Co-funded by
the Health Programme
of the European Union

advantAGE
MANAGING FRAILTY

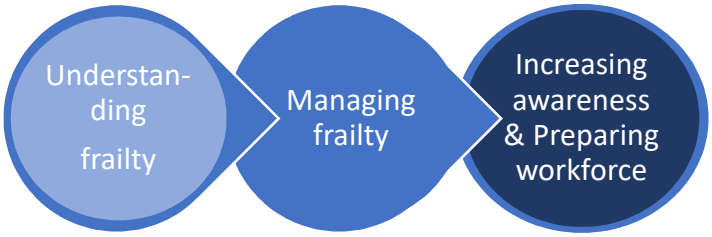
POLICY BRIEF

Prevention and management of frailty in the EU
A health policy priority

Keywords:
Frailty; Ageing; Policy-making; Prevention; National Health Programmes; Europe.

Aim of the policy brief
To support policymakers at national and local levels to tackle the grand-challenge of frailty amongst older people in Europe.

Contents
It provides key messages, policy options and recommendations in three main areas: 1) understanding frailty; 2) preventing and managing frailty and 3) increasing awareness and preparing the workforce. In the final chapter of the document, opportunities and challenges of implementing strategies addressing frailty at national, regional and local level are discussed. The contents of the policy brief are based on the extensive scientific review conducted by the partners of the first European Joint Action on Frailty, ADVANTAGE.



Target groups
Policymakers at any governmental level, professionals and other stakeholders with interests in formulating or influencing policy in the field of frailty and ageing.

Introduction

The Joint Action (JA) ADVANTAGE, co-funded by the Third European Health Programme of the European Union, is a collective effort involving 22 Member States (MS) and 33 organizations with the aim to develop a comprehensive strategic framework for the prevention and management of frailty at European level.

ADVANTAGE JA partners worked together to summarize the current State of the Art of the different components of frailty and its prevention and management, both at a personal and population level and increase knowledge in the field of frailty to build a common understanding on frailty to be used by participating MS. Evidence was gathered from four sources of information: peer-reviewed articles, grey documents, good practices identified at European level and EU funded projects. The main results are presented in specific State of the Art Reports (SoARs)[1]. The key messages reflected in the State of the Art documents are grounded in scientific knowledge, are assertive and avoid controversial statements whenever further research is needed or results are unclear. Furthermore, they acknowledge the heterogeneity of the MSs health and social care systems and diverse societies in a scenario of demographic change and economic constraints across the EU. Overall, these messages intend to be an instrument of added value to advocate for policy driven decisions on frailty prevention and management in the JA participating MSs and subsequently towards a disability free older population in Europe.

This policy brief stems from the ADVANTAGE JA SoARs and recommends policy options in three main areas: 1) understanding of frailty; 2) preventing and managing frailty and 3) increasing awareness and preparing the workforce.

[1] The specific reports are available at the JA website www.advantageja.eu

1. Understanding frailty

What is frailty?
What are the dimensions of the phenomenon?
How can frailty be identified?

Frailty is a geriatric syndrome, which is increasing worldwide as consequence of the widespread population ageing trend (1). Frailty increases the risks for adverse effects, such as infections, hospitalisation, morbidity, and even death (2).

Interest on frailty is gaining momentum, since it can be considered a promising therapeutic target for innovative clinical interventions and care policies (3). Frailty is not an inevitable consequence of ageing, it may be prevented and treated to foster a longer and healthier life. Multi-morbidity, disability and frailty are distinct clinical entities that are causally related, often associated and may overlap (4). All three occur frequently and have important clinical consequences. What really affects the quality of life is function and not disease, and the best predictor of function is frailty (5).

Frailty is a dynamic functional state. Its onset and progression amongst older adults can be reduced and even reversed, provided that early intervention and correct management strategies are set in place (6). The ADVANTAGE JA consortium reviewed the different definitions available in the literature, concluding that a meaningful and comprehensive definition of frailty should incorporate at least the following five features (7):

1. *Heterogeneity of its manifestations.* Frailty can manifest in diverse forms and characteristics.
2. *Complexity of its characteristics*. Different properties should be considered when defining frailty: it is a complex state affecting multiple body systems. Frailty is related to specific trajectories of ageing and through accumulation of health deficits over time.
3. *Its specific pathogenesis:* frailty develops on the basis of multiple causes in which several body systems seem to play a major role (especially the nervous, endocrine, immunological and musculoskeletal). It is driven by both individual and environmental factors.
4. *Its implication in terms of individual vulnerability:* frailty can be triggered by specific situations, which are defined as "stressors".
5. *Its association with adverse outcomes*: frailty is associated with a higher propensity of worsening comorbidities and complications, such as disability, morbidity, hospitalisation, institutionalisation, and death.

ADVANTAGE JA recognised that the best definition that incorporates all the above components is that provided by the World Health Organization (WHO):

> *Frailty is a progressive age-related decline in physiological systems that results in decreased reserves of intrinsic capacity, which confers extreme vulnerability to stressors and increases the risk of a range of adverse health outcomes (8).*

Estimates regarding prevalence and incidence of frailty tend to vary widely across settings, age ranges, follow-up duration, and depending on frailty assessment instrument and definition used (9, 10, 11). Most of the data are available in only five of the EU Member States: France, Germany, Italy, the Netherlands and Spain. The highest prevalence is seen among hospitalised populations and residents in nursing homes in Eastern Europe, where about 75% of residents are classified as frail. Most community-based population samples yield prevalence rates below 30%, although results range from 2% to 60% (12). The meta-analysis of European community-based studies confirmed a prevalence of 12%, with a pooled estimate about four times higher in

hospital/nursing home settings (9). Although its dynamic nature, there is a remarkable paucity of data about frailty development and progression over time (6, 11).
Frailty has a clear impact on welfare and societies in terms of costs. Recent studies carried out in Germany, France and Spain suggest that the incremental annual costs of frailty ranges from 1,500 to 5,000 €/person depending on the frailty status (pre-frail or frail) and the setting of care (community or hospital) (13, 14, 15). Costs are generated by the higher morbidity and mortality rates associated with the frailty condition, which leads to an increased health and social care utilisation in terms of hospitalisation and use of long term care support. Frailty is a stronger predictor of health care costs than age and comorbidity per se.

The overall heterogeneity of data on the frequency and progression of frailty in the population highlights the need for a common and standardized approach to define frailty (16). Its manifestations can cover the physical, the cognitive and the psychosocial domains. Using comparable and validated instruments for identifying frailty could help to overcome this gap. In this respect, ADVANTAGE JA has identified 22 different tools, out of which 17 have been scientifically validated (17). Some of these screening instruments are short, fast (less than 10 minutes to administer), and simple while others may rely on more sophisticated and time-consuming measurements. Alternatively, gait speed despite not being a scale has been demonstrated to be a good predictor of frailty. Nonetheless, Comprehensive Geriatric Assessment remains the gold standard for the assessment of the functional domain (18).

Key policy recommendations

1. The WHO definition of frailty should be adopted.

2. A specific code for frailty should be created and included in the International Classification of Diseases (ICD) classification of the WHO.

3. (Being a dynamic condition, potentially reversible through appropriate and timely interventions) the systematic study of factors associated with the development and progression of frailty in the population should be enhanced to inform resource planning and calibrate interventions addressed to groups of people at higher risk.

4. Validated tools to screen and diagnose frailty should be implemented in the care pathways, contextualised at local level according to practice priorities and characteristics.

5. Community-based, two-step screening programmes for frailty at population level should be developed and evaluated

6. The Comprehensive Geriatric Assessment approach should be widely adopted for recognising and managing frailty through a global assessment of the frail person.

2. Preventing and managing frailty

Are there specific care models for frailty prevention?
Which interventions are effective to tackle frailty amongst individuals?

The ADVANTAGE JA assessed the characteristics and current state of implementation of models of integrated care specifically designed to prevent and tackle frailty in the community, as well as the existing strategies for the management of frailty at individual level.

With respect to the care models characteristics, evidence retrieved by ADVANTAGE JA partners supports the case for a more holistic and salutogenic response to frailty, blending a chronic care approach with education, enablement and rehabilitation to optimise function, particularly at times of a sudden deterioration in health, or when moving between home, hospital or care home (19).
A care model suitable for providing this type of response incorporates the following components (20):

- Availability of a single entry point in the community, generally in primary care setting;
- Use of simple frailty specific screening tools in all care settings;
- Availability of comprehensive assessment and individualised care plans, including for caregivers of the frail individual;
- Tailored interventions by an interdisciplinary team – both in hospitals and community;
- Case management and coordination of intervention across the continuum of providers;
- Effective management of transitions between care teams and settings;
- Shared electronic information tools and technology enabled care solutions;
- Clear policies and procedures for service eligibility and care processes.

With respect to the interventions to prevent and manage frailty, available evidence suggests the effectiveness of comprehensive assessments of users' needs and multidimensional interventions tailored to their modifiable physical, psychological, cognitive and social factors. More specifically, ADVANTAGE JA suggests (21):

1. Risk for malnutrition and healthy diet and lifestyle promotion are of paramount importance: inadequate nutritional intake is an important modifiable risk factor for frailty.
2. Exercise can improve physical performance and reduce frailty: exercise in frail older people is indeed effective and relatively safe, and may reverse frailty while sedentary lifestyle is a risk factor. There is evidence of effectiveness for multicomponent exercise.
3. Comprehensive Geriatric Assessment can support the creation of multidimensional interventions personalised to the capacities and needs of the individuals, considering its home environment and community. Personalisation of care is a fundamental approach to the treatment of chronic diseases in the presence of frailty.
4. Manage drug prescribing effectively and reduce inappropriate polypharmacy. While evaluating the pharmaceutical plans of older people, aspects such as multimorbidity, safety, efficacy and acceptability of medicines, the patient's wellbeing, social circumstances and goals should be included.
5. Promote tele-healthcare and falls prevention interventions in frail older persons. Information and Communication Technologies (ICT) offer a variety of opportunities in terms of clinical outcomes and opportunities for changing the way the services are implemented. Several technological tools can be chosen for ensuring e.g. safety and reduce risks, such as falls. However, the acceptance and use of these technologies remains problematic, especially for elderly people.

Key policy recommendations

1. A holistic and integrated approach to care should be promoted.

2. Frailty prevention should include the promotion of healthy lifestyles (e.g. nutrition and physical exercise).

3. Personalisation of care should be supported as a fundamental approach to the treatment of chronic diseases in the presence of frailty.

4. Prescribing should be considered carefully by physicians to avoid inappropriate polypharmacy when treating older people with, or at risk of, frailty.

5. Tele-health care solutions and falls prevention programmes should be further developed.

3. Increasing awareness & Preparing the workforce

How can awareness of the frailty challenge be increased?
How can the care workforce be prepared to address the challenge of frailty?

The dramatic demographic changes call for a radical change in education, organisation, and delivery of health care (22). There is a growing necessity to promote a better understanding of needs of older people in all aspects and to raise public awareness on the importance of social inclusion and integration. Successfully increasing awareness on the issues associated with ageing, including frailty, will require a series of actions at policy level. Awareness can be increased by strengthening the links between academic centres, primary care settings, communities and older people and carer advocacy groups. While frailty is viewed as an unavoidable part of ageing, people's attitudes are unlikely to change. Awareness can be increased by developing policies and protocols on ageing and health, by re-defining performance targets and by monitoring professional practice and performance in this area.

Implementing effective interventions for frailty in care settings, however, can only be achieved if the workforce is adequately trained staff and has sufficient capacity to face up to frailty as a key challenge. In this respect, the WHO in 2013 delivered a report containing specific recommendations for the MSs on how to reshape health workforce skills development (23). The WHO outlined the need for a "critical mass of specialist geriatric expertise or the availability of geriatricians" to see and treat complex cases and to develop the curricula and teaching needed to cover this vision. The most prominent Scientific Societies in the field of Geriatric Medicine and Gerontology, and also public National Health Services, such as in the UK countries, have also issued similar recommendations pointing in the same direction. These recommendations address all health and social care professionals involved in supporting older people, with the aim of building new skills in the prevention and treatment of common geriatric syndromes and in preserving and restoring individual functional capacity.

The development of skills in the area of frailty prevention and management requires dynamic and competency-based curricula and inter- as well as multi-professional education, in vibrant sustainable and supportive learning environments for both undergraduate and post graduate education (22). In many local contexts, indeed, the current curricula offered in the undergraduate training programmes does not match the skills and competences required in practice. Roles of care professionals are continuously reshaped, the scope of practice extended and new professionals are being created and integrated into the care organisations. For example, nurses, social workers and allied health professionals today play an important role by using their skills in key tasks such as assessment, treatment management, self-management support, and follow-up care. Modern health workers may then need to be (re)trained for becoming care coordinators and to acquire the ability to oversee comprehensive and multidisciplinary care plans. Ultimately, the ability to work in multidisciplinary teams is of paramount importance, if older people are to be placed at the core of individualised care planning and well coordinated care pathways.

Currently, there is no evidence on the effectiveness and sustainability of educational programmes specific for frailty prevention and management, despite a few interesting European initiatives. However, good practices for continuous education and training of health professionals on frailty have been identified across MS by ADVANTAGE JA. Most of these programmes have a multidisciplinary approach. Few MSs report having a national education strategy or specific competency framework in the field of frailty. It is difficult to make a critical evaluation of the widely varying under- and postgraduate good practice models. In the future, more investment and a systemic approach in this area are required if a real impact is to be made.

Key policy recommendations

1. Each MSs should develop a plan to invest in health workforce capacity and capability in the area of frailty prevention and management, in line with the WHO recommendation from 2015.

2. Multidisciplinary training curricula and educational programmes should be developed and delivered jointly between academic centres, hospitals, primary care settings and communities.

3. Education and training programmes in the field of frailty prevention and management should be evaluated in a transparent way for multidimensional efficacy and should be accredited following the criteria of European Accreditation Council for Continuing Medical Education).

4. Implementation of policy recommendations

What are the opportunities and challenges for addressing frailty at policy level?

Addressing frailty amongst ageing populations must be a comprehensive holistic endeavour employing a multilevel strategy to coordinate the efforts of all stakeholders (24). The urgency of such a strategy is clear, given that frailty prevalence will exponentially increase in the coming years as the European population continues ageing, but also as the negative consequences of frailty affects family caregivers, professionals, public and private service providers and society as a whole.

The positive impact of addressing frailty has been already outlined by several initiatives, pointing out how investment in preventing and managing frailty, for example through integrated care strategies, leads in the mid- and long-term to a more efficient and sustainable care system and more resilient overall (25). For instance, preliminary analysis of the outcomes of the Scottish reforms to reshape care and support for older people with multiple and complex needs, suggests that person-centred and integrated health and social care, in partnership with housing, community, voluntary and independent sectors, is associated with significant cost avoidance from reduction in the projected age related rate of hospital and long term institutional care utilisation for people aged 65 (26).

Even though European MSs vary largely in many aspects, e.g. in terms of welfare system structure, national economy, and family and social networks, EU policy makers face similar challenges in implementing new initiatives, programmes and/or reforms. These challenges can be grouped as three main areas.

1. Lack of awareness and a number of misconceptions about the nature and definition of frailty, with the consequent need to diagnose it separately from chronic diseases and disability. Undoubtedly, the complexity and the lack of agreement on the definition of frailty contributed to hinder its prioritisation in the political agendas. There is a persistent tendency to overlap the concept of frailty with that of other common phenomena among older people, such as disability and multi-morbidity. It should be kept in mind that whereas the former two phenomena are extremely relevant, the concept of frailty has a greater potential for the implementation of preventive strategies, as it allows to target a potentially reversible conditions, thus saving resources and improving the quality of life in the population by avoiding new cases of disability and diseases.

2. Need to tackle frailty using a holistic approach, typically multi-sectoral, which conflicts with the silos mentality often found in the health and social care organisations. This attitude prevents collaboration, as services/departments in these organisations tend to consider what is rational/profitable from their own (budget) perspective without considering the overall scenario of care. For example, a potential intervention budgeted in the social care department, can produce savings for the healthcare system, which are not evident while planning its implementation in the field. Overcoming the silos mentality is required to achieve further care integration and more efficient use of budgets.

3. The lack of preparedness of the educational sector and the workforce to make the required broad change in the existing paradigms of care (24). Such changes typically encounter some degree of resistance among the different professionals that are invited to innovate their current working routines. This factor should not be neglected when planning new initiatives addressing frailty, as cooperation and collaboration with professionals is a clear pre-requisite of success.

Implementing the key recommendations in this policy brief will help MS to overcome these three sets of challenges and make progress together in preventing and managing frailty. These recommendations should be considered as guiding principles, to be implemented through measures which are designed locally to reflect and address the heterogeneity of each national and regional context.

REFERENCES

1. Clegg A, Young J, Iliffe S, Rikkert MO & Rockwood K (2013). Frailty in elderly people. Lancet, 381(9868), 752–62. doi:10.1016/S0140-6736(12)62167-9
2. Fried LP, Tangen CM, Walston J, Newman AB, Hirsch C, Gottdiener J, Seeman T, Tracy R, Kop WJ, Burke G, McBurnie MA, Cardiovascular Health Study Collaborative Research Group (2001). Frailty in older adults: evidence for a phenotype. The Journals of Gerontology Series A: Biological Sciences and Medical Sciences, 56(3), M146-M157. doi:10.1093/gerona/56.3.m146
3. Junius-Walker U, Onder G, Soleymani D, Wiese B, Albaina O, Bernabei R, Marzetti E, ADVANTAGE JA WP4 group (2018). The essence of frailty: A systematic review and qualitative synthesis on frailty concepts and definitions. European Journal of Internal Medicine. [Epub ahead of print] doi: 10.1016/j.ejim.2018.04.023
4. Vetrano DL, Palmer K, Marengoni A, Marzetti E, Lattanzio F, Roller-Wirnsberger R, Samaniego L, Rodríguez-Mañas L, Bernabei R, Onder G, Joint Action ADVANTAGE WP4 Group (2018) Frailty and multimorbidity: a systematic review and meta-analysis. The Journals of Gerontology: Series A, gly110. doi:10.1093/gerona/gly110
5. Rockwood K, Song X, MacKnight C, Bergman H, Hogan DB, McDowell I, Mitnitski A (2005). A global clinical measure of fitness and frailty in elderly people. Canadian Medical Association Journal, 173(5), 489-495. doi:10.1503/cmaj.050051
6. O'Caoimh R, Galluzzo L, Rodríguez-Laso Á, Van Der Heyden J, Ranhoff AH, Carcaillon-Bentata L, Beltzer N, Kennelly S, & Liew A, on behalf of Work Package 5 of the Joint Action ADVANTAGE (2018). Transitions and trajectories in frailty states over time: a systematic review of the European Joint Action. Annali dell'Istituto Superiore di Sanità, 54(3), 246–252. doi:10.4415/ANN_18_03_12.
7. Redon J, Perez-Hernandez J (2017). ADVANTAGE WP8 Report – Extending and Expanding the Knowledge on Frailty to Foster Innovative Policy on Frailty: A Systematic Review. Available at link
8. World Health Organization. (2015). World report on ageing and health. Luxembourg. Available at link
9. O'Caoimh R, Galluzzo L, Rodríguez-Laso Á, Van Der Heyden J, Ranhoff AH, Lamprini-Koula M, Ciutan M, Lopez Samaniego L, Carcaillon-Bentata L, Kennelly S, Liew A on behalf of Work Package 5 of the Joint Action ADVANTAGE (2018a). Prevalence of frailty at population level in European ADVANTAGE Joint Action Member States: a systematic review and meta-analysis. Annali dell'Istituto Superiore di Sanità, 54(3), 226–238. doi:10.4415/ANN_18_03_10.
10. O'Caoimh R, Galluzzo L, Rodríguez-Laso Á, Van Der Heyden J, Ranhoff AH, Lamprini-Koula M, Ciutan M, Carriazo AM, Carcaillon-Bentata L, Kennelly S, & Liew A on behalf of Work Package 5 of the Joint Action ADVANTAGE (2018b). Supplementary materials for 'Prevalence of frailty at population level in European ADVANTAGE Joint Action Member States: a systematic review and meta-analysis'. Annali dell'Istituto Superiore di Sanità, 54(3), 228-240. doi:10.4415/ANN_18_03_10.
11. Galluzzo L, O'Caoimh R, Rodríguez-Laso Á, Beltzer N, Ranhoff AH, Van Der Heyden J, Lamprini-Koula M, Ciutan M, Lopez Samaniego L, Liew A on behalf of Work Package 5 of the Joint Action ADVANTAGE (2018). Incidence of frailty: a systematic review of scientific literature from a public health perspective. Annali dell'Istituto Superiore di Sanità, 54(3), 239–245. doi:10.4415/ANN_18_03_11
12. O'Caoimh R, Galluzzo L, Van der Heyden J, Carriazo AM, Samaniego LL, Koula M, Macijauskienė J, Bacaicoa OA, Hammar T, Ciutan M, Hendry A, Beltzer N, Carcaillon-Bentata L, Ranhoff AH, Rodriguez Laso A, Aaron Liew - on behalf of all WP5 partners (2017). Frailty at Population Level: A Systematic Review. Available at link
13. Bock J-O, König H-H, Brenner H, Haefeli WE, Quinzler R, Matschinger H, Saum K-U, Schöttker B, Heider D (2016). Associations of frailty with health care costs – results of the ESTHER cohort study. BMC health services research, 16(1), 128. doi:10.1186/s12913-016-1360-3
14. García-Nogueras I, Aranda-Reneo I, Peña-Longobardo LM, Oliva-Moreno J, Abizanda P (2017). Use of health resources and healthcare costs associated with frailty: the FRADEA study. The journal of nutrition, health & aging, 21(2), 207-214. doi:10.1007/s12603-016-0727-9.

15. Sirven N, & Rapp T (2017). The cost of frailty in France. The European Journal of Health Economics, 18(2), 243-253. doi: 10.1007/s10198-016-0772-7
16. Galluzzo L, & O'Caoimh R (2018). Preface to Monographic section 'Epidemiology, surveillance and population screening of frailty. Results from the systematic reviews of the European Joint Action ADVANTAGE' Edited by Lucia Galluzzo and Rónán O'Caoimh. Annali dell'Istituto Superiore di Sanità, 54(3), 223–225. doi:10.4415/ANN_18_03_09
17. Bernabei R, Benjak T, Kern A, Junius-Walker U, Macijauskiene J, Onder G, Palmer K, Taragowski T, Soleymani D, Caballero-Mora MA (2017). ADVANTAGE WP4 Report - Knowing Frailty at Individual Level: A Systematic Review. Available at link
18. Rodríguez-Laso Á, O'Caoimh R, Galluzzo L, Carcaillon- Bentata L, Beltzer N, Macijauskiene J, Bacaicoa OA, Ciutan M, Hendry A, Lopez Samaniego L, Liew A, on behalf of Work Package 5 of the Joint Action ADVANTAGE (2018). Population screening, monitoring and surveillance for frailty: three systematic reviews and a grey literature review. Annali dell'Istituto Superiore di Sanità, 54(3), 253–262. doi:10.4415/ANN_18_03_13
19. Gabrovec B, Panagiotopoulos E, Jelenc M, Antoniadou E, Selak S, Soleymani D, Targowski T, Kadalska E, Carriazo A, López Samaniego L, Csizmadia P, Hendry A, Mair A, Albaina Bacaicoa O, Veninšek G, Strojnik V, Skela Savič B, Potisek R & Caballero-Mora Maria A (2017). ADVANTAGE WP6 Report – Management of Frailty at Individual Level: A Systematic Review. Available at link
20. Rodríguez-Laso Á, Caballero-Mora, MA, García-Sánchez, I, Rodriguez-Mañas, L, Bernabei R, Gabrovec B, Hendry A, Liew A, O'Caoimh R, Roller-Wirnsberger R, Antoniadou E, Carriazo AM, Galluzzo L, Redón J, Targowski T on behalf of all ADVANTAGE Joint Action partners (2017). State of the art report on the prevention and management of frailty. Available at link
21. Hendry A, Vanhecke E, Carriazo AM, López Samaniego L, Espinosa JM, O'Caoimh R, Liew A, Hammar T, Ferry P, Vella A, Albaina Bacaicoa O, Braga M, Ciutan M, Velivasi A, Koula M, Van der Heyden J - on behalf of all WP7 partners (2017). Models of Care for Frailty: A Systematic Review. Available at link
22. Roller-Wirnsberger R, Windhaber T, Koula ML, Ntzani E, Velivasi A, Rizos E, Doumas M, Pappas E, Timofe M, Illario M, Maggio M, Abete P, Liotta G, Iaccarino G, Rodriguez-Laso A (2017). ADVANTAGE WP8 Report – Building Workforce Capacity on Frailty Prevention. Available at link
23. World Health Organization. Transforming and scaling up health professionals' education and training, World health organization guidelines (2013) Available at link
24. NHS England (2014). Safe, compassionate care for frail older people using and integrated care pathway. Practical guidance for commissioners, providers and nursing, medical and allied health professional leaders. Available at link
25. Hendry A, Cariazo A, Vanhecke E, & Rodríguez-Laso Á (2018). Integrated Care: A Collaborative ADVANTAGE for Frailty. International Journal of Integrated Care, 18(2), 1. doi:10.5334/ijic.4156
26. Hendry A, Taylor A, Mercer S, & Knight P (2016). Improving outcomes through transformational health and social care integration-The Scottish experience. Healthcare Quarterly, 19(2), 73-79. doi:10.12927/hcq.2016.24703.

Co-funded by
the Health Programme
of the European Union

ADVANTAGE JOINT ACTION

Managing Frailty. A comprehensive approach to promote disability-free advanced age in Europe: the ADVANTAGE initiative

DISCLAIMER

This publication arises from the Joint Action ADVANTAGE, which has received funding from the European Union, in the framework of the 3rd Health Programme, under the grant agreement n° 724099. This document reflects only the authors' views and neither the European Commission nor any person on its behalf is liable for any use that may be made of the information contained herein.