



inDemand: Demand driven co-creation for public entities

CHALLENGE 4:A3D (GCSMS 91)

Pitch

Elderly people – Non-invasive and easy to do undernourishment monitoring test

Global definition of the challenge

Malnutrition in retirement care homes for the dependent elderly are major public health issues. It leads to longer periods of hospitalisation, increased risks of nosocomial infection, falls, fractures or dependency, immune deficiencies, depression and worsening of chronic diseases, etc. The consequences of malnutrition are numerous and serious.

The challenge of the project is to simplify screening for malnutrition. Currently, it consists of taking blood samples from the elderly. These are invasive acts involving frail people with behavioural problems. The nurses sometimes have difficulties collecting samples because of the poor quality of the venous network and the person's agitation. We are sometimes obliged to have two people hold down the residents. It is a hardship for both the staff and the elderly residents. We sometimes get involved in involuntary abuse.

The solution must make it possible to eliminate all the difficulties related to screening, and to simplify it as much as possible. It must make it possible to screen and monitor any resident profile.

Definition standard profiles

The objective of defining standard profiles is to better understand the current situation within the facility and more particularly the people related to the problem defined in the Challenge, and who will therefore eventually use the innovative developed. These standard profiles will enable interested companies to apply to fully understand all the contours of the current situation in the facility.

2 "patient" standard profiles related to the Challenge have been described (the standard profile of the "problem" patient and the standard profile of the "easy" patient). Also, 2 "health professionals" standard profiles related to the Challenge are described (the standard profile of the specialised physician and the standard profile of a nurse, for example).

STANDARD PROFILE OF THE « Problem patient »

Name	Mrs. B
Age	84
Status	Resident
Location in relation to the institution	Lives in the facility
Occupation	Retired
Short biography in three points	<ul style="list-style-type: none"> • Divorced • No children
Pathologies	<ul style="list-style-type: none"> • Alzheimer's • Behavioural problems • Diabetes
Potential disabilities	Loss of cognitive functions
Motivations (recognition, power, reward...)	Satisfaction
Objectives in relation to illness and treatment	Avoid malnutrition and its consequences

Constraints and frustrations	n/a
Personality traits (introverted, logical, reflective...)	Introverted
Understanding of the illness	1/5
Observance	1/5
Internet skills	1/5
Mobile telephone skills	1/5
Social networks skills	1/5

STANDARD PROFILE OF THE « Easy patient »

Name	Mr. V
Age	86
Status	Resident
Location in relation to the institution	Lives in the facility
Occupation	Retired
Short biography in three points	<ul style="list-style-type: none"> • Widower • Two children, one of who is deceased • Bicycle vendor
Pathologies	<ul style="list-style-type: none"> • Kidney failure • Depression
Potential disabilities	Lack of appetite due to ageing and depression
Motivations (recognition, power, reward...)	<ul style="list-style-type: none"> • Recognition • Satisfaction
Objectives in relation to illness and treatment	Avoid malnutrition and its consequences
Constraints and frustrations	XX
Personality traits (introverted, logical, reflective...)	Logical
Understanding of the illness	3/5
Observance	5/5
Internet skills	4/5
Mobile telephone skills	4/5
Social networks skills	4/5

STANDARD PROFILE OF THE « Health professional 1 »

Position	Nurse
Name	Mrs. W
Age	32
Status	Employee
Location in relation to the institution	10 min away
Short biography in three points	<p>Young graduate</p> <p>Was a nursing assistant before her nursing studies</p>
Motivations (recognition, power, reward...)	Satisfaction
Objectives in relation to illness and treatment	Quality care
Constraints and frustrations	No constraint

Personality traits (introverted, logical, reflective...)	Calm and reflective
Understanding of the illness	5/5
Internet skills	5/5
Mobile telephone skills	5/5
Social networks skills	5/5

STANDARD PROFILE OF THE « Health professional 2 »

Position	Health manager
Name	Mrs. S
Age	52
Status	Employee
Location in relation to the institution	40 min
Short biography in three points	<ul style="list-style-type: none"> • Nurse since 1999 • Health manager or acting for 6 years
Motivations (recognition, power, reward...)	Satisfaction
Objectives in relation to illness and treatment	Appropriate, quality care
Constraints and frustrations	No constraint
Personality traits (introverted, logical, reflective...)	Calm and reflective
Understanding of the illness	5/5
Internet skills	5/5
Mobile telephone skills	5/5
Social networks skills	5/5

Definition uses

Uses are defined as the description of the current situation in the healthcare organisation facility from a particular point of view (patient or health professional, for example).

In order to have a perfect understanding of the current situation, it is important that each use be defined step-by-step, starting with step 1, which is the starting point (which can be, for example, the first consultation at the hospital for the patient, admission to the emergency room, return to the room after surgery) and finishing with stage X, which is the end point (the patient is completely treated, an end of remote monitoring ...). The time between the starting point and the end point represents the moment when the new digital solution must be used in the patient's treatment. At each defined step, it is important to highlight the current problems encountered and which must be solved by the use of the new co-developed digital solution. For each step, please list the current issues and what should be done to solve them.

Find below the description of the case

Take the case of a resident on arrival. She arrived from her home, and her last checkup was one year ago. She cannot answer the entry questionnaire because of her cognitive disorders.

Today,

- a blood test must be performed the day after her arrival, to find out if she is malnourished or not. The nurse must be assisted by a nurse's aide to reassure the resident who does not know anybody at the moment. It is an invasive, painful and anxiety-provoking act for the resident.
- Depending on the result, her diet will be adapted.
- Monitoring will be organised: it should include at a minimum two samples per year if there is no sign of malnutrition and a minimum of one sample per month in the case of severe malnutrition. This monitoring is not carried out owing to the complexity of performing blood tests on a fragile venous network, and people with cognitive disorders.

Tomorrow

- No more blood tests. The first dose for nutritional monitoring will be performed without trauma for the resident.

Painless monitoring will be carried out without difficulty.

Technical and operational requirements

Must obtain LRA approval for the given values to be recorded in the file.

Feasibility

- Guarantee the reliability of the results
- Avoid a solution that is too complicated to use

Financial Aspects

N/A

Expected Impact

- Fewer blood samples,
- Fewer and shorter hospital stays,
- Lower risks of nosocomial infection,
- Fewer falls, fractures, dependencies and depressions,
- Stabilisation of chronic illnesses...
- Fewer malnourished residents owing to close monitoring

Scope of the challenge

Information on the specificity of the challenge, if it is defined specific to the hospital

We are certain that this Challenge will bring a real benefit for the residents, the caregivers in all medico-social facilities. It can be duplicated for home monitoring during hospital care at home, by a nursing service, or even the private doctors ...