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MANAGING FRAILTY

# Frailty prevention at individual level –partial reusult of systematic literature review

*Preventiva krhkosti na ravni posameznika – delni rezultati  
sistematičnega pregleda literature*

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# Introduction

- By 2060 the number European people over 65 years will be doubled, accounting for a total of 151 million people (European Commission, 2015).
- This huge progress needs improved standards of health and quality of life (QoL).
- Frailty can be defined as the inability of an individual to return to their baseline homeostasis after an insult to the body, or a measure of resilience which increases individual's vulnerability for developing increased dependency and/or mortality when exposed to a stressor (Clegg, 2013).
- It has been recognized that frailty may have a biologic basis, with a physical, social and psychological component (Uchmanowicz et al., 2015), but a standardized definition has not yet been established.

- Not only physical and cognitive status but also depression, anxiety and loneliness may be a sign of frailty. Depending on the definition selected, the estimates of frailty oscillate from 4% to 17% at the community-dwelling adults aged 65 and older (Collard et al., 2012).
- There is scientific consensus in that both the high prevalence and the impact on health recommend screening for frailty at population level (Morley et al., 2013).

# Methods

- The literature search was conducted using the following databases: PubMed, The Cochrane Library, Embase, UpToDate, Cumulative Index of Nursing and Allied Health Literature (CINAHL), according to Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA-P) 2015 guidelines.
  - Grey documents which were identified and proposed by task leader and working group on Prevention of the project Joint Action on Frailty prevention – JA ADVANTAGE, Work package 6 – Management of Frailty at individual level were also reviewed.
- The criterion in selecting the literature: articles were published in the time period of 15 years, from 2002 to 2017.
- The research design: Meta synthesis

# Results

- The total number of all search results was 391910. After excluding duplicates and taking into account inclusion criteria the final 31 articles/sources remained for analysis.
- PRISMA DIAGRAM

Identification

Records identified through database searching  
(391910/266 selected)

Additional records identified through other sources  
(n = 0)

Screening

Records after duplicates removed  
(n = 240)

Records screened  
(n = 240)

Records excluded  
(n = 192)

Eligibility

Full-text articles assessed for eligibility  
(n = 48)

Full-text articles excluded, with reasons  
(n = 17)

Included

Studies included in qualitative synthesis  
(n = 31)

We recognised six thematic categories (C):

- C1: Definition and different types of frailty,
- C2: Preventive activities in professional service to prevent frailty,
- C3: Observation of risk indicators for prevent or early recognition of frailty,
- C4: Changes in Health Care Systems and health care research for manage of frailty,
- C5: Instruments for discover and measurement of frailty,
- C6: Support for family carers’.

# Preventive activities in professional service to prevent frailty

- **Three-monthly visits** beneficially applied in clinical practice **for the prevention of functional decline** among ambulatory frail elderly people living at home (Kono et al., 2016).
- 28 longitudinal cohort studies the physical frailty indicators (Vermeulen et al., 2011):
  - **Slow gait speed and low physical activity/exercise**, followed by **weight loss, lower extremity function, balance, muscle strength**.
  - **Monitoring physical frailty indicators** might be useful to identify elderly people who could benefit from disability prevention programs.
- **The care model** (Fougère et al., 2017), observational research,
  - Patients identified as potentially frail by **Geriatric Evaluation Nurse (GEN)** - specialized in the evaluation of frailty and cognitive functions, who could be an interesting option to develop geriatric assessment in all territories and, thus, improve accessibility to everyone for less complicated cases.
- **U-CARE program** (Bleijenberg et al., 2012),
  - The three steps: a frailty assessment to **identify frail patients**, a **comprehensive geriatric assessment (CGA)** at home, a tailor-made **care plan with evidence-based interventions**, and **multiple follow-up visits**.



# Observation of risk indicators for prevent or early recognition of frailty

- Factors, which can better explain social, clinical and analytical factors associated with frailty (Serra-Prat et al., 2016):
  - **Good control over underlying diseases and pain**, rationalizing use of medications, optimizing nutritional status and body weight, promoting physical activity and improving social support may contribute to preventing or even reverting frailty. F
- Frailty associations with **sociodemographic, social support and health characteristics** (Buttery et al., 2015):
  - Independent determinants of frailty: **older age, low socioeconomic status (SES), poor social support, lower cognitive function and a history of falls.**
  - Modifiable characteristics:
    - low physical activity, depressive symptoms, polypharmacy, poor hearing, low levels of social support and self-reported lack of help.

- Young et al. (2016): frailty is both **genetically and environmentally determined**,
  - addressing deleterious environmental factors, some of which, like childhood socioeconomic status [SES], may act across the life course.
  - Environment — education, marital status, and health behaviours - had a significant association with frailty.
  - Small but significant association was seen between frailty and father's occupational classification, mediated by birth weight and an individual's own educational attainment.

# Changes in Health Care Systems and health care research for manage of frailty

- **Primary care have a role in fostering the development of generally agreed-upon, sound methods** - Ilinca and Calciolari (2015) study in 10 EU countries frailty and the influence of frailty on access to health care.
- **Early diagnosis of frailty and functional decline** are considered as effective measures against age-related comorbidities - Carretero et al. (2015).
  - The scalability of **good practices**, together with **expansion of research** in effective interventions, should increase the benefits in terms of healthy longevity.
- **Public health programs aimed at improving socioeconomic status (SES) and promoting healthy longevity** should start early in old age, or even earlier, and target poor and frail older adults for maximum impact Gu et al. (2016).

# Conclusion

- The recognition of frailty is important and this is why prevention and early assessment for frailty should form part of any interaction between an older person and a health or social care professional.
- If the presence of frailty has been identified, this will influence the health or social care professional in weighing the benefits and risks of any intervention or treatment plan.

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*More information in Skela-Savič, B., Gabrovec, B. (avtor, urednik), HvaličTouzery, S., Veninšek, G., Strojnik, V., Jelenc, M., Selak, Š. WP6 Management of frailty at individual level : systematic literature review : Joint Action Advantage. Ljubljana: Nacionalni inštitut za javno zdravje, 2017. Str. 4-46. [COBISS.SI-ID [1024226094](#)]*