Health & Medicine | Maider Mateo-Abad & Itziar Vergara

Screening frailty
A predictor of healthcare requirements in older people

People are living longer, and this is associated with increased pressure on healthcare services. Assessing how much support people need allows resources to be used effectively and patients to receive the best care. Frailty is associated with poorer health and more complications – but the condition can be hard to characterise. Maider Mateo-Abad and Dr Itziar Vergara at the Biodonostia Health Research Institute in the Basque Country, Spain show that functional performance correlates with healthcare use, suggesting an easy way to screen individuals. This could improve the prediction of healthcare needs and allow clinical management to be tailored to the patient’s needs.

The above highlight the necessity for healthcare systems to move towards new models of care. It is more important than ever to make sure that resources are being used effectively while optimising person wellbeing, appropriate care, and assuring a good quality of life for as long as possible. It is estimated that in Europe, around 18% of the individuals over 65 years of age are frail. Frailty isn’t the same as living with multiple long-term health conditions, although many of these individuals may also be frail. Frailty is more prevalent in older people and is generally characterised by issues such as reduced muscle strength, impaired balance, and fatigue. These individuals may also have lower resilience to illness, with minor health conditions more likely to lead to complications or delayed healing. Frailty is associated with negative health-related events, such as falls, hospitalisation, dependence, and death.

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ASSESSING FRAILTY
Maider Mateo-Abad and Dr Itziar Vergara work at Biodonostia Health Research Institute in the Basque Country, Spain. Their research tackles the assessment of frailty at primary care: identification of frail individuals, needs assessment, and evaluation of interventions aimed to reverse frailty.

First, the researchers compared the performance of a number of instruments in identifying frail people at primary care. It should be noted that there is no consensus on the optimal way to identify frail individuals, and several tools have been proposed. Their study demonstrated that different profiles of frailty were identified by each tool. One of the profiles was that of people with a high load of chronic diseases that were already known to their healthcare team. But there were also other groups of people with diminished functional performance with worse health outcomes and high-risk of negative events such as falls that, without actively looking for frailty, will remain unnoticed to their primary health care team. This is precisely the most interesting profile of frailty to be identified.

This study identified the ‘Timed Up and Go’ – or TUG – test as the most suitable option to tackle frailty at the primary care setting. This is a simple screening test that can determine functional performance of a person. Individuals start the test in a seated position before standing up, walking three metres, turning around, walking back to the chair and returning to sitting. The main measurement from the TUG test is time, and older adults who take over 12 seconds to complete the test are defined as being at higher risk of falls and other negative health-related events. The walking test also allows the observer to evaluate the participants’ overall postural stability and walking ability.

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Following this research line, a new study was carried out focusing on those persons with low functional performance. The question they set out to answer was: is it possible to predict which healthcare services and resources might be required by an individual according to their frailty condition? This would subsequently allow to adapt the corresponding clinical management, to meet the needs of those affected.

The research group stresses the importance of using the correct statistical method to analyse the data, allowing meaningful, accurate conclusions to be drawn. For this study, an advanced statistical model called the Generalized additive model for locations, scale and shape (GAMLSS) was selected. Using a GAMLSS model allowed the researchers to fit the data and account for confounding factors, such as comorbidities and medications.
There is a growing field of evidence that has looked at the role of gender and socioeconomic status in healthcare. For example, women are more likely to seek support earlier compared to men, but men often receive higher-quality care. Mateo-Abad and Vergara explain that their study showed differences in the use of healthcare visits and hospitalisation. This is important consideration as functional capacity will be measured as the primary outcome, in addition to adverse events such as hospitalisations. Secondary outcomes would include sociodemographic characteristics, health-related quality of life, nutritional status, and activity levels. The project aims to highlight how frailty can be improved through timely, guided interventions, and this is reflected as an improvement in functional ability.

Although not fully reversible, the severity of frailty can be attenuated with appropriate interventions such as exercise, nutrition, and medication reviews. Frailty is associated with the level of functional ability, and it suggests more work needs to be done to understand and tackle gender inequality in healthcare.

MULTICOMPONENT INTERVENTIONS
Vergara and colleagues have already proposed a multicomponent intervention for frailty. This intervention would use a combination of exercise, medication review, and nutritional changes. The research group aimed to recruit 200 participants with frailty and compare the application of this multicomponent intervention in primary care versus usual follow-up over a 12-month period.

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USE OF HEALTHCARE SERVICES
Almost 750 participants from two regions in Spain were followed up for two years. Of those, 274 (37%) were identified as having poor functional performance based on the results of the TUG test. The participants, aged 70 or above, were living in the community and did not require care support with everyday activities.

The results of the study showed that those with low functional performance tended to be female, older, and had lower income and poorer health status than those with higher functional performance.

Further, they were more likely to use primary and secondary health services and were also more likely to be hospitalised for prolonged periods of time when compared to more robust individuals. For example, those with low functional performance attended a nurse appointment in a primary care setting almost 50% more times over the space of a year than those with normal performance.

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Frailty is associated with the level of functional ability, this presents an attractive option for systematically assessing frailty level in primary care. Once identified, changes can be put in place to reduce the risk of adverse events associated with frailty, eventually decreasing disability, dependence, and poor quality of life associated with deteriorating functional capacity.

Tailoring healthcare services to meet the needs of an ageing population will have wide-ranging benefits, from an individual level to broader social, financial, and economic areas.