



Swiss Learning
Health System

Effect of frailty on healthcare utilization: policy analysis and recommendations to the Swiss health system

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Executive Summary

Background and Objectives

Frailty is increasingly seen as a problematic expression of population aging. Given its major implications for clinical practice, public health, and financial sustainability, it represents an emerging challenge for health systems.

Frailty is a clinical geriatric condition characterized by increased vulnerability resulting from a diminished physiological reserve and function of multiple organs, compromising the ability to cope with everyday or acute stressors. The two most widespread instruments to measure frailty were built on this definition and were developed in the 2000s: the Frailty Phenotype (FP) and the Frailty Index (FI). Such instruments adopt a definition of frailty that is limited to the physical domain of frailty. More recently, however, it has been argued that the concept should be widened to adopt a multidimensional approach, including psychological and social aspects, because disregarding a holistic approach may lead to care fragmentation and consequent negative health outcomes.

Existing literature has focused on the effects of physical frailty on the patterns of healthcare utilization and costs in different contexts, while there is a paucity of evidence regarding the effect of other frailty dimensions. However, the risks derived from omitting important psychosocial characteristics of frailty, such as a poorer sensitivity in detecting health outcomes and a sub-optimal choice of targeted interventions, are more often highlighted.

Today, frailty is measured using several instruments, ranging from short, fast, and crude tools to sophisticated and time-consuming measures. Notably, some instruments merely focus on physical frailty, while few aim at measuring also its cognitive and socio-psychological domains. Different frailty instruments may serve different purposes, and therefore, the choice may be driven by several reasons, including the measurement aim, the care setting, time constraints, and the subject performing the measurement. Besides, some instruments perform better for population-level screening, while others are more suitable for clinical settings or specific clinical populations.

Nevertheless, there is still considerable inconsistency and a lack of consensus even in the tools for measuring frailty within the same setting or context. As a result, there may be consistent differences in how the “same” elderly is classified, in the estimated prevalence of frailty, and in the interventions put in place to improve healthcare outcomes.

Main Findings

Using data from the Survey of Health, Ageing and Retirement in Europe (SHARE), we estimated the prevalence of physical, social, and psychological frailty¹ in community-dwelling elderly individuals of 12 European countries, including Switzerland, in 2011-2020.

Frailty increases with age and with concomitant multimorbidity and differs widely across European countries. The latter also holds for social and psychological frailty. Despite Switzerland falling among countries with the lowest prevalence rates, physical frailty has increased over time, while psychological and social frailty has fluctuated.

In general, physical frailty is more burdensome than multimorbidity in terms of hospital access and number of doctor visits. The prevalence of hospitalization and doctor visits is higher in individuals with psychological frailty. Contrarily, a lower share of high socially frail respondents is hospitalized and experiences a high number of doctor visits compared to unfrail ones.

A longitudinal regression model controlling for several factors (e.g., age, gender, ...) shows that physical, social, and psychological frailty predict hospital admission and number of doctor visits ([see full-text Policy Brief for details](#)). The effect of physical frailty confirms previous results: physically frail individuals are more likely to be hospitalized and have more doctor visits. In addition, physical frailty is confirmed as more burdensome than multimorbidity. Regarding the other two frailty dimensions, psychologically/socially frail individuals are more/less likely to be hospitalized and see a doctor. The effect of the three dimensions on hospital admissions is stronger than the one on doctor visits.

The frail elderly, who are socially isolated, may forego healthcare due to their inability to reach healthcare facilities or the lack of availability of a caregiver whenever they cannot count on an informal network. Ignoring psychological frailty, similarly, may prevent the detection of patients that are at higher risk of institutionalization and that may in turn lack appropriate interventions. These are all issues that may be tackled by rethinking home and social care on top of traditional medical care.

Results suggest that social and psychological frailty are important aspects to consider in health policies as a strategy to both contain expenditures and avoid potential healthcare inequalities.

Recommendations

Recommendation 1: Reach a consensus on the definition of frailty and define a comprehensive measurement instrument.

Acknowledging the multidimensionality of frailty represents a key factor of effective health-related risk stratification. The objective to measure it through a harmonized, comprehensive instrument is the first step towards its prioritization in health policy agendas. A convergence towards a standardized definition of the condition is a “work in progress” still lagging at the international level. In this respect, using appropriate tools to measure frailty consistently would help identify the frail population and use frailty as a risk stratification tool, correctly

¹ We measured physical frailty using the Fried's FP and social and psychological frailty using the TFI.

estimate the clinical and economic burden, design targeted intervention strategies, and compare different studies and care settings.

Recommendation 2: Design frailty-specific, integrated care strategies to appropriately address the frailty needs and shift the clinical and economic burden from hospitals to primary and home-care care settings.

The complexity and multidimensionality of frailty suggest the importance of designing and implementing integrated and comprehensive care strategies, carried forward by all the providers and professionals from different sectors: health care, social care, housing, and community support. Such a strategy would improve older adults' quality of life and functional ability. Moreover, since the influence of frailty on the likelihood of hospitalization is larger than on doctor visits, one might hypothesize that improving the assessment and treatment of frailty might help shifting the clinical and economic burden from the acute to other care settings, with consequential effects at the system level, provided appropriate care integration across care settings. Integrated care models specifically designed to prevent and manage frailty are scarce and have only recently been given further attention. Switzerland already has some interesting models, showing that patients' outcomes improve while re-hospitalizations and costs decrease when the interfaces between acute care and follow-up are professionalized and when the resources devoted to their coordination are sufficient. Nevertheless, such models are not directly transferable to other Swiss contexts, calling for attention to be given to generalizable solutions.

Recommendation 3: Adopt a nationwide harmonized electronic frailty index, built using existing primary care data, to increase the likelihood of identifying individuals most at risk.

The Swiss Frailty Network and Repository is working on the establishment of a nationwide harmonized eFI. However, as the measurement is conditional on having been hospitalized in the previous year, it makes the tool inappropriate for measurement in primary care or other settings whenever the individual hasn't been institutionalized, thus disregarding any integration across different health care settings and between health and social care. Assessing an individual's condition using existing data from primary care systems instead, would increase the likelihood of timely identifying individuals most at risk before they experience a crisis or progress and ensure their care is appropriately tailored to meet their individual needs and preferences. Finally, the use of such an eFI may also support the thesis of the two-steps approach, where the eFI would represent the fast and easy-to-use, yet clinically valid, tool for a preliminary and rapid identification of frail older people at risk.

Implementation considerations: barriers and facilitators

The implementation of the recommendations may be enabled by:

- the existence of the Swiss Frailty Network & Repository and of the Swiss Society for Geriatrics, which may contribute to the decision on commonly agreed, comprehensive definition of frailty;
- the ongoing debate on Coordinated Care-oriented policies at the Federal level;

- the ongoing Federal Council consultation on Electronic Patients Records (EPRs), aims at boosting the adoption EPRs to facilitate data sharing and cooperation among healthcare providers.

The implementation may however be hindered by:

- an overall neglect of the complexity and multidimensionality of frailty;
- the current financing system, which does not create incentives for managing the patient as a network and/or according to a defined care pathway;
- The Federal Law on Data Protection (LDP), strictly enforcing data protection and sharing;
- approximately half of the hospitals having either not joined the electronic patient record system or refused to work with it.