Development of criteria, complexity indicators and management strategies on frailty
Executive abstract

Introduction
The United Nations foresees that the Spanish society can become the oldest in the world in the next 15 years, which will mean a 6 percent of the population (Statistics National Institute, February 2008).

Nowadays, in the overall ranking of life expectancy, Spain comes as one of the highest. But concerning life expectancy with good health, it gets worse as compared to other countries like France, Sweden, Australia or Japan. A longer life is not synonymous with good life quality and health (Topinková, 2008).

Despite the fact that the elderly constitute a large population area, there are gaps of knowledge about them. Specifically, the so-called frail elderly is a group of old people just at the limit, on the verge of health damage. However two health experts might understand different things depending on the concept frail old person or frailty. There is not agreement about it.

Apart from this, there is a poor assessment of management strategies, diagnosis tools, frailty assessment scales…so we do not know if its diagnosis and later management is effective.

Some authors like Ho, Williams, Hardwick 2002 estimate that primary prevention of health deterioration associated with age could be done with even a 50 percent of the elderly, if we obtain diagnosis tools or risk indicators.

Therefore, identifying risk factors, causes, frailty markers and/or predictors of frailty could be useful for frailty diagnosis in the old person and consequently it would mean an improvement in the quality of health care and the creation of adequate preventive measures.

The lack of consensus on the definition, the scarce assessment of both the diagnosis tools as well as the strategies for management the frail old person led the Andalusian Agency for Health Technology Assessment to suggest the Ministry both a systematic review on the subject and a study using the Delphi technique.

Objective
The overall objective of this report is to define the concept of frailty in the old person, to show tools and/or markers which help us analyse the strategies for management the frail elders. To get it, the following specific objectives will be accomplished:

Objective 1: To analyse the concept of frailty in scientific literature.
Objective 2: To identify frailty risk factors in the old person.
Objective 3: To identify the tools to be used to recognise frail elderly.
Objective 4: To identify strategies to facilitate integral care assistance to this population group.
Objective 5: To select relevant variables within the diagnosis of frailty.

Material and methods
Different search strategies were used in the following databases: PreMEDLINE until 2007, MEDLINE 1997-2007, CINAHL 1982-2007, PsycINFO 1985-2007, EMBASE 1999-2007 and COCHRANE LIBRARY until December 2007. Other sources of information were the International Network of Agencies for Health Assessment (INAHTA), web sites from other agencies not involved in INAHTA network as well as from other international institutions and providers who elaborate reports for their healthcare systems, like Blue Cross Blue Shield Association, Technology Evaluation Center, Institute for Clinical Evaluative Services (ICES), National Institute of Clinical Excellence (NICE), and at last, web sites from different scientific societies like Sociedad Española de Medicina Familiar y Comunitaria, Sociedad Española de Medicina Interna and Sociedad Española de Geriatría y Gerontología.

The papers included defined the frail old person, described or validated markers and/or predictors, included tools for the recognition of frailty and showed strategies for management the old person.

The outcomes of the systematic review showed diversity in the predictors of frailty, lack of consensus regarding terminology and at last poor assessment of the tools for the diagnosis of frailty in the old person. The Delphi technique came up with the aim to try to reach consensus among the professionals involved in caring the elderly. A three-round Delphi technique was carried out.

Outcomes
The papers were largely heterogeneous, and of a low-moderate quality since only a 21.83% were systematic reviews, clinical trials, cohort studies or cost-effectiveness studies.

There was not consensus in the choice of a suitable tool for the diagnosis. Nor was scientific evidence found for showing a tool better than the rest. In order to identify the risk factors of the frail old person, some authors used frailty indices (established by categories), while others used pathologies which could be alarm indicators in the diagnosis.

Besides, several types of units were identified regarding the strategies:
- Effective units in the functional deterioration of the elderly, like the ictus functional recovery units, convalescent care units and acute care hospital units (teams of multidisciplinary consultants and acute geriatric units).
- Less effective units like the hip functional recovery units.

Other units will improve their effectiveness with a suitable selection of patients. This is the case of geriatric home care assistance.

As for outpatient geriatric hospitals, they are the best option when there is no other alternative.
Frailty predictors were grouped into 16 categories and they were assessed by the experts commission established for the Delphi study panel. All the experts agreed on the frailty predictors, which are listed below. Therefore, they reached consensus regarding the frailty predictors they were asked about:

- Mobility disorder, falls and change in activities of daily life (ADL).
- Cognitive decline.
- Risk of suffering pressure ulcers.
- Concurrence of multiple pathologies.
- Socio-demographic and environmental aspects (there was only agreement in the infrastructure of the place of residence).
- Mood disorders (depression, anxiety and sleep disorders).
- Visual and/or auditory deficit.

Conclusions

- 70.6% of the authors do not create their own concept, they use other author’s definition. There is not agreement regarding the concept of frailty.
- From the clinical practice perspective, definitions can be sorted out into two groups:
  - On the one hand, those ones which define the frail old person through biomedical factors (proposed by Fried 2001)
  - On the other hand, there are more holistic definitions like the one offered by Rockwood 1994, in which psychosocial and environmental factors were included. They improved exhaustivity but lost speed.
- It is observed the multiple variables found regarding the indicators/markers used in the identification of frailty, and no evidence has been found to consider any of them the right indicator to allow diagnosing frailty in the old person.
- There is no validated tool which identifies frailty, although it is possible to set out possible predictors into 16 categories. This could provide us with the criteria for diagnosing frailty.
- There is a common element among the different units forming the health care system in our country and it is the achievement of better outcomes with a specialized team in geriatric cares, coordination between the hospital and the community members levels and the organization with standardised procedures, together with the active participation of the medical staff (adequate decision tools).
- The concept of frailty is different for experts involved in caring the elderly, primary healthcare and palliative care (also including the medical and nursery staff). They considered a frail old person as someone suffering functional disorders and death risk, and frailty as death risk. However, specialists in internal medicine considered frailty as the risk to suffer
functional disorders as well as the loss of abilities to continue being independent.