

Activation of Stratification Strategies and Results of the interventions on frail patients of Healthcare Services

1-What is frailty?

Frailty is a chronic condition of increased vulnerability to the poor resolution of homeostasis after a stressor event, which increases the risk of adverse outcomes, leading progressively to disability. Socio-demographic changes and the development of more effective therapeutic strategies are modifying disease patterns and increasing the population with chronic disease at risk of frailty.

Frailty is a progressive physiological decline in multiple organ systems marked by loss of function, loss of physiological reserve and increased vulnerability to disease. It is a prevalent and important geriatric syndrome associated with decreased survival. Frailty is considered as an early stage of disability which, differently from disability, is still amenable for preventive interventions and is reversible. Frail elderly persons increase their primary and hospital care utilization before the onset of disability. Frail older adults are vulnerable to poor health outcomes including an increased risk of disability, social isolation and institutionalisation³. The prevalence of frailty is high in most countries and is expected to increase. This renders frailty prevention and remediation efforts imperative for two complementary reasons: to promote healthier ageing and to reduce the burden on health systems.

Frailty appears to be secondary to multiple conditions using multiple pathways, leading to vulnerability to a stressor. Biological (inflammation, loss of hormones), clinical (e.g. sarcopenia, osteoporosis), as well as social factors (isolation, financial situation) are involved in the vulnerability process. Many chronic diseases are associated with increasing frailty and functional

decline in older people, with concomitant personal, social, and public health implications. Prefrail subjects have more comorbidity and disability than nonfrail subjects. This can be of particular value in evaluating non-disabled older persons with chronic diseases. Older people suffering from frailty often receive fragmented chronic care from multiple professionals. There is an urgent need for coordination of care and a multidimensional approach in developing interventions aimed at reducing frailty, especially in lower educated groups.

Numerous social factors, generally studied in isolation, have been associated with older adults' health. Social vulnerability has an important independent influence on older adults' health. Frailty is experienced by homeless and other vulnerable populations.

Risk Stratification tools can help to identify complex frail and high-risk patients and can maintain these patients on the radar of the Health Services across the continuum of care. Risk Stratification helps to ensure an appropriate coverage of key secondary health risk prevention interventions, including managing disease stratification registers systematically by modelling expected versus actual prevalence and incidence, and thereby identifying practices where improvement is necessary. The systematic screening of groups of people at risk of suffering a disease constitutes a part of a broader area-level strategy on public health.

2-What is ASSEHS? - A message from the chair

To face the challenge of active and healthy ageing (AHA), European Health Systems and services should move towards proactive, anticipatory and integrated care. Health care systems thus need to personalize services, put patients in the centre of care and provide services using the adequate resources. Population health risk management is emphasized through the use of tools to stratify people with chronic diseases according to their risk. Offering support commensurates with this risk. Effective screening of frailty is key in optimizing care for frail populations at risk. The Activation of Stratification Strategies and Results of the interventions on frail patients of Healthcare Services (ASSEHS) EU project (N° 2013 12 04) is an international effort to bring together stratification-related professionals from Health Services, Aca-

demia and Research in the EU to (i) study current existing health risk stratification strategies and tools (ii) spread their use and the application on frail elderly patients, (iii) minimize deterioration of conditions and/or (iv) prevent emergency or hospital admissions. The analysis of Risk Stratification in different Health Systems will generate conclusions and risk stratification solutions transferable to a variety of regions in the future.

ASSEHS is in line with Area 4 of the B3 Action Plan of the European Innovation Partnership on Active and Healthy Ageing (EIP on AHA). Ultimately, ASSEHS will contribute to the innovation of care for the ageing population in Europe. It will generate knowledge on the use of stratification tools at policy

making, healthcare management and clinical practice levels. But it will also increase knowledge on how to widen the use of stratification tools (methodologies and solutions to barriers) that will come as a consequence of the implementation of stratification tools and models (WP7). ASSEHS will directly tackle the challenge of deployment of stratification strategies across the EU, in order to change the way of practicing medicine into proactive and targeted interventions according to the needs of those patients.



3-The ASSEHS consortium

TABLE 1: ASSEHS consortium

PARTICIPANT	ACRONYM	NAME
1- INTERNATIONAL CENTRE FOR RESEARCH IN CHRONICITY	KRONIKGUNE	Esteban de Manuel Keenoy
2-OSAKIDETZA	OSAKIDETZA	Cristina Domingo
3-POLIBIENESTAR INSTITUTE-UNIVERSITY OF VALENCIA	UVEG	Jorge Garcés
4-PHILIPS RESEARCH	PHILIPS	Steffen Pauws
5-GENERALITAT CATALUNYA	GENCAT	Joan Carles Contel
6-FONDACIÓ TICSALUT	TICSALUT	Tino Martí
7-TELBIOS S.p.a	TELBIOS	Marco Nalin
8-FONDAZIONE MARIO NEGRI SUD	MARIO NEGRI	Vito Lepore
9- REGIONAL HEALTHCARE AGENCY OF PUGLIA	ARES	Francesca Avolio
10-CENTRE HOSPITALIER RÉGIONAL UNIVERSITAIRE MONTPELLIER	CHRU	Jean Bousquet

The ASSEHS consortium is enriched by the presence of stakeholders and regions in which the health system is organized in different ways, i.e. general practitioners as public salaried employees, general practitioners' cooperatives or health care models based on private care suppliers and with public and private hospitals providing secondary care. This provides the project with a strong focus on European reality and with heterogeneity of input, which we believe is beneficial for the design of patient stratification tools that ought to be exportable to different regions and diverse health care models.

4-The ASSEHS work packages

To deliver the objectives, the project is structured in 7 work packages (WPs) (Table 2).

TABLE 2: Work packages of ASSEHS

WP	GOALS
1 - Coordination	
2 - Dissemination	
3 - Evaluation	
4 - Analysis of existing risk stratification tools	To develop a consolidated standard for appraising stratification techniques to support the critical comparison and EU deployment of those techniques. Using this standard, existing stratification techniques will be analysed and assessed on various aspects, including performance indicators, statistical models, methods, predictors, outcome characteristics and EU deployment. Techniques affecting different health services and social actors, and primary and secondary care will be considered.
5 - Analysis of the feasibility of introducing stratification tools in healthcare	To analyze the feasibility of implementing stratification methods (affecting different health services and social actors, and primary and secondary care) in real life in the clinical field, identifying barriers and facilitators.
6 - Impact of stratification tools on structure and processes of healthcare organizations	To address the consequences of using stratification strategies and tools on health services resources, management and clinical practice, involving different health services and social actors, and primary and secondary care.
7 - Population and individual risk stratification implementation experience	To deploy stratification techniques and implementation of integrated interventions targeted to frail complex chronic patients. These will be analysed in several sites: Basque Country, Catalonia, Lombardy, Puglia, incorporating key findings of previous WPs. The four regions belong to Mediterranean countries and their health systems share some common features, such as being publicly funded. However the organization of healthcare in these regions is sufficiently heterogeneous to ensure that the findings of this analysis will provide new knowledge that will not only be helpful locally but that can be readily transferred to other countries. Decision making power and fund flows differ from one region to the next. In Spain, Regions decide on the amount of money they devote to healthcare. In Italy, the funds to be spent on healthcare come "tagged" from the Central Government. In Catalonia, 80% of Acute Hospital beds are private non for profit, whereas in the Basque Country, most are publicly owned. All four regions have strong Primary Care levels, but they are organized in different ways. Italian GPs are private contractors, many of them working in solo practices. In Spain, most are public employees working on Health Centres, but in Catalonia, there also exist private GP cooperatives working under a contract for the Health Service. Italy has deployed important disease management programmes. Some of them have telehealth, externally contracted to private companies. There are other differences in health service integration, reimbursement and co-payment, patient choice, other health professional roles, chronic care programme organization, health information systems structure and data availability and confidentiality, legal frameworks, telehealth deployment, etc.

5-The Stakeholder Advisory Board

ASSEHS should be disseminated to all countries in Europe and eventually beyond. An SAB has been initiated. It includes a representative from the different EU countries clustered in regions and another from non-EU countries. The list of members includes important stakeholders (public health, geriatrics, chronic diseases, patients, managers).

The role of the SAB will be:

1. To inform governments of countries and regions of the area of the results of ASSEHS.
2. To disseminate the results of ASSEHS to the regions and the governments.
3. The patient association will disseminate the results of ASSEHS to the patients.

The SAB will meet face-to-face at Mo 11 with the coordinators and the dissemination leaders in Amsterdam (November 27-

28, 2014) and by telephone conference once every six months. A final meeting will be held in January 2016 when the results of ASSEHS will be reported.

We are delighted to have an SAB including Prof. Timo Strandberg, President of the European Union Geriatric Medicine Society; Prof. Boleslaw Samolinski, Allergologist and National Consultant on Public Health in Poland; Geraint Lewis, Chief Data Officer at NHS England; Toni Dedeu, Chair in EUREGHA and Director of Research and Knowledge Exchange in the Digital Health Institute of Scotland; Cristina Barbara, Director of the Respiratory programme in Portugal; Tobias Freund, Researcher and expert in Risk Stratification and Alma Linkeviciute, Bioethicist.

6-First Consortium Meeting ASSEHS- 8-9 September 2014 in Bilbao (Spain)

The First Consortium Meeting took place in Bilbao on the 8th and 9th of September 2014. During this meeting, the overall progress of the project and the WP work plans were reviewed.

WP2 showed the finished Website and Leaflet, as well as the first ASSEHS publication which is available online; "de Manuel Keenoy, E. et al, Activation of Stratification Strategies and Results of the interventions on frail patients of Healthcare Services (ASSEHS) DG Sanco Project No. 20131204, European Geriatric Medicine (2014), DOI:10.1016/j.eurger.2014.07.011"

WP4 showed the objectives, methods, process of construction and results of the Appraisal Standard for Risk Stratification Tools. The Appraisal Standard aims at identifying the most suitable existing risk stratification tools according to the needs and context of the user.

WP5 and WP6 showed the results of the Scoping Review they are developing, in parallel with the design of 2 sets of ques-

tionnaires, one on "Feasibility and Impact of the Introduction of Risk Stratification Tools" and the other on "Impact and Satisfaction Questionnaire for Clinicians and Health Service Managers".

WP7 focused on the clarification of key definitions in ASSEHS and identified the areas amenable for intervention in ASSEHS, which are:

- The risk stratification tools: Interface visualization of content, content management...
- The communication of its nature, functions and potentials of the tool to the end users: mostly increase and improve communication means
- The training provided to end users, i.e, health professionals
- The integration of the tool in the ICT of health services: aiming to increase the interoperability of the tool in the regions of ASSEHS
- Potential of the tool to serve for patient selection.



7-A message from one of the WP leaders (extracted from the Bilbao meeting)

WP3 of ASSEHS is led by Polibienestar Institute, acting as Evaluators of the project. After reviewing the presentations of other WP leaders and the status of each area of the project,

WP3 highlighted the following:

- the overall evaluation of the progress of the project so far, taking into account the deliverables, the milestones and the products, is positive as all of them have been issued or achieved on time and reach the required standard of quality.
- The meeting was constructive, given that important topics were discussed and important agreements were reached.

- Key issues were discussed in the meeting which is very relevant for the progress and the upcoming activities of the project. Further to the discussion, some important and essential aspects were clarified among the partners so that the future work can be achieved on a solid basis.
- The evaluator suggested putting new improved procedures into operation in order to monitor the performance of the WP tasks which will soon be introduced; WP3 will contact the partners more frequently and a standardised form will be used to facilitate the provision of information, the collection of data for evaluation and the follow-up of each partner's activities.