and Caring Sciences, Linnaeus University, Växjö, Sweden; [23]Faculty of Medicine and Health, School of Health Sciences, Örebro University, Örebro, Sweden; [24]Department of Molecular and Clinical Medicine, Sahlgrenska Academy, University of Gothenburg, Gothenburg, Sweden; [25]Jönköping Academy for Improvement of Health and Welfare, Jönköping University, Jönköping, Sweden; [26]Department of Architecture and Civil Engineering, Chalmers University of Technology, Gothenburg, Sweden; and [27]Department of Quality Assurance and Patient Safety, Sahlgrenska University Hospital, Gothenburg, Sweden

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Older adults have multiple medical and social care needs, requiring a shift toward an integrated person-centered model of care. Our objective was to describe and summarize Swedish experiences of integrated person-centered care by reviewing studies published between 2000 and 2023, and to identify the main challenges and scientific gaps through expert discussions. Seventy-three publications were identified by searching MEDLINE and contacting experts. Interventions were categorized using two World Health Organization frameworks: (1) Integrated Care for Older People (ICOPE), and (2) Integrated People-Centered Health Services (IPCHS). The included 73 publications were derived from 31 unique and heterogeneous interventions pertaining mainly to the micro- and meso-levels. Among publications

From the symposium: Person-centered and integrated care for older people: Successful experiences across Sweden.

measuring mortality, 15% were effective. Subjective health outcomes showed improvement in 24% of publications, morbidity outcomes in 42%, disability outcomes in 48%, and service utilization outcomes in 58%. Workshop discussions in Stockholm (Sweden), March 2023, were recorded, transcribed, and summarized. Experts emphasized: (1) lack of rigorous evaluation methods, (2) need for participatory designs, (3) scarcity of macro-level interventions, and (4) importance of transitioning from person- to people-centered integrated care. These challenges could explain the unexpected weak beneficial effects of the interventions on health outcomes, whereas service utilization outcomes were more positively impacted. Finally, we derived a list of recommendations, including the need to engage care organizations in interventions from their inception and to leverage researchers' scientific expertise. Although this review provides a comprehensive snapshot of interventions in the context of Sweden, the findings offer transferable perspectives on the real-world challenges encountered in this field.

Keywords: person-centered care, integrated care, older people, Sweden

Introduction

In recent decades, evidence from the aging research field has demonstrated the need for a shift from traditional, single-disease-focused healthcare to a holistic, person-centered approach that considers the entirety of an individual, encompassing their medical, social, and psychological needs simultaneously [1, 2]. This approach requires the integration of different disciplines and care settings, which have traditionally operated in a fragmented manner. Older adults often have complex health needs that lead to interactions with multiple specialists and care providers, requiring effective communication and coordination [2, 3]. These needs can be met by integrated person-centered care models, which ensure that older people's health is comprehensively addressed, promoting improvements in health and well-being, while simultaneously preserving their autonomy and dignity [4, 5].

The Swedish medical and social care system is decentralized, and responsibilities are divided among several regions and municipalities in charge of delivering various components of medical and social care services, respectively [6]. Although the country has publicly funded universal health coverage, it is confronted with several challenges that are common to many other developed heath systems, including a lack of coordination among healthcare providers and between medical and social care settings, variable care quality among different regions and municipalities, and increased reliance on informal caregivers for caring for the oldest old [7]. Several initiatives have been directed toward promoting better integration of care, including the Good and Close Care 2030 (*God och nära vård*) program enacted in 2018, which aims to integrate services for seamless and better coordinated care [8]. However, the most recent evaluations report minimal to no changes from the patient, system, and professional perspectives and highlight that—despite existing political and strategic support—a lack of resources in primary care might hinder the transition into actual good and close care in the coming years [9, 10].

The concepts of person-centered and integrated care have been defined in multiple ways. Briefly, person-centered care implies that a person's values and preferences guide their care, supporting their realistic health and life goals [11], whereas integrated care involves managing and delivering healthcare services in a coordinated manner, covering everything from prevention to treatment and beyond, tailored to the individual's needs and resources throughout their life [12]. The endorsement of integrated and person-centered care is highly prioritized in the international health-policy agenda due to its potential to promote equitable access to quality care worldwide. Recent recommendations have emphasized the need to combine these two concepts and move forward toward people-centered integrated care delivery [13]. The Integrated Care for Older People (ICOPE) framework by the World Health Organization (WHO) provides guidance for implementing interventions at the micro (patient), meso (service), and macro (system) levels [14]. In parallel, a WHO practice brief linked to the Integrated People-Centered Health Services (IPCHS) framework provides eight key practice areas that need to be optimized to support interactions among multiple providers within

and across interdisciplinary teams at different care settings [15].

In this paper, we aim to evaluate Swedish experiences of integrated person-centered care for older people by conducting: (1) a scoping review of the effectiveness of interventions in Sweden, structured according to the ICOPE and IPCHS frameworks, and (2) a qualitative analysis of a workshop held in Stockholm in March 2023, where 17 experts discussed specific challenges, barriers, and enablers linked to intervention design, evaluation, and implementation.

Methods

This review was written based on the symposium and expert workshop "Person-centered and integrated care for older people: Successful experiences across Sweden", which took place on March 21–22, 2023, at Karolinska Institutet, in Stockholm, Sweden (https://news.ki.se/symposium-on-person-centred-and-integrated-care-for-older-people). The manuscript was structured based on the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews checklist [16].

Scoping review

Eligibility criteria. We included original, peer-reviewed articles published in Swedish or English between 2000 and the search date (March 10, 2023). The identification of person-centered or integrated (or both) interventions was determined if either: (1) the authors "labeled" the interventions as such themselves, (2) specific keywords were used to describe the interventions, or (3) the descriptions met the definitions proposed by the University of Gothenburg Center for Person-Centered Care (GPCC) for person-centered interventions [17], and the Swedish Agency for Health and Care Services Analysis (*Myndigheten för vård- och omsorgsanalys*) for integrated care [18]. All types of study designs were considered, as well as articles examining implementation outcomes, according to Proctor et al.'s framework [19]. The full list of inclusion and exclusion criteria is summarized in Fig. S1.

Information sources and search strategy. We searched MEDLINE on March 10, 2023, to identify potentially relevant publications. The search used a combination of controlled vocabulary terms (e.g., MeSH terms) and relevant free-text keywords related to the research topic, which were identified by searching previous literature. The full search algorithm is presented in Table S1. All experts attending the workshop were also contacted to check the completeness of the included publications. Additionally, a manual search of the reference lists of selected publications was conducted.

Selection of studies and data charting. The titles and abstracts of all references, as well as the full texts of preliminarily selected articles, were independently screened against the eligibility criteria by at least two authors using the *Covidence* software [20]. Any dissent in screening was resolved by discussion moderated by a third author. Two authors extracted data from the studies, and a third author checked and confirmed the accuracy of the data. Information extracted from the articles included findings related to the outcomes of interest, as well as details about the samples and intervention design/content. Of note, implementation outcomes were mapped using an existing framework as follows: acceptability, adoption, appropriateness, costs, feasibility, fidelity, penetration, and sustainability (see definitions in the original manuscript by Proctor et al. [19]).

Synthesis of results. We conducted a narrative synthesis of the included papers [21]. Interventions were grouped using (1) ICOPE implementation framework levels (i.e., micro-, meso-, and macro-levels of service provision) [14] and (2) IPCHS framework priority practice areas [15] (Table 1).

Expert discussion

Four main discussion points were raised in the workshop: (1) definitions of person-centered and integrated care, (2) intervention design, (3) intervention evaluation, and (4) implementation/scalability. The list of the 17 experts participating in the discussion and the detailed questions posed in the workshop are available in Table S2. Voice recordings were made and transcribed *verbatim* based on explicit consent from the participants. The transcript was thematically summarized.

Results: scoping review

Our MEDLINE search resulted in 1832 unique records, of which 1634 were excluded at the stage of title and abstract screening (Fig. S2). Of the 198

Table 1. *Definitions of Integrated Care for Older People (ICOPE) levels and the list of Integrated People-Centered Health Services (IPCHS) priority practice areas*

ICOPE level	Objectives
Micro (patient)	Maximize intrinsic capacity and functional ability through shared decision-making and person-centered goal-setting.
Meso (service)	Orient services towards community-based care; support the coordination of services delivered by multidisciplinary providers; engage and empower people and communities.
Macro (system)	Strengthen governance and accountability systems; enable system-level strengthening.
IPCHS practice area	**Description**
1. Continuity with a primary care professional	A positive, continuing relationship between the patient and the named primary care professional within the extended primary care team.
2. Collaborative planning of care and shared decision-making	Involving patients, family and caregivers in holistic, anticipatory planning of care with care "navigators", "connectors," or "health coaches" to help them manage their conditions, build social connections, and improve their understanding and adherence to medicines.
3. Case management for people with complex needs	Care and support are planned, reviewed, and coordinated by a practitioner case manager, who follows care over time and addresses both the physical and the mental health needs of people with complex multiple conditions or complicated circumstances.
4. Collocated services or a single point of access	A single-entry point to access physically collocated services or to access staff and services linked by online or telephone systems.
5. Transitional or intermediate care	Teams manage transitions between hospital and home and offer urgent community assessment, treatment, rehabilitation, or palliative and end-of-life care as alternatives to readmission to hospital. The teams also help people to understand and manage their medicines at home.
6. Comprehensive care along the entire pathway	Comprehensive managed care models provide care coordination along the entire pathway, from home, community services, ambulatory, and emergency care to hospital care.
7. Technology to support continuity and care coordination	The availability of information and communication technologies that support the management of people's care makes it easier to ensure continuity and care coordination.
8. Building workforce capability	Education and training are required to strengthen the knowledge, confidence, skills and competence of patients, families, volunteers, communities, and all staff involved in delivering continuity and care coordination.

Source: Adapted from Integrated Care for Older People, implementation framework guidance for systems and services (2019) and Continuity and coordination of care: a practice brief to support implementation of the World Health Organization (WHO) framework on Integrated People-Centered Health ervices (2018).

articles that underwent full-text screening by at least 2 authors, 67 were included. Six additional articles were identified by contacting experts in the field, bringing the total up to 73 publications. We summarized the evidence on health and service use outcomes (55 publications), as well as implementation outcomes (18 publications) pertaining to 31 unique interventions in Sweden. All publications were written in English.

Interventions were carried out predominantly in urban settings, concentrated around two large cities in Sweden: Gothenburg and Stockholm (Fig. 1). Most interventions focused on specific diseases, such as heart failure and chronic obstructive pulmonary disease, although 13 interventions addressed a broader group of geriatric patients, emphasizing those with multimorbidity and frailty. Interventions primarily occurred

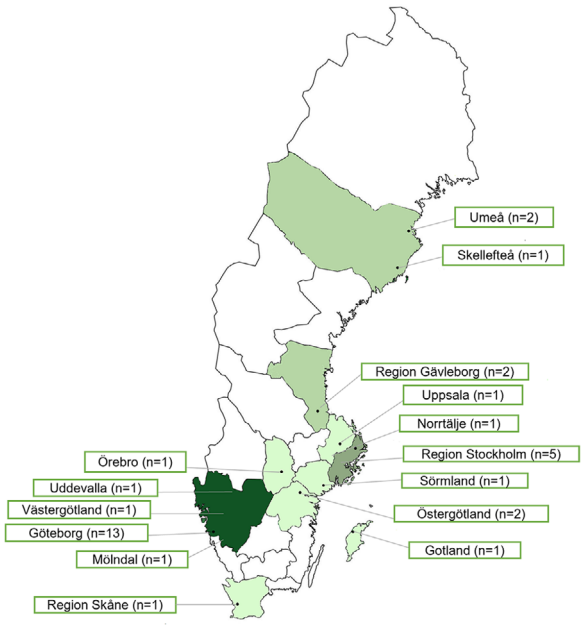

Fig. 1 *Map of Sweden showing where the 31 interventions took place between January 2000 and March 2023 (NB: some interventions had more than one location involved). A darker shade of green represents a higher number of interventions taking place in that geographical area.*

in hospital, post-discharge, and home care settings, with fewer instances in care homes and primary care. The most frequently involved professional was a nurse, followed by occupational therapists and physiotherapists. Most interventions involved medical professionals exclusively, and six involved social workers. The predominant type of study design was a non-randomized controlled trial (Table 2).

Regarding effectiveness—considering every publication by which the outcome was measured and, thus, accounting for the fact that some interventions were assessed by multiple publications—, in 15% of the publications measuring mortality, a significant protective effect was observed. Subjective health outcomes showed improvement in 24% of publications, morbidity outcomes in 42%, disability outcomes in 48%, and service utilization outcomes in 58% (Table 3). For implementation outcomes, acceptability of the intervention—defined as the perception that a given treatment, service, practice, or innovation is agreeable, palatable, or satisfactory [19]—was most commonly examined (11 interventions). Detailed descriptions of the interventions, as well as their effectiveness, are presented in Tables S3–S5. The implementation outcomes are presented in detail within the text.

Table 2. *Summary of intervention characteristics (N = 31)*

Characteristic	Number of interventions
Settings	
Hospital care	16
Home care	10
Primary care	5
Care (residential) homes, rehabilitation clinics	3 for each
Outpatient surgery	1
Professionals involved	
Nurses	27
Occupational therapists	17
Physiotherapists	13
Physicians	8
Social workers	6
Nutritionists/dieticians	5
sDisease focus	
No focus/frailty/multimorbidity	13
Heart failure and/or chronic obstructive pulmonary disease	6
Hip fracture	5
Stroke	4
Cancer	3
Study design (only effectiveness studies)	
Non-randomized controlled study	15
Randomized controlled study	12
Uncontrolled study	3
Longitudinal, register-based analysis	2
Patient and public involvement (PPI)	
PPI components present	6
No PPI components found	25

The results of categorizing the interventions across the WHO ICOPE and IPCHS frameworks are presented in Table 4 and described within the text below.

Summary of 20 interventions on the ICOPE micro (patient) level

Five interventions on collaborative planning and shared decision-making (practice area 2)

Table 3. *Effectiveness and implementation outcomes of interventions*

Health- and service use-related outcomes	Number of interventions*	% of success	Number of publications**	% of success
Mortality	8	2 **(25%)**	13	2 **(15%)**
Morbidity (symptom control and burden, depression, anxiety, stroke impact scale, physical fitness)	24	11 **(46%)**	26	11 **(42%)**
Disability (ADLs, IADLs, frailty, overall disability)	18	11 **(61%)**	23	11 **(48%)**
Subjective health (HRQoL, life satisfaction, self-rated health)	20	6 **(30%)**	25	6 **(24%)**
Service utilization (hospitalization rate and length of stay, discharge process, use of services, outpatient visits, emergency visits, recommended drug use)	32	21 **(66%)**	36	21 **(58%)**

Implementation outcomes (Proctor et al.)	Number of interventions*
Acceptability (by users, staff, families)	11
Costs (utility, effectiveness)	10
Feasibility	7
Fidelity	2
Sustainability	2

Abbreviations: ADLs, activities of daily living; IADLs, instrumental activities of daily living; HRQoL, health-related quality of life.
*Outcome counted only once per intervention, regardless of number of publications reporting it.
**Outcome counted every time it was measured in all publications pertaining to one same intervention.

- The *PCC-HF study* (a study employing person-centered care in managing patients with chronic heart failure) showed reduced hospital stay and better preservation of activities of daily living (ADLs) but found no differences between the intervention and control groups in terms of health-related quality of life (HRQoL) or readmission rates after six months [22]. Patients in the intervention group were discharged earlier, and the process went smoother than for those in the control group [23]. The intervention was associated with lower costs and more health benefits than conventional care [24]. According to the managers involved in the intervention, facilitators to implementation included the organizational culture, distribution of power, teamwork, and efficiency [25]. However, there was a concern that the implementation process was incomplete and that it could regress to previous work routines [25].
- The intervention *Person-centered care for patients undergoing total hip arthroplasty* showed shorter hospital stay but did not find significant differences in ADLs and HRQoL [26].
- A *client-centered program focusing on energy conservation for people with heart failure* failed to find statistically significant differences in terms of depression and fatigue severity between the intervention and control groups [27]. The intervention was positively assessed by staff and clients, with notable findings on enhanced collaboration and new knowledge [27]. However, the staff questioned the possibility of long-term use in clinical practice [27].
- The intervention *Coordinated geriatric care with increased patient participation and goal-setting* for patients with hip fracture demonstrated a faster recovery in ADLs in the intervention group but failed to show significant differences between groups for the remaining outcomes,

Table 4. *Mapping of included interventions (N = 31) across the elements of the Integrated Care for Older People (ICOPE) and Integrated People-Centered Health Services (IPCHS) frameworks (see Table 1 for descriptions of ICOPE levels and IPCHS priority practice areas 1–8)*

Interventions	IPCHS Priority practice areas							
	1	2	3	4	5	6	7	8
ICOPE micro (person-centered goal) level interventions								
PCC-HF Study: PCC for patients with CHF [22–25]		×						
PCC for patients undergoing total hip arthroplasty [26]		×						
A client-centered energy conservation program for people with CHF [27]		×						
Coordinated geriatric care with increased patient participation and goal setting [28]		×						
DCI-SWE: Swedish Dignity Care Intervention [29,30]		×						
Case management intervention including personalized plan and coordination of care [31]		×	×					
RESPECT intervention [32]		×	×					
A client-centered ADL stroke rehabilitation intervention [33–40]		×			×			
Empowerment intervention for hip fracture rehabilitation [41]		×			×			
Gothenburg Very Early Supported Discharge study (GOTVED) [42]		×			×			
Preparedness for colorectal cancer surgery and recovery [43]		×	×		×			
Multidisciplinary postoperative rehabilitation using CGA [44,45]		×			×	×		
CGA-Swed: CGA in a Swedish acute hospital [46–50]		×			×	×		
CGA in acute hospital care [51–55]		×				×		
CGA in primary care [56,57]	×	×				×		
Patient-centered home-based management of CHF using OPTILOGG® system [58]		×					×	
Care4ourselves: PCC delivered using a structured telephone support (±digital platform) [59–63]		×			×		×	
F@ce: A team-based PCC for rehabilitation after stroke [64]		×			×		×	
ASSIST: A reablement program for older adults [65]		×			×		×	
Person-centered incontinence care [66]		×						×
ICOPE meso (service) level interventions								
Göteborg 70+ Stroke Study [67,68]		×	×		×	×		
IC pathway for acute hip fracture [69,70,106]		×	×		×	×		
Continuum of care intervention for frail older people [71–74]		×	×		×	×		
A Frailty Intervention Trial (Age-FIT) [75–80]		×	×		×	×		
PREFER intervention [81–85]		×	×		×	×		
Care Process Programme for frail older people [86]		×	×		×	×		
Advanced cancer nursing (contact nurse) intervention [87]		×	×	×	×	×		
Coordinated hip fracture care model [88]					×	×		
Knowledge-based palliative care intervention [89]		×						×
ICOPE macro (system) level interventions								
Nurse-led heart failure clinics in primary care [90]	×		×	×	×	×		×
TioHundra integrated healthcare organization [91–93]	×	×		×	×	×	×	×

Abbreviations: IC, integrated care; PCC, person-centered care; CHF, chronic heart failure; CGA, comprehensive geriatric assessment: ADL, activities of daily living, ICOPE: Integrated Care of Older People, IPCHS: Integrated People-Centered Health Services.

such as functional balance and physical performance measures [28].

- The *Swedish Dignity Care Intervention (DCI-SWE)* targeting palliative care patients did not show significant changes in quality of life (QoL) [29]. The intervention was reported to be acceptable by both patients and their relatives, as it provided the needed structure for palliative care. Facilitators included sufficient time, support from managers, and positive effects on patients; barriers included lack of staff, fear of change, and interruptions from family members [29, 30].

Two interventions on collaborative planning with a case management element (practice areas 2 and 3)

- A *case management intervention for older people with frequent emergency department visits*, which included a personalized plan and coordination of hospital care, showed a significant reduction in hospitalization rates [31]. However, there were no differences in the number of days in hospital nor the risk of death between the intervention and control groups [31]. The intervention did not result in significant differences in total healthcare costs between the intervention and control groups [31].
- The *RESPECT intervention*—a person-centered support program aiming to empower patients with cancer to deal with treatment side effects—showed no significant differences between the control and intervention groups after three months with regard to the number and severity of symptoms [32]. The intervention showed high recruitment and retention rates, but none of the patients made contact with the intervention team after the intervention was completed, raising concerns regarding sustained effects [32].

Four interventions on collaborative planning within transitional care (practice areas 2, ±3, and 5)

- A *client-centered ADL stroke rehabilitation intervention* was examined in six publications. In a feasibility trial, there were no differences in ADL, stroke impact scale (SIS) measures, functional dependence, life satisfaction, or use of services [33]. Similarly, in a pilot trial, there were no statistically significant differences in outcomes for ADLs, functional dependence, life satisfaction, or SIS [34]. In a subsequent randomized controlled trial, the intervention failed to show significant differences, apart from the domain of emotional health in SIS [35]. In a multicenter trial, there were no differences between the groups regarding changes in independence in ADLs or life satisfaction during the first 12 months [36]. A secondary analysis of the trial showed that patients in the intervention group had a shorter length of hospital stay and fewer outpatient contacts [37]. Finally, in the most recent cluster-randomized trial with a five-year follow-up, the intervention group did not demonstrate significant improvements for the primary outcome SIS nor for secondary outcomes such as independence in ADLs and life satisfaction [38]. The intervention was accepted by patients, although these were involved in other simultaneous studies, making it difficult to discern effects [33]. The caregiver burden was not improved by the intervention, and the intervention was too strenuous for some participants [34]. In a separate caregiver interview study, there were no differences in the outcomes of caregiver burden, provision of informal care, perceived participation in everyday occupations, or life satisfaction [39]. In a later publication, anxiety and depression scale scores were significantly higher for caregivers in the control group [38]. Finally, in an interview study with managers and staff, some therapists thought that the intervention was too limited and difficult to implement. Managers reported some barriers, including reorganization, low staffing, and recruitment issues during the implementation [40].
- An *empowerment intervention for rehabilitation of patients with hip fracture* demonstrated a significantly shorter length of hospitalization in the intervention group, although mortality rates did not differ [41].
- The *Gothenburg Very Early Supported Discharge study* did not show significant differences between the stroke groups regarding anxiety at three- or 12-months poststroke [42]. The overall disability was significantly lower in the intervention group three months poststroke, but not at one-year poststroke [42].
- An intervention exploring the effects of a *person-centered information and communication intervention for preparedness for colorectal cancer surgery and recovery* found no significant

difference in QoL between the intervention and control groups [43]. However, the intervention group had a significantly shorter hospital stay [43].

Four interventions on collaborative planning with comprehensive patient pathways (practice areas ±1, 2, ±5, and 6)

- A *multidisciplinary CGA-based postoperative rehabilitation program* for older people with femoral neck fractures demonstrated better ADL independence and mobility measures in the intervention group but failed to show differences in mortality compared to the control group [44]. In a subgroup analysis of the same trial pinpointing older people with femoral neck fracture and concomitant dementia, the intervention group had fewer postoperative complications and gained ADL independence faster but was not different from the control group in terms of mortality, readmissions, or length of stay [45].
- The intervention *CGA-Swed: Comprehensive geriatric assessment in a Swedish acute hospital for frail older people* did not lead to significant differences in ADLs or self-rated health [46]. However, the intervention was associated with a higher proportion of patients being prescribed antidepressants [47]. In a recent study, the intervention reduced frail older people's dependence in ADL, but there were no statistically significant changes for self-rated health or frailty at the 12-month follow-up [48]. The *CGA-Swed* was proven to be feasible [49], patients reported feeling respected as a person [50], and had a higher probability of having received written information on their care [46].
- The intervention *Comprehensive geriatric assessment in acute hospital care*, which targeted frail, hospitalized older patients, showed that patients in the intervention group had a lower risk of decline in ADLs and in the degree of frailty [51], lower mortality rate, better HRQoL [52], and better physical fitness [53]. The intervention was found to be less costly and more effective than usual care, and patients reported high satisfaction with the received care [54, 55].
- An intervention on *comprehensive geriatric assessment in primary care* targeting older people at risk of hospitalization, found a significant reduction in hospital care days and number of hospital episodes in the intervention group throughout the two-year follow-up [56]. The number of outpatient visits and mortality rates were not different between the groups [56]. The intervention was found to be less costly [56], mainly due to lower costs for hospital episodes, and cost-effective at 24 months [57].

Four interventions on using technology to support continuity of care (practice areas 2, ±5, and 7)

- An project employing a home intervention system, *OPTILOGG*, for managing heart failure symptoms showed that the intervention group had significantly higher scores on HRQoL measures and spent fewer days in hospital [58].
- A person-centered care intervention delivered using structured telephone support, *Care4ourselves*, was assessed in several studies. There were no differences in hospitalization and mortality rates between the intervention and control groups [59]. However, self-reported fatigue improved in the intervention group in one out of five dimensions (i.e., "reduced motivation" dimension) [60]. In a version of the intervention comprising telephone support plus a digital platform, the hospitalization and mortality rates neither differed between the groups [61], but at both three- and six-month follow-ups, the intervention group improved significantly in terms of ability to control one's illness [62]. The intervention showed higher cost-effectiveness than usual care [63].
- The *F@ce* intervention—using information and communication technology for stroke rehabilitation—was assessed in an uncontrolled feasibility study [64]. Several participants showed clinically meaningful improvements in SIS and life satisfaction, whereas there were no changes in anxiety, depression, or fatigue [64]. The intervention showed good adherence and acceptability, but the fidelity of the intervention required some improvement—for example, more time for workshop planning and preparation and better procedures for following-up the intervention [64].
- The *ASSIST intervention*—a reablement program for older adults who were discharged from the hospital into home care—showed

improvements in HRQoL but failed to show differences between the intervention and control groups in terms of ADLs, anxiety, depression, and life satisfaction [65]. The intervention was shown to be acceptable to patients and feasible for scale-up and implementation in the Swedish context [65].

Other

- One intervention covered the areas of collaborative care (practice area 2) and capacity building of the workforce through comprehensive education of staff (practice area 8). This was the *person-centered incontinence care intervention for older adults with cognitive decline in residential care*, which showed an increase in residents' QoL in the intervention group compared to the baseline and control group [66].

Summary of nine interventions on the ICOPE meso (service) level

Seven interventions on collaborative planning through case management and care continuity (practice areas 2, 3, ±4, 5, and 6)

- The *Göteborg 70+ Stroke Study: Integrating stroke care into the care continuum* was not associated with better outcomes in terms of a greater number of surviving patients living at home, better ability to perform ADLs, or higher QoL [67]. An article examining healthcare costs of the intervention reported that the total costs during the first year poststroke did not differ significantly between the intervention and control groups [68].
- In an article on the *Integrated care pathway for acute hip fracture*, the intervention group had a significantly shorter length of hospital stay, shorter time to first ambulation, fewer pressure wounds, and fewer medical complications than the comparison group [69]. Another publication on the same intervention reported that ADL outcomes were more favorable in the intervention group [70]. The intervention was cheaper and more effective than usual care [71].
- The *continuum of care intervention for frail older people* was assessed in three publications over the years. An earlier randomized controlled trial reported that the intervention group had higher odds of improved ADL independence compared to the control group at both three- and 12-month follow-ups but showed no significant differences between the groups in terms of changes in frailty levels [72]. A subsequent article reported that life satisfaction was higher among patients in the intervention group [73]. Finally, another paper reported that the intervention was associated with improvements in self-rated health and a reduction in symptoms [74]. According to the staff participating in the intervention, the different cultures of organizations must be considered when implementing a new model. The role of upper management emerged as very important [75].
- The *Frailty Intervention Trial (Age-FIT),* which explored the effects of comprehensive ambulatory geriatric assessment for frail older people with multimorbidity, reported no differences in the number of hospitalizations or measures of HRQoL, but the intervention group stayed in the hospital for a shorter time and demonstrated a trend of reduced mortality [76]. A long-term evaluation of the same intervention reported an increase in mean survival time in the intervention group [77]. The mean number of hospitalizations or care home transfers during follow-up did not differ significantly between groups, whereas the number of days in the hospital was significantly lower in the intervention group [77]. The *Age-FIT* did not show differences between the intervention and control groups regarding prevalence, burden, or trajectory of symptoms in another study [78]. The same intervention was found not to affect the causes of death [79], but at 24-months post-intervention, there was a significantly smaller proportion of frail and deceased patients and a significantly higher proportion of pre-frail patients in the intervention group [80]. The *Age-FIT* was shown to be equivalent to usual care in terms of total costs for medical and social care [76]. However, patients in the intervention group had significantly more visits to physicians and other staff and lower costs for hospital care than patients in the control group [77]. A later cost-effectiveness analysis of the *Age-FIT* reported that, although the intervention was associated with higher costs, participants in the intervention group survived longer [81].
- The *PREFER intervention, person-centered and integrated chronic heart failure and palliative home care*, improved HRQoL, functionality,

symptom burden, and reduced the number and duration of hospitalizations [82]. The same intervention was assessed again in a sub-study focusing on pharmacological treatment, which reported that patients in the intervention group were more likely to receive guideline-recommended target doses of drugs [83]. The *PREFER intervention* was deemed cost-saving (mainly due to reduced costs for hospital care) [84], acceptable by family members of patients [85], and fostered feelings of personhood and involvement in decision-making among patients [86].

- A *care process program for frail older people* was assessed by one paper, which reported that, between the six- and 12-month follow-ups, there was a significant improvement in life satisfaction among participants in the program [87].
- One publication assessed the intervention *advanced cancer nurse role* (coordination contact nurse) and effects on access to healthcare resources among all adults (mean age was higher than 65 years) [88]. There were statistically significant improvements related to the availability of supportive care resources—for example, increased reported access to contact nurses and individual written care plans [88].

Other

- A *coordinated hip fracture care model*, addressing the areas of transitional care (practice area 5) and comprehensive care along the entire pathway (practice area 6), demonstrated a shortening of the hospital stay, but there was no difference between the groups in terms of patient-reported QoL [89]. The cost of care was significantly lower for patients in the intervention group [89].
- A *knowledge-based palliative care intervention* for care home residents, addressing the areas of collaborative planning of care (practice area 2) and building workforce capacity (practice area 8), did not find between-group differences in QoL [90].

Summary of two interventions on the ICOPE macro (system) level

- One publication on *nurse-led heart failure clinics in primary care settings* reported that this intervention significantly reduced the number of heart failure-related hospital admissions, hospital days, and emergency room visits [91].
- According to two publications assessing the integrated care model for people aged over 65 years implemented by the *TioHundra* organization, the care model was associated with a decrease in the rate of emergency department visits [92] and the rate of hospitalization for ambulatory care sensitive conditions [93], compared to pre-intervention levels. However, the difference was not statistically significant when compared to changes in the rest of Stockholm county [92] and a matched control area [93]. Another article examining *TioHundra* found that patients undergoing total hip replacement in the integrated care system showed no differences across studied health outcomes compared to those receiving standard care [94].

Results: expert discussion

In Table 5, we present findings from the expert discussion by themes (four main discussion points raised in the workshop, see Table S2) and subthemes (consistent categories of topics mentioned by the experts), supported by *verbatim* quotes.

Discussion

In this review, which draws from a workshop involving experts in the field, a strategic choice was made to examine care interventions using the ICOPE and IPCHS frameworks from WHO involving both people-centered practice (which extends the concept of person-centered care to individuals, families, communities, and the society) and integrated care elements [13]. This decision was dictated by the need to account for heterogeneous definitions and diverse interventions [12, 95], as well as the conceptual development of person-centered integrated care models [4]. Taking the Swedish experience as a case study, we have derived some key recommendations linked to intervention content, design, and implementation (Fig. 2).

Theoretical frameworks were rarely used in the included Swedish interventions. For person-centered interventions, as expected by our choice of definitions, the GPCC framework was predominant [17]. It is reasonable to assert that the GPCC

Table 5. *Findings from the experts' workshop*

Theme	Subtheme	Verbatim
Features of integrated person-centered care	Care integration as a means for person-centeredness to flourish	*Integrated care is very important if we are to lift the person-centered care from just the clinical level to the system level.*
	Shifting from integrated person- to people-centered care	*This is another element of integrated care, not just for people who need care now, but to create health for the whole population.*
	Trusted relationships and shared decision-making with the person and their family	*On the micro level, it's about the patient story or the narratives, it's about shared decision-making. It's about taking patients' goals, wishes, and needs as the basis.*
	Supporting dignity, respect, and empowerment	*Every member of the workforce should know how to incorporate values of, for example, dignity and respect.*
	Ensuring health literacy for the patient and their family	*We need to support the patient and family members to obtain and gain knowledge about the situation and become actively involved in the care process.*
	Deconstructing organizational barriers to ensure informational and interpersonal continuity	*We can't read each other's documentation; the care documentation in the municipalities can't be compared to that of the regions, for example. So, that's a kind of obstacle for working in an integrated person-centered way.*
	Where is integrated person-centered culture initiated?	*We immediately got a little dissonance in our group because some of us said that culture must be set on the macro level and others thought it must happen at ground level, among people.*
Intervention design	Participatory research with patients is vital	*It's so important to really listen if the person wants to be involved in co-design; […] they maybe feel very uncomfortable participating as an older person.*
	People with cognitive difficulties should not be excluded	*Too often there is exclusion criteria for people with cognitive disabilities, but the results are very often used for that group.*
	Independent advocates for older people with communication impairment	*Older people who have communication or sensory impairments might need an advocate to ensure that care is safe and appropriate for them and in their best interest.*
	Educating professions in silos hinders interdisciplinary research	*There is a lack of interdisciplinary education of professions. One facilitator could be a transdisciplinary ambassador at the clinics.*
	Cooperation among academia, care providers, and care quality experts for true co-design	*It would be exciting to test different kinds of rotation employments; for example, I as a healthcare professional would work both within patient care and in the municipality, as part of a chain.*
Intervention evaluation	Multiple outcomes and their synergies should be considered	*It's the need of having outcomes in numbers and in stories […], spanning the personal, relational, and community dimensions.*

(*Continued*)

Table 5. *(Continued)*

Theme	Subtheme	Verbatim
	Patient-level outcomes are vital	*Interventions should cover measures of quality of life, dignity, loneliness, comfort, and support. Moreover, certain outcomes should be personalized as people's preferences can be subjective.*
	Service-level outcomes are also important	*Service outcomes like costs, staff turnover, rewardingness, and satisfaction are the kind of variables reflecting meaning for professionals and staff.*
	Targeting underprivileged groups to reduce inequalities	*We should identify them more inductively, not only using variables known beforehand, and maybe considering intersectionality approaches.*
	Diversifying study designs and evaluation methods	*If we really want to capture the interdependence between care levels, realist evaluations, culture-sensitive evaluations, and program-level evaluations are needed, as opposed to smaller, project-based assessments.*
Implementation and scalability	Key enablers	*Enablers include information technology, quality measures, infrastructures, incentive and regulatory systems, and contract strategies.*
	Barrier: fragmentation within the administration	*Municipalities and regions have their own legislation, administration and budget, and even within municipalities, there could be different electronic health record systems for nurses working at the municipality and the physicians working from primary care.*
	Barrier: readiness for organizational change	*There is hesitation to change and to actually […] having a new way of working.*
	Shared project ownership is vital for sustainability	*We suggest a change of ownership of projects. It might be highly beneficial that projects are owned by service organisations and not researchers.*

serves as a focal point for person-centered care standards in Sweden, which is also reflected in the European Standard for Minimal Patient Involvement in Person Centered Care [96]. Defining the theoretical underpinnings of integrated care is a bit more difficult. Integrated care pathways were developed in several interventions, although identification of a specific theoretical model within this category was often absent. Almost all studies implemented models at the level of clinical practice or service, via interdisciplinary teams, with a clear lack of organizational and health system-wide integration models. This lack of macro-level integration has been shown in a previous review of reviews, including 15 systematic reviews on integrated care [97].

Indeed, based on the operational WHO frameworks, most of the interventions were situated on the micro level, addressing only small pieces of care continuity and coordination. However, we observed that almost all interventions addressing the meso (service) level involved multiple priority practice areas simultaneously, which contributed to enhanced continuity and coordination of care along with fostering person-centered practices. The only two macro-level interventions encompassed almost all priority practice areas. Certain settings and areas, notably primary care, care homes, and palliative care settings, were underrepresented. This is of big concern because primary care—inherently focused on continuity, coordination, and effective collaboration with social services

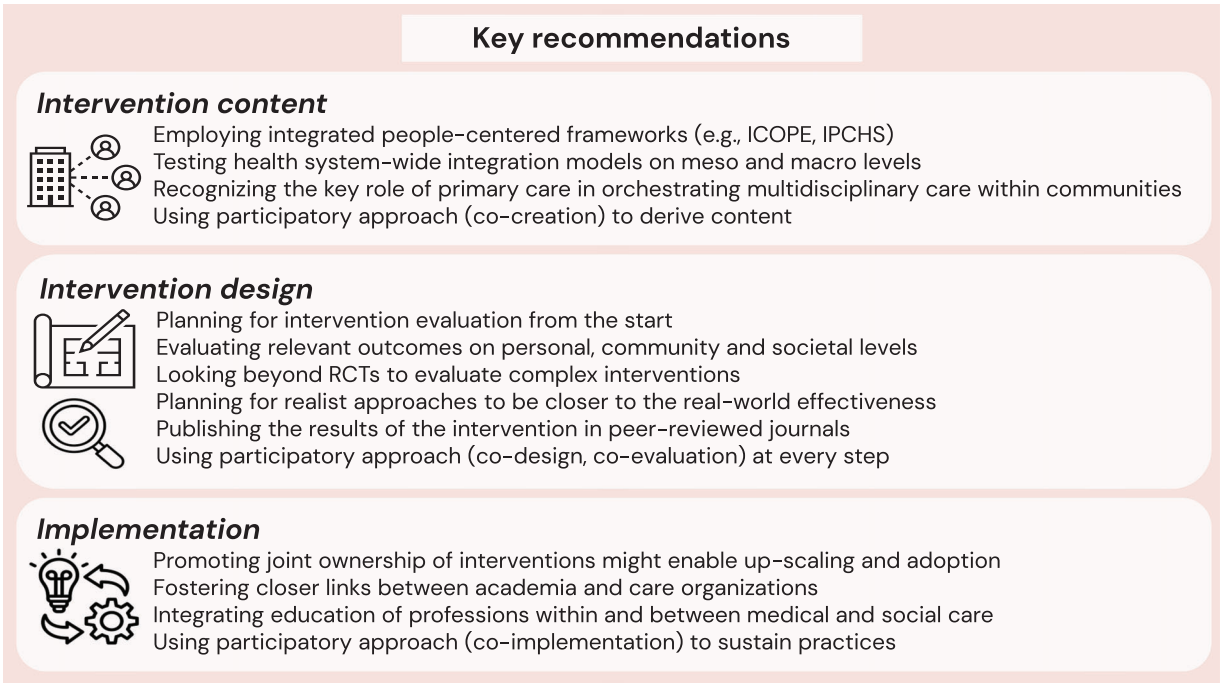

Fig. 2 *Summary of key recommendations considering the findings from both the scoping review and the expert opinion from workshop discussions.*

and community resources [98]—should serve as a key platform for integrated person-centered interventions. Additionally, interventions involving social care professionals and integrating services across the medical and social care systems were lacking.

Intervention effectiveness

The evidence supporting the effectiveness of interventions on health outcomes was generally weak. Our analysis did not reveal distinct patterns indicating the superiority of certain IPCHS thematic clusters over others. The IPCHS practice brief denotes that continuity and care coordination have the greatest impact when different practice areas are delivered in a "bundle" along the care pathway [15]. Indeed, in our review, interventions that addressed more IPCHS priority practice areas, e.g., those that were based on the comprehensive geriatric assessment, tended to exhibit greater effectiveness. The mixed picture on intervention effectiveness can be attributed to various factors.

First and foremost, our review focused primarily on health-related and service utilization outcomes. However, the studies included in our analysis also covered additional outcomes, such as patient satisfaction, self-efficacy, and dignity. These alternative measures may be equally pertinent when evaluating the effectiveness of such interventions. During discussions with experts, the significance of patient-level subjective outcomes—such as feelings of loneliness and dignity—was underscored. Notably, certain service use outcomes—such as length of hospital stay and rate of hospitalization—were more consistently positively affected by the interventions. This has been suggested in previous research. A review of integrated care interventions for older people found that interventions decreased hospital readmission rates and length of stay but did not affect mortality [99]. An umbrella review of 50 systematic reviews reported that multidisciplinary teams and chronic integrated care models are associated with reduced costs and service use [100]. A review of 55 person-centered interventions concluded that although most of the interventions did not improve health outcomes, some shortened the hospital stay and reduced the costs of care [101]. In addition, we focused on older people, often with a high disease burden. The failure to demonstrate between-group

differences in health outcomes could also be attributed to the limited potential for improvement in this population.

Poor evaluation practices may additionally underlie the discordance among our effectiveness findings. For example, as discussed by experts, the choice of outcome measures and timepoints for assessment in complex interventions warrants more attention and tailoring. One comprehensive approach for evaluating complex interventions such as those examined in our review is the realist evaluation. Realist evaluation is increasingly applied in the appraisal of complex healthcare interventions as it seeks to provide a more explicit and in-depth understanding of *what works, for whom* and *in what circumstances* [102]. This methodology is particularly valuable for knowledge translation and the adoption of successful interventions [103]. Another complementary approach for identifying relevant outcomes is contribution analysis [104], a theoretical framework for testing complex interventions that employs a theory of change to identify the most relevant outcomes across various impact levels (such as personal, relational, community, and societal levels). This technique might be more relevant and effective than exclusively targeting improvements in the health and functional outcomes of older people. Implementing these holistic methods would entail using diverse data sources and incorporating mixed-method study designs, which is not free from challenges. Nevertheless, these and similar approaches hold the potential to better capture the reality of what a complex multicomponent intervention can achieve, and may help in moving beyond arbitrarily defined health and service use outcomes that could be less meaningful to the end users.

There is also much room to improve publication practices. Promoting publication of study findings was underscored in the expert discussions. It is important to acknowledge that our group is aware of several relevant interventions in this field that have not published their effectiveness results up to our search date. To uphold high-quality research and evaluation standards, we strongly encourage researchers and professionals in the field to plan for the publication of their study findings in peer-reviewed journals in advance. It is also recommended that funding agencies take evaluation and knowledge mobilization plans into consideration.

Intervention implementation

The lack of participatory approaches (patient and public involvement, PPI) across interventions was striking. It is important to note that PPI is relevant to every stage of the process, from intervention design to evaluation and implementation. Thus, by excluding end users from the initial design-related stages, the adoption of the intervention is jeopardized. According to a systematic review of 66 studies on medical and social care, involvement of end users may lead to better dissemination and implementation of research findings because of their influence in the community [105]. However, researchers report that the main barriers to incorporating PPI in meaningful ways are lack of finance and time [106]. We believe that PPI should become a mandatory component of intervention and practice planning, starting with funding bodies and eventually becoming an integral part of day-to-day operations within medical and social care.

Across implementation studies linked to the included interventions, cost analyses revealed overwhelmingly favorable results, demonstrating cost savings mainly by reducing hospital costs. In addition, most interventions were deemed acceptable and favorable by patients, their families, and staff. The expert discussions as well as our review findings concerning implementation outcomes underscore the requirement for strong managerial and executive support. The engagement of intervention staff and active involvement of upper management stakeholders are pivotal factors in ensuring the sustainability and scalability of interventions. Experts frequently cited the lack of shared ownership over interventions as a key reason for failure to expand successful practices. To ensure post-intervention sustainability, it is crucial for financial bodies and care organizations to engage in projects from their inception, leveraging on the expertise of researchers in conducting intervention studies rigorously. This collaborative approach fosters long-term viability and promotes knowledge sharing among the scientific community. The concepts of person-centeredness and care integration should also permeate the field of education, where the siloed training of professional disciplines was identified as an important barrier to providing high-quality, integrated care.

Strengths and limitations

We believe that the attempt to review the evidence on both person-centered and integrated care

interventions is a strength of this study. Moreover, we position the review's findings based on insights from expert discussions in these areas. Importantly, this workshop set the scene for a network of Swedish experts on person-centered and integrated care, paving the way for future collaborations. Although this review provides a comprehensive snapshot of published research and study characteristics in the country context of Sweden, the findings offer valuable and transferable perspectives on the practical challenges and real-world barriers encountered in this field.

This study had several important limitations. First, we employed a scoping review methodology and, thus, did not assess the quality of the included studies. This might be problematic, as some studies did not use a randomized controlled design, the gold-standard to prove intervention effectiveness. The decision to exclude unpublished or "gray" literature may result in our findings being somewhat incomplete. Nevertheless, we chose to maintain a focus on peer-reviewed material, which helped ensure a certain level of quality of the evidence among included studies. The use of the internationally recognized ICOPE and IPCHS frameworks to map the interventions mitigated some of the heterogeneity identified. Moreover, although this review provides a broad overview of the state of evidence on integrated person-centered care interventions in Sweden, we believe that a more in-depth disease- and intervention-specific examination of these studies is essential to draw conclusions on their effectiveness. As for the second part of the paper, the workshop with experts was time-limited, and we were only able to tackle selected topics, preventing us from providing in-depth insights across all potential matters in the field.

Conclusion

Our comprehensive review of 31 interventions for older people's care in Sweden highlights the high acceptability and efficiency of integrated person-centered care approaches in this population group. Yet, these strategies often fail to produce consistent improvements in health-related outcomes. To advance research and practice, future interventions should aim to be more comprehensive, covering not only the areas of person-centered practice but also those linked to care continuity and coordination across services and systems. Interventions should strive to involve both medical and social care, to be anchored in primary care, and to target higher meso- and macro-levels of integration. Moreover, recognizing the synergies between person-centered and integrated care approaches and moving toward people-centeredness is crucial. Assessing personal, relational, community, and societal outcomes is warranted. For successful implementation and scalability, strong support from the managerial and executive levels is essential, along with the adoption of participatory designs. Early and active collaboration between researchers and care organizations is decisive to produce high-quality research and to ensure long-term sustainability. The alignment of educational practices with the evolving health and care landscape is paramount for overcoming barriers and delivering truly integrated person-centered care.

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Conflict of interest statement

The inclusion decisions were made by the core team, who did not participate in any of the interventions directly or indirectly. Some of the other coauthors, who provided critical feedback on the manuscript, are active researchers in the field and might be connected to the included projects directly or indirectly. However, none of them declares any conflicts of interest.

Data availability statement

Data sharing not applicable to this paper as no datasets were generated or analyzed during the current study.

REFERENCES

1 Olde Rikkert MGM, Melis RJF, Cohen AA, (Geeske) Peeters GMEE. Why illness is more important than disease in old age. *Age Ageing*. 2022;**51**:afab267. https://doi.org/10.1093/ageing/afab267.
2 Tinetti ME, Fried TR, Boyd CM. Designing health care for the most common chronic condition—multimorbidity. *JAMA*. 2012;**307**:2493–94. https://doi.org/10.1001/jama.2012.5265

3 Atun R. Transitioning health systems for multimorbidity. *Lancet North Am Ed.* 2015;**386**:721–22. https://doi.org/10.1016/S0140-6736(14)62254-6.
4 McCormack B, McCance T. *Person-centred nursing and health care—theory and practice.* Oxford, UK: Wiley Publishing; 2017.
5 Britten N, Ekman I, Naldemirci Ö, Javinger M, Hedman H, Wolf A. Learning from Gothenburg model of person centred healthcare. *BMJ.* 2020:m2738. https://doi.org/10.1136/bmj.m2738.
6 Agerholm J, Pulkki J, Jensen NK, Keskimäki I, Andersen I, Burström B, et al. The organisation and responsibility for care for older people in Denmark, Finland and Sweden: outline and comparison of care systems. *Scand J Public Health.* 2023:140349482211371. https://doi.org/10.1177/14034948221137128.
7 Vård- och omsorgsanalys. Samordnad vård och omsorg; En analys av samordningsutmaningar i ett fragmenterat vård- och omsorgssystem. [Coordinated care and welfare; An analysis of coordination challenges in a fragmented healthcare system]. 2016.
8 Socialstyrelsen. God och nära vård [Good and Close Care]. https://www.socialstyrelsen.se/kunskapsstod-och-regler/omraden/god-och-nara-vard/ (Accessed Sept 27, 2023). https://www.vardanalys.se/rapporter/samordnad-vard-och-omsorg/
9 Vård- och omsorgsanalys. Ordnat för omställning?; Utvärdering av omställningen till en god och nära vård: delrapport. [Arranged for conversion? Evaluation of the transition to good and close care: interim report]. 2023. https://www.vardanalys.se/digital-publikation/ordnat-for-omstallning/
10 Vård- och omsorgsanalys. Nära vård i sikte?; Utvärdering av omställningen till en god och nära vård: delrapport. [Close care in sight? Evaluation of the transition to good and close care: interim report]. 2021. https://www.vardanalys.se/rapporter/nara-vard-i-sikte/
11 The American geriatrics society expert panel on person-centered care. Person-centered care: a definition and essential elements. *J Am Geriatr Soc.* 2016;**64**:15–18. https://doi.org/10.1111/jgs.13866.
12 Goodwin N. Understanding integrated care. *Int J Integr Care.* 2016;**16**:6. https://doi.org/10.5334/ijic.2530.
13 World Health Organization. *Framework on integrated, people-centered health services.* Geneva, Switzerland: WHO; 2016.
14 World Health Organization. *Integrated care for older people (ICOPE) implementation framework: guidance for systems and services.* Geneva: WHO; 2019.
15 World Health Organization. *Continuity and coordination of care: a practice brief to support implementation of the WHO Framework on integrated people-centred health services.* Geneva: WHO; 2018.
16 Tricco AC, Lillie E, Zarin W, O'Brien KK, Colquhoun H, Levac D, et al. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. *Ann Intern Med.* 2018;**169**:467–73. https://doi.org/10.7326/M18-0850.
17 Britten N, Moore L, Lydahl D, Naldemirci O, Elam M, Wolf A. Elaboration of the Gothenburg model of person-centred care. *Health Expect.* 2017;**20**:407–18. https://doi.org/10.1111/hex.12468.
18 Vård- och omsorgsanalys. Från medel till mål—att organisera och styra mot en samordnad vård och omsorg ur ett patientoch brukarperspektiv. [From means to ends—to organize and steer towards coordinated care from a patient and user perspective]. 2017. https://www.vardanalys.se/rapporter/fran-medel-till-mal/
19 Proctor E, Silmere H, Raghavan R, Hovmand P, Aarons G, Bunger A, et al. Outcomes for implementation research: conceptual distinctions, measurement challenges, and research agenda. *Adm Policy Ment Health.* 2011;**38**:65–76. https://doi.org/10.1007/s10488-010–0319-7.
20 Covidence systematic review software, Veritas Health Innovation. Melbourne, Australia. Available at www.covidence.org
21 Popay J, Roberts H, Sowden A, Petticrew P, Arai L, Rodgers M, et al. *Guidance on the conduct of narrative synthesis in systematic reviews.* United Kingdom: Lancaster University; 2006.
22 Ekman I, Wolf A, Olsson L-E, Taft C, Dudas K, Schaufelberger M, et al. Effects of person-centred care in patients with chronic heart failure: the PCC-HF study. *Eur Heart J.* 2012;**33**:1112–19. https://doi.org/10.1093/eurheartj/ehr306.
23 Ulin K, Olsson L-E, Wolf A, Ekman I. Person-centred care—an approach that improves the discharge process. *Eur J Cardiovasc Nurs.* 2016;**15**:e19–e26. https://doi.org/10.1177/1474515115569945.
24 Hansson E, Ekman I, Swedberg K, Wolf A, Dudas K, Ehlers L, et al. Person-centred care for patients with chronic heart failure—a cost-utility analysis. *Eur J Cardiovasc Nurs.* 2016;**15**:276–84. https://doi.org/10.1177/1474515114567035.
25 Alharbi TS, Carlström E, Ekman I, Olsson L-E. Implementation of person-centred care: management perspective. *J Hosp Adm.* 2014;**3**:107. https://doi.org/10.5430/jha.v3n3p107.
26 Olsson L-E, Karlsson J, Berg U, Karrholm J, Hansson E. Person-centred care compared with standardized care for patients undergoing total hip arthroplasty—a quasi-experimental study. *J Orthop Surg Res.* 2014;**9**:95. https://doi.org/10.1186/s13018-014–0095-2.
27 Norberg E-B, Lofgren B, Boman K, Wennberg P, Brannstrom M. A client-centred programme focusing energy conservation for people with heart failure. *Scand J Occup.* 2017;**24**:455–67. https://doi.org/10.1080/11038128.2016.1272631.
28 Asplin G, Carlsson G, Ziden L, Kjellby-Wendt G. Early coordinated rehabilitation in acute phase after hip fracture—a model for increased patient participation. *BMC Geriatr.* 2017;**17**:240. https://doi.org/10.1186/s12877-017–0640-z.
29 Söderman A, Werkander Harstäde C, Hälleberg Nyman M, Blomberg K. Valuing the individual—evaluating the dignity care intervention. *Nurs Ethics.* 2023;**30**:86–105. https://doi.org/10.1177/09697330221122902.
30 Söderman A, Werkander Harstäde C, Östlund U, Blomberg K. Community nurses' experiences of the Swedish Dignity Care Intervention for older persons with palliative care needs—a qualitative feasibility study in municipal home health care. *Int J Older People Nurs.* 2021;**16**:e12372. https://doi.org/10.1111/opn.12372.

31 Edgren G, Anderson J, Dolk A, Torgerson J, Nyberg S, Skau T, et al. A case management intervention targeted to reduce healthcare consumption for frequent emergency department visitors: results from an adaptive randomized trial. *Eur J Emerg Med.* 2016;**23**:344–50. https://doi.org/10.1097/MEJ.0000000000000280.

32 Ahlstedt Karlsson S, Henoch I, Olofsson Bagge R, Wallengren C. Person-centred support programme (RESPECT intervention) for women with breast cancer treated with endocrine therapy: a feasibility study. *BMJ Open.* 2022;**12**:e060946. https://doi.org/10.1136/bmjopen-2022-060946.

33 Guidetti S, Andersson K, Andersson M, Tham K, Von Koch L. Client-centred self-care intervention after stroke: a feasibility study. *Scand J Occup.* 2010;**17**:276–85. https://doi.org/10.3109/11038120903281169.

34 Guidetti S, Ytterberg C. A randomised controlled trial of a client-centred self-care intervention after stroke: a longitudinal pilot study. *Disabil Rehabil.* 2011;**33**:494–503. https://doi.org/10.3109/09638288.2010.498553.

35 Bertilsson A-S, Ranner M, von Koch L, Eriksson G, Johansson U, Ytterberg C, et al. A client-centred ADL intervention: three-month follow-up of a randomized controlled trial. *Scand J Occup.* 2014;**21**:377–91. https://doi.org/10.3109/11038128.2014.880126.

36 Guidetti S, Ranner M, Tham K, Andersson M, Ytterberg C, von Koch L. A "client-centred activities of daily living" intervention for persons with stroke: one-year follow-up of a randomized controlled trial. *J Rehabil Med.* 2015;**47**:605–11. https://doi.org/10.2340/16501977-1981.

37 Tistad M, Flink M, Ytterberg C, Eriksson G, Guidetti S, Tham K, et al. Resource use of healthcare services 1 year after stroke: a secondary analysis of a cluster-randomised controlled trial of a client-centred activities of daily living intervention. *BMJ Open.* 2018;**8**:e022222. https://doi.org/10.1136/bmjopen-2018-022222.

38 Hedman A, Eriksson G, von Koch L, Guidetti S. Five-year follow-up of a cluster-randomized controlled trial of a client-centred activities of daily living intervention for people with stroke. *Clin Rehabil.* 2019;**33**:262–76. https://doi.org/10.1177/0269215518809791.

39 Bertilsson A-S, Eriksson G, Ekstam L, Tham K, Andersson M, von Koch L, et al. A cluster randomized controlled trial of a client-centred, activities of daily living intervention for people with stroke: one year follow-up of caregivers. *Clin Rehabil.* 2016;**30**:765–75. https://doi.org/10.1177/0269215515603780.

40 Eriksson C, Eriksson G, Johansson U, Guidetti S. Occupational therapists' perceptions of implementing a client-centered intervention in close collaboration with researchers: a mixed methods study. *Scand J Occup.* 2020;**27**:142–53. https://doi.org/10.1080/11038128.2019.1573917.

41 Lofgren S, Hedstrom M, Ekstrom W, Lindberg L, Flodin L, Ryd L. Power to the patient: care tracks and empowerment a recipe for improving rehabilitation for hip fracture patients. *Scand J Caring Sci.* 2015;**29**:462–69. https://doi.org/10.1111/scs.12157.

42 Rafsten L, Danielsson A, Nordin A, Björkdahl A, Lundgren-Nilsson A, Larsson MEH, et al. Gothenburg Very Early Supported Discharge study (GOTVED): a randomised controlled trial investigating anxiety and overall disability in the first year after stroke. *BMC Neurol.* 2019;**19**:277. https://doi.org/10.1186/s12883-019–1503–3.

43 Ohlen J, Sawatzky R, Pettersson M, Sarenmalm EK, Larsdotter C, Smith F, et al. Preparedness for colorectal cancer surgery and recovery through a person-centred information and communication intervention—a quasi-experimental longitudinal design. *PLoS One.* 2019;**14**:e0225816. https://doi.org/10.1371/journal.pone.0225816.

44 Stenvall M, Olofsson B, Nyberg L, Lundstrom M, Gustafson Y. Improved performance in activities of daily living and mobility after a multidisciplinary postoperative rehabilitation in older people with femoral neck fracture: a randomized controlled trial with 1-year follow-up. *J Rehabil Med.* 2007;**39**:232–38. https://doi.org/10.2340/16501977-0045

45 Stenvall M, Berggren M, Lundstrom M, Gustafson Y, Olofsson B. A multidisciplinary intervention program improved the outcome after hip fracture for people with dementia–subgroup analyses of a randomized controlled trial. *Arch Gerontol Geriatr.* 2012;**54**:e284–89. https://doi.org/10.1016/j.archger.2011.08.013.

46 Westgård T, Andersson Hammar I, Dahlin-Ivanoff S, Wilhelmson K. Can comprehensive geriatric assessment meet frail older people's needs? Results from the randomized controlled study CGA-Swed. *Geriatrics.* 2020;**5**:101. https://doi.org/10.3390/geriatrics5040101.

47 Westgård T, Hammar IA, Wilhelmson K, Waern M. Comprehensive geriatric assessment is associated with increased antidepressant treatment in frail older people with unplanned hospital admissions—results from the randomised controlled study CGA-Swed. *BMC Geriatr.* 2022;**22**:645. https://doi.org/10.1186/s12877-022-03324-9.

48 Wilhelmson K, Andersson Hammar I, Westgård T, Holmquist Henrikson L, Dahlin-Ivanoff S. Positive effects on activities of daily living one year after receiving comprehensive geriatric assessment—results from the randomised controlled study CGA-Swed. *BMC Geriatr.* 2022;**22**:180. https://doi.org/10.1186/s12877-022-02862-6.

49 Westgard T, Ottenvall Hammar I, Holmgren E, Ehrenberg A, Wisten A, Ekdahl AW, et al. Comprehensive geriatric assessment pilot of a randomized control study in a Swedish acute hospital: a feasibility study. *Pilot Feasibility Stud.* 2018;**4**:41. https://doi.org/10.1186/s40814-018–0228-1.

50 Westgård T, Wilhelmson K, Dahlin-Ivanoff S, Ottenvall Hammar I. Feeling respected as a person: a qualitative analysis of frail older people's experiences on an acute geriatric ward practicing a comprehensive geriatric assessment. *Geriatrics.* 2019;**4**:16. https://doi.org/10.3390/geriatrics4010016.

51 Ekerstad N, Dahlin-Ivanoff S, Landhal S, Östberg G, Johannsson J, Andersson D, et al. Acute care of severely frail elderly patients in a CGA-unit is associated with less functional decline than conventional acute care. *Clin Interv Aging.* 2017;**12**:1239–49. https://doi.org/10.2147/CIA.S139230.

52 Ekerstad N, Karlson BW, Dahlin-Ivanoff S, Landhal S, Andersson D, Heintz E, et al. Is the acute care of frail elderly patients in a comprehensive geriatric assessment unit superior to conventional acute medical care? *Clin Interv Aging.* 2017;**12**:1–9. https://doi.org/10.2147/CIA.S124003.

53 Åhlund K, Bäck M, Öberg B, Ekerstad N. Effects of comprehensive geriatric assessment on physical fitness in an acute medical setting for frail elderly patients. *Clin Interv Aging.* 2017;**12**:1929–39. https://doi.org/10.2147/CIA.S149665.

54 Ekerstad N, Östberg G, Johansson M, Karlson BW. Are frail elderly patients treated in a CGA unit more satisfied with their hospital care than those treated in conventional acute medical care? *Patient Prefer Adherence.* 2018;**12**:233–40. https://doi.org/10.2147/PPA.S154658.

55 Ekerstad N, Karlson BW, Andersson D, Husberg M, Carlsson P, Heintz E, et al. Short-term resource utilization and cost-effectiveness of comprehensive geriatric assessment in acute hospital care for severely frail elderly patients. *J Am Med Dir Assoc.* 2018;**19**:871–878.e2. https://doi.org/10.1016/j.jamda.2018.04.003.

56 Nord M, Lyth J, Alwin J, Marcusson J. Costs and effects of comprehensive geriatric assessment in primary care for older adults with high risk for hospitalisation. *BMC Geriatrics.* 2021;**21**:263. https://doi.org/10.1186/s12877-021-02166-1.

57 Nord M, Lyth J, Marcusson J, Alwin J. Cost-effectiveness of comprehensive geriatric assessment adapted to primary care. *J Am Med Dir Assoc.* 2022;**23**:2003–9. https://doi.org/10.1016/j.jamda.2022.04.007.

58 Hagglund E, Lynga P, Frie F, Ullman B, Persson H, Melin M, et al. Patient-centred home-based management of heart failure. Findings from a randomised clinical trial evaluating a tablet computer for self-care, quality of life and effects on knowledge. *Scand Cardiovasc J.* 2015;**49**:193–99. https://doi.org/10.3109/14017431.2015.1035319.

59 Fors A, Blanck E, Ali L, Ekberg-Jansson A, Fu M, Lindstrom Kjellberg I, et al. Effects of a person-centred telephone-support in patients with chronic obstructive pulmonary disease and/or chronic heart failure—a randomized controlled trial. *PLoS One.* 2018;**13**:e0203031. https://doi.org/10.1371/journal.pone.0203031.

60 Wallstrom S, Ali L, Ekman I, Swedberg K, Fors A. Effects of a person-centred telephone support on fatigue in people with chronic heart failure: subgroup analysis of a randomised controlled trial. *Eur J Cardiovasc Nurs.* 2020;**19**:393–400. https://doi.org/10.1177/1474515119891599.

61 Ali L, Wallstrom S, Fors A, Barenfeld E, Fredholm E, Fu M, et al. Effects of person-centered care using a digital platform and structured telephone support for people with chronic obstructive pulmonary disease and chronic heart failure: randomized controlled trial. *J Med Internet Res.* 2021;**23**:e26794. https://doi.org/10.2196/26794.

62 Ali L, Wallstrom S, Ekman I, Swedberg K, Fors A. Effects of person-centred care via telephone on self-efficacy in patients with chronic obstructive pulmonary disease: subgroup analysis of a randomized controlled trial. *Nurs Open.* 2021;**8**:927–35. https://doi.org/10.1002/nop2.701.

63 Pirhonen L, Gyllensten H, Olofsson EH, Fors A, Ali L, Ekman I, et al. The cost-effectiveness of person-centred care provided to patients with chronic heart failure and/or chronic obstructive pulmonary disease. *Health Policy OPEN.* 2020;**1**:100005. https://doi.org/10.1016/j.hpopen.2020.100005.

64 Guidetti S, Gustavsson M, Tham K, Andersson M, Fors U, Ytterberg C. F@ce: a team-based, person-centred intervention for rehabilitation after stroke supported by information and communication technology—a feasibility study. *BMC Neurol.* 2020;**20**:387. https://doi.org/10.1186/s12883-020-01968-x.

65 Assander S, Bergstrom A, Eriksson C, Meijer S, Guidetti S. ASSIST: a reablement program for older adults in Sweden—a feasibility study. *BMC Geriatrics.* 2022;**22**:618. https://doi.org/10.1186/s12877-022-03185-2.

66 Wijk H, Corazzini K, Kjellberg IL, Kinnander A, Alexiou E, Swedberg K. Person-centered incontinence care in residential care facilities for older adults with cognitive decline: feasibility and preliminary effects on quality of life and quality of care. *J Gerontol Nurs.* 2018;**44**:10–19. https://doi.org/10.3928/00989134-20181010-04.

67 Fagerberg B, Claesson L, Gosman-Hedstrom G, Blomstrand C. Effect of acute stroke unit care integrated with care continuum versus conventional treatment: a randomized 1-year study of elderly patients: the Goteborg 70+ Stroke Study. *Stroke.* 2000;**31**:2578–84. https://doi.org/10.1161/01.STR.31.11.2578

68 Claesson L, Gosman-Hedstrom G, Johannesson M, Fagerberg B, Blomstrand C. Resource utilization and costs of stroke unit care integrated in a care continuum: a 1-year controlled, prospective, randomized study in elderly patients: the Goteborg 70+ Stroke Study. *Stroke.* 2000;**31**:2569–77. https://doi.org/10.1161/01.STR.31.11.2569

69 Olsson L-E, Karlsson J, Ekman I. The integrated care pathway reduced the number of hospital days by half: a prospective comparative study of patients with acute hip fracture. *J Orthop Surg Res.* 2006;**1**:3. https://doi.org/10.1186/1749-799X-1-3

70 Olsson L-E, Karlsson J, Ekman I. Effects of nursing interventions within an integrated care pathway for patients with hip fracture. *J Adv Nurs.* 2007;**58**:116–25. https://doi.org/10.1111/j.1365-2648.2007.04209.x

71 Olsson L-E, Hansson E, Ekman I, Karlsson J. A cost-effectiveness study of a patient-centred integrated care pathway. *J Adv Nurs.* 2009;**65**:1626–35. https://doi.org/10.1111/j.1365–2648.2009.05017.x.

72 Eklund K, Wilhelmson K, Gustafsson H, Landahl S, Dahlin-Ivanoff S. One-year outcome of frailty indicators and activities of daily living following the randomised controlled trial: "continuum of care for frail older people". *BMC Geriatrics.* 2013;**13**:76. https://doi.org/10.1186/1471–2318-13–76.

73 Berglund H, Hasson H, Kjellgren K, Wilhelmson K. Effects of a continuum of care intervention on frail older persons' life satisfaction: a randomized controlled study. *J Clin Nurs.* 2015;**24**:1079–90. https://doi.org/10.1111/jocn.12699.

74 Ebrahimi Z, Eklund K, Dahlin-Ivanoff S, Jakobsson A, Wilhelmson K. Effects of a continuum of care intervention on frail elders' self-rated health, experiences of security/safety and symptoms: a randomised controlled trial. *Nord J Nurs Res.* 2017;**37**:33–43. https://doi.org/10.1177/2057158516668710.

75 Duner A, Blomberg S, Hasson H. Implementing a continuum of care model for older people-results from a Swedish case study. *Int J Integr Care.* 2011;**11**:e136. https://doi.org/10.5334/ijic.665

76 Ekdahl AW, Wirehn A-B, Alwin J, Jaarsma T, Unosson M, Husberg M, et al. Costs and effects of an ambulatory geriatric unit (the AGe-FIT Study): a randomized controlled trial. *J Am Med Dir Assoc.* 2015;**16**:497–503. https://doi.org/10.1016/j.jamda.2015.01.074.

77 Ekdahl AW, Alwin J, Eckerblad J, Husberg M, Jaarsma T, Mazya AL, et al. Long-term evaluation of the ambulatory geriatric assessment: a frailty intervention trial (AGe-FIT): clinical outcomes and total costs after 36 months. *J Am Med Dir Assoc.* 2016;**17**:263–68. https://doi.org/10.1016/j.jamda.2015.12.008.

78 Eckerblad J, Theander K, Ekdahl AW, Jaarsma T. Symptom trajectory and symptom burden in older people with multimorbidity, secondary outcome from the RCT AGe-FIT study. *J Adv Nurs.* 2016;**72**:2773–83. https://doi.org/10.1111/jan.13032.

79 Dahlqvist J, Ekdahl AW, Friedrichsen M. Does comprehensive geriatric assessment (CGA) in an outpatient care setting affect the causes of death and the quality of palliative care? A subanalysis of the age-FIT study. *Eur Geriatr Med.* 2019;**10**:455–62. https://doi.org/10.1007/s41999-019-00198-w.

80 Mazya AL, Garvin P, Ekdahl AW. Outpatient comprehensive geriatric assessment: effects on frailty and mortality in old people with multimorbidity and high health care utilization. *Aging Clin Exp Res.* 2019;**31**:519–25. https://doi.org/10.1007/s40520-018–1004-z.

81 Lundqvist M, Alwin J, Henriksson M, Husberg M, Carlsson P, Ekdahl AW. Cost-effectiveness of comprehensive geriatric assessment at an ambulatory geriatric unit based on the AGe-FIT trial. *BMC Geriatrics.* 2018;**18**:32. https://doi.org/10.1186/s12877-017–0703-1.

82 Brannstrom M, Boman K. Effects of person-centred and integrated chronic heart failure and palliative home care. PREFER: a randomized controlled study. *Eur J Heart Fail.* 2014;**16**:1142–51. https://doi.org/10.1002/ejhf.151.

83 Markgren R, Brannstrom M, Lundgren C, Boman K. Impacts of person-centred integrated chronic heart failure and palliative home care on pharmacological heart failure treatment: a substudy of a randomised trial. *BMJ Support Palliat.* 2019;**9**:e10. https://doi.org/10.1136/bmjspcare-2015-000894.

84 Sahlen K-G, Boman K, Brannstrom M. A cost-effectiveness study of person-centered integrated heart failure and palliative home care: based on a randomized controlled trial. *Palliat Med.* 2016;**30**:296–302. https://doi.org/10.1177/0269216315618544.

85 Alvariza A, Arestedt K, Boman K, Brannstrom M. Family members' experiences of integrated palliative advanced home and heart failure care: a qualitative study of the PREFER intervention. *Palliat Support Care.* 2018;**16**:278–85. https://doi.org/10.1017/S1478951517000256.

86 Talabani N, Angerud KH, Boman K, Brannstrom M. Patients' experiences of person-centred integrated heart failure care and palliative care at home: an interview study. *BMJ Support Palliat Care.* 2020;**10**:e9. https://doi.org/10.1136/bmjspcare-2016-001226.

87 Berglund H, Gustafsson S, Ottenvall Hammar I, Faronbi J, Dahlin-Ivanoff S. Effect of a care process programme on frail older people's life satisfaction. *Nurs Open.* 2019;**6**:1097–104. https://doi.org/10.1002/nop2.300.

88 Westman B, Ullgren H, Olofsson A, Sharp L. Patient-reported perceptions of care after the introduction of a new advanced cancer nursing role in Sweden. *Eur J Oncol Nurs.* 2019;**41**:41–48. https://doi.org/10.1016/j.ejon.2019.05.009.

89 Lofgren S, Rehnberg C, Ljunggren G, Brommels M. Coordination pays off: a comparison of two models for organizing hip fracture care, outcomes and costs. *Int J Health Plann Manage.* 2015;**30**:426–38. https://doi.org/10.1002/hpm.2249.

90 Bökberg C, Behm L, Ahlström G. Quality of life of older persons in nursing homes after the implementation of a knowledge-based palliative care intervention. *Int J Older People Nurs.* 2019;**14**:e12258. https://doi.org/10.1111/opn.12258.

91 Liljeroos M, Stromberg A. Introducing nurse-led heart failure clinics in Swedish primary care settings. *Eur J Heart Fail.* 2019;**21**:103–9. https://doi.org/10.1002/ejhf.1329.

92 Doheny M, Agerholm J, Orsini N, Schon P, Burstrom B. Impact of integrated care on trends in the rate of emergency department visits among older persons in Stockholm County: an interrupted time series analysis. *BMJ Open.* 2020;**10**:e036182. https://doi.org/10.1136/bmjopen-2019-036182.

93 Agerholm J, de Leon AP, Schon P, Burstrom B. Impact of integrated care on the rate of hospitalization for ambulatory care sensitive conditions among older adults in Stockholm County: an interrupted time series analysis. *Int J Integr Care.* 2021;**21**:22. https://doi.org/10.5334/ijic.5505.

94 Agerholm J, Teni FS, Sundbye J, Rolfson O, Burstrom K. Patient-reported outcomes among patients undergoing total hip replacement in an integrated care system and in a standard care system in Region Stockholm, Sweden. *BMC Health Serv Res.* 2022;**22**:1414. https://doi.org/10.1186/s12913-022-08722-8.

95 McCormack B. Person-centred care and measurement: the more one sees, the better one knows where to look. *J Health Serv Res Policy.* 2022;**27**:85–87. https://doi.org/10.1177/13558196211071041.

96 CEN. *CEN/TC 450—minimum requirements of patient involvement in person-centred care.* Belgium: CNE; 2020.

97 Briggs AM, Valentijn PP, Thiyagarajan JA, Araujo De Carvalho I. Elements of integrated care approaches for older people: a review of reviews. *BMJ Open.* 2018;**8**:e021194. https://doi.org/10.1136/bmjopen-2017-021194.

98 Starfield B, Shi L, Macinko J. Contribution of primary care to health systems and health. *Milbank Q.* 2005;**83**:457–502. https://doi.org/10.1111/j.1468-0009.2005.00409.x.

99 Liljas AEM, Brattström F, Burström B, Schön P, Agerholm J. Impact of integrated care on patient-related outcomes among older people—a systematic review. *Int J Integr Care.* 2019;**19**:6. https://doi.org/10.5334/ijic.4632.

100 Damery S, Flanagan S, Combes G. Does integrated care reduce hospital activity for patients with chronic diseases? An umbrella review of systematic reviews. *BMJ Open.* 2016;**6**:e011952. https://doi.org/10.1136/bmjopen-2016-011952.

101 Nkhoma KB, Cook A, Giusti A, Farrant L, Petrus R, Petersen I, et al. A systematic review of impact of person-centred interventions for serious physical illness in terms of outcomes and costs. *BMJ Open.* 2022;**12**:e054386. https://doi.org/10.1136/bmjopen-2021-054386

102 Pawson R, Tilley N. *Realistic evaluation.* Thousand Oaks, CA: Sage; 1997.

103 Salter KL, Kothari A. Using realist evaluation to open the black box of knowledge translation: a state-of-the-art review. *Implement Sci.* 2014;**9**:115. https://doi.org/10.1186/s13012-014–0115-y.
104 Mayne J. Contribution analysis: coming of age? *Evaluation.* 2012;**18**:270–80. https://doi.org/10.1177/1356389012451663
105 Brett J, Staniszewska S, Mockford C, Herron-Marx S, Hughes J, Tysall C, et al. Mapping the impact of patient and public involvement on health and social care research: a systematic review. *Health Expect.* 2014;**17**:637–50. https://doi.org/10.1111/j.1369–7625.2012.00795.x.
106 Brett J, Staniszewska S, Mockford C, Herron-Marx S, Hughes J, Tysall C, et al. A systematic review of the impact of patient and public involvement on service users, researchers and communities. *Patient.* 2014;**7**:387–95. https://doi.org/10.1007/s40271-014–0065-0

Correspondence: Mariam Kirvalidze, Aging Research Center, Department of Neurobiology, Care Sciences and Society, Karolinska Institutet and Stockholm University, Tomtebodavägen 18a, 171 65 Solna, Sweden.
Email: mariam.kirvalidze@ki.se

Supporting Information

Additional Supporting Information may be found in the online version of this article:

Supplementary Figure 1. Inclusion and exclusion criteria.

Supplementary Figure 2. PRISMA flowchart for study selection.

Supplementary Table 1. Search strategy for MEDLINE.

Supplementary Table 2. List of experts contributing to the workshop and the questions they reflected on.

Supplementary Table 3. ICOPE micro (patient) level interventions (N = 20).

Supplementary Table 4. ICOPE meso (service) level interventions (N = 9).

Supplementary Table 5. ICOPE macro (system) level interventions (N = 2). ■