Basque Country: Malnutrition in the elderly and hospital stay

Part 1: General Information

Publication on EIP on AHA Portal	Yes
Copyright	No
Verification of the Good Practice	No
Evaluation of the Good Practice	Yes
Type of the Good Practice	Good practice

Part 2: Description of the Good Practice

Name of the Good Practice	Malnutrition in the elderly and hospital stay
Short name (Acronym)	Not applicable
URL of the Good Practice	Not applicable
Geographical scope	Local level
Country	Spain
Region(s) involved	Basque Country
Status of the Good Practice	Completed
Stakeholders involved	• Hospitals • Primary care centres • Specialised physicians • Nurses • Pharmacists • General Practitioners • Day care centres • Home care centres • Nursing homes • Informal caregivers • Housing organisations • Large-sized industry • Regional public authorities
Size of population covered	>100,000
Targeted audience	65 - 79, 80+

Summary of the Good Practice

According to the literature malnutrition affects 60% of the people admitted in nursing homes, 40% of hospitalized, and about 5% of the general population. Malnutrition slows recovery, increases the average length of stay and increases the cost (up to 50%) of early readmission rates, increases susceptibility to infection and increases mortality.
We note that in our clinical practice, there is no systematic nutritional assessment of elderly patients, being an entity unrecognized and untreated, that can be prevented and limited.
It is a preventable public health problem cost.

Likewise, the systematic introduction of the nutritional assessment at hospital admission and adequate dietary prescription are related to the evolution of the disease, taking into account occurrence of complications (bedsores, infections and bone fractures), mortality, days of stay and readmissions.

We want to know the prevalence of malnutrition in elderly patients admitted to the network of public hospitals in the Basque Country and its clinical consequences, in order to promote a strategic line that affects all levels of care (primary care and geriatric residences). This strategy aims to address the nutritional status of our elderly patients through a multidisciplinary, comprehensive and efficient way.

Key words: malnutrition, elderly, hospital stay, multidisciplinary approach

Good practice being part of the larger programme

Yes.

Shared objectives and actions with the general lines of Department of Health of the Basque Country 2013-2016 - Line 1: People, backbone of the health system - Line 2: Integrated response to chronicity, old age and dependency - Line 3: Ensure sustainability of the system - Line 4: Prominence and professional involvement - Line 5: Strengthening research and innovation

Challenges / problems addressed by the good practice

During the intervention:

- Primary and secondary prevention of malnutrition in the elderly people and hospital complications (infections, fractures, bedsores and mortality)
- To maximize multidisciplinary, comprehensive and integrated patient care
- Improving the quality of life and patient safety

After the intervention:

- To contribute to the sustainability of the health system: Reduce the average length of stay and readmissions of patients
- Promote the design of a strategy in the Basque Country in which nutritional assessment and the multidisciplinary intervention is part of the integrated care of elderly patients.

Importance of the challenges / problems before starting to implement good practice

The concept of hospital malnutrition evidences new multidisciplinary team practices aimed at the diagnosis and appropriate treatment of malnourished hospitalized patients. Despite the availability of validated screening tools, this situation remains little recognized in many hospitals.

It has been reported that in a hospital setting, malnutrition has a prevalence of 20-50% at the time of admission. If untreated, two thirds of the malnourished patients experience a decrease in their nutritional status during his/her stay in the hospital. Among patients who were not malnourished at hospital admission, one-third actually can become malnourished during their hospital stay.

Furthermore, it has been shown that poor nutritional status is negatively associated with functional, clinical and economic outcomes (increased risk of attendant complications such as hip fractures, a longer stay, more frequent re-admissions and increased mortality compared to properly fed patients). All this worsens the quality of life of patients and families.

In addition, poor nutritional status has been associated with increased health care costs by more than 300% associated with longer hospitalizations, comorbidities and readmissions.

Along with SENPE, the Ministry of Health Social Services and Equality is currently developing a transversal strategic line to address malnutrition in the National Health System.

We note that in clinical practice the Basque health system, there is still no systematic nutritional assessment of the elderly patient.

Environment before the good practice was implemented

There was no intervention of this type before the deployment of this practice.

Key innovative elements of the good practice and how the good practice improved situation compared to previous practice

- Introduction of a screening tool and a suitable nutritional assessment of elderly patients at hospital admission (included in the Emergency Department) in the overall assessment of the routine clinical practice,
- Diagnosis of malnourished patients and patients at risk of malnutrition in the report of Emergency Department - Adequate nutritional contribution according to the needs of each patient
- Multidisciplinary monitoring of the nutritional status of patients during their hospital stay
- Diagnosis of malnourished patients and patients at risk and a series of recommendations included in the hospital discharge report to guide the follow-up by primary care and geriatric centres.

Part 3: Transferability of the Good Practice

Cost-effectiveness of the good practice (including all kind of costs and outcomes such as better health, quality of life or other resources)	Equal costs, improved outcomes
Resources required for the deployment of the good practice (personnel, equipment, facilities, ICT and other resources required • Training on nutritional assessment • A database • Usual medical and nursing staff of the emergency department and hospitalization • Form for detection of the nutritional status (MNA SF) in the electronic health record. • Lab tests with nutritional parameters	
Total budget of the Good Practice	€10.000 -€ 99,999
Source of funding	Local funding
The main actions that have to be done to deploy the Good Practice • Design of the training plan design by the research team in April 2015 • Training of all the clinicians and nurses of the hospital - May 2015 • Database Design June 2015 • Implementation and Patient Recruitment: July to August 2015 by the medical team of the Emergency Department • Target population patients over 65 who go to the Emergency Department of the Hospital, meet the inclusion criteria and none of exclusion • Nutritional status evaluation: nutritional screening (MNA SF) by the multidisciplinary team in the ER and registration of the results in patient ▫s EHR. • Additional assessment based on lab results (albumin, prealbumin, total cholesterol and leukocyte) of all the three groups of patients according to the screening (nourished, at risk of malnutrition and malnourished) valuation by a number of analytical parameters is completed • Prescription of an appropriate diet according to patients ▫ needs to the three groups of patients differentiated • Filling of the intake control sheet by nursing assistants • Functional and comorbidity assessment through scales by the nurse responsible for the service • At discharge, the physician performs a reassessment of the patient and registers his/her nutritional status and corresponding recommendations in the discharge letter to ensure continuity of care. • Data registration September 2015 • Exploitation and dissemination of results October- November 2015	
Issues during the implementation of the Good Practice	

Being a multidisciplinary study that involves different professionals from various hospital services, not all patients are approached, mainly due to lack of time and lack of sensitivity on the impact of malnutrition.

Additional resources required to scale up Good Practice

Yes.

For the implementation of the practice, we consider the possibility of hiring a nutritionist for 6 months, whose function would be giving advice to doctors and nursing professionals in relation to the nutritional assessment of patients, assessment of adequate dietary contribution, reminders to monitor patients and re-evaluation at discharge. The nutritionist role could gradually create culture and awareness regarding the importance of malnutrition in the elderly and could help to incorporate this practice into daily comprehensive assessment of our patients.

Basis to support sustainability of the Good Practice

Analysis of our results with a sample of 71 patients:

- The 40% of elderly patients admitted to our hospital suffers from malnutrition 20% are at risk, and 20% well- nourished from which one third have suffered malnutrition during their hospitalization.
- The 64% of malnourished patients or at risk of malnutrition have suffered hospital complications vs the 0% of well-nourished ones.
- The difference in the average stay among the group of well nourished and malnourished or at risk is 2.8 days
- Hospital mortality is 36% in the group of malnourished or at risk of malnutrition

These data confirms to what extent the patient's nutritional status impacts how patient deal with the hospital admission. Hence, the enormous importance of designing strategies for primary care and nursing homes to address nutrition in the elderly patients.

Evidence to observe the Good Practice

A practice report, a visit to implementation site.

Part 4: Viability assessment of the Good Practice

Time needed to deploy the Good Practice

Less than a year.

During 2 months two sessions of awareness of the problem of malnutrition in the elderly and training on the action plan aimed at all the hospital staff were prepared and conducted. Teachers were practitioners of the research team, who in turn, previously were sensitized and trained through the literature review and the assistance to expert forums, where they became a reference in the hospital. The patient recruitment was implemented in a period of two months, and the data were recorded in the previously designed database. After this, data mining and the analysis of the results were performed in one month. After the pilot

(it took 8 months), the practice has been gradually incorporated into the routine clinical practice.

Investment per citizens / patient / client in terms of financial resources

Between €1.000 – €5.000 EUR per targeted citizen / patient

Evidence behind the Good Practice

Agreed evidence. Evidence is based on an agreed established monitoring system/process before and after implementation of the Good Practice

Data resulting from our practice are consistent with those found in the literature and in expert forums, so its implementation and extension is justified.

http://www.nutricionhospitalaria.com/pdf/3317.pdf
http://scielo.isciii.es/pdf/nh/v25n6/original15.pdf
www.fightmalnutrition.eu

Maturity of the Good Practice

The practice is "on the market" and integrated in routine use. There is proven market impact, in terms of job creation, spin-off creation or other company growth.

The practice is incorporated in the overall assessment of the patients by the professionals of the different services of the Hospital. Its cost is 0€, and has demonstrated a positive impact on the patient's health and quality of life.

Estimated time of impact of the Good Practice

Long term and sustainable impact – e.g. a long time after the pilot project ended and routine day-to-day operation began.

Impact observed

Better health (societal).

The results achieved during the pilot project support the assumptions made by the team:
Principal hypothesis: In the elderly, a good nutritional status before the hospital admission decreases the average stay.

Secondary hypothesis:
1. Malnourished patients have a higher risk of complications during their hospital stay.
2. Malnourished patients have a higher mortality rate.
3.The number of malnourished patients with readmissions is higher than those with good nutritional status.

Transferability of the Good Practice

Ready for transfer, but the innovative practice has not been transferred yet. The innovative practice has been developed on local/regional/national level and transferability has been

considered and structural, political and systematic recommendations have been presented. However, the innovative practice has not been transferred yet.

After piloting, the practice has been implemented in the hospital even with the difficulties mentioned above (lack of involvement of certain professionals in the hospital, attributable to the lack of awareness and time) to be incorporated into routine clinical practice. As a facilitator, we will incorporate a dietician and a nutritionist in the hospital for over a period of 6 months to perform an advisory role to the doctors and nursing professionals in relation to nutritional assessment and prescription of patients. This figure could gradually be creating culture and awareness regarding the importance of malnutrition in the elderly. The results and conclusions have been disseminated in various seminars and national congresses. Other hospitals in the Basque public network and geriatricians of our catchment area have shown interest in incorporating such activity.

Part 5: Your organisation

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