

Basque Country: Telemonitoring COPD patients with frequent admissions

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	Notable practice

Part 2: Description of the Good Practice

Name of the Good Practice	Telemonitoring COPD patients with frequent admissions
Short name (Acronym)	“telPOC” Program
URL of the Good Practice	Not applicable
Geographical scope	Regional level
Country	Spain
Region(s) involved	Basque Country
Status of the Good Practice	Completed
Stakeholders involved	<ul style="list-style-type: none"> • Hospitals • Primary care centres • Specialised physicians • Nurses • General Practitioners • Nursing homes • Informal caregivers • Housing organisations
Size of population covered	250 - 999
Targeted audience	18-49, 50-64, 65 - 79, 80+
Summary of the Good Practice	<p>COPD is a leading cause of morbidity and mortality worldwide with two important impact points; one is the use of healthcare resources that the disease implies; and the other, the effect of the disease in the patient. Hospitalization has been identified from years as the main factor of cost in this disease. At the same time exacerbation, especially hospitalization, has potential severe consequences in the COPD patient as loss of pulmonary function and quality of life and increase in mortality risk.</p> <p>The project has the following objectives:</p> <ol style="list-style-type: none"> 1. Determine the rate of readmission for exacerbation in a cohort of patients with COPD with readmissions to the hospital, comparing with themselves in the previous 2 years and during the same period of intervention, with respect to an external control group.

2. Determine the frequency of this cohort of patients with COPD who are readmitted to hospital emergency departments compared to a control group.
3. Evaluate the quality of life related to health during follow-up period compared to a control group.
4. Evaluate the degree of satisfaction of patients in both cohorts.
5. Establish medical costs arising from the implementation of this program about a group treated by conventional care and respect to the costs prior to the inclusion of this program.

The inclusion criteria were being hospital admitted at least twice in the previous year or at least three times in the 2 previous years. The cohorts were follow-up for 2 years. Several clinical measurements like pulmonary function, exercise capacity, health related quality of life, limitation in daily life activities and anxiety and depression were recorded in both cohorts. Telemonitoring and an organized education program were only and applied in the intervention cohort.

Finally, the key aspects that can be transferable are the education programme and the programme of telemonitoring and control of the patients.

Key words: COPD, telemonitoring, several exacerbations

Good practice being part of the larger programme

No.

Challenges / problems addressed by the good practice

- Economic problems. We had to stop including some patients to the program due to budgetary problems. Currently, this problem does not exist.
- Coordination problems. Not all actors understood the program (some doctors of primary care and the eHealth centre among others).
- Problems with adapting the software tool. The care team (nurses and doctors) had to work with the computer technicians to obtain a suitable tool.
- Problems in the development of the program. The program has to evolve and this requires resources.

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

COPD is a leading cause of morbidity and mortality worldwide with two important impact points; one is the use of healthcare resources that the disease implies; and the other, the effect of the disease in the patient. Hospitalization has been identified from years as the main factor of cost in this disease. At the same time exacerbation, especially hospitalization, has potential severe consequences in the COPD patient as loss of pulmonary function and quality of life and increase in mortality risk.

Environment before the good practice was implemented

COPD patients with this profile, often hospitalized, were attended "on demand" based on the criterion of the patient, which caused delays in care and caused new hospitalizations.

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

1. Reduction in the rate of hospitalizations.
2. Decreased rate of readmissions.
3. Reduction in the rate of visits to the emergency department.
4. Reduction of hospital stays.
5. Improvement in clinical parameters (quality of life, exercise capacity)

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)	Lower costs, improved outcomes
Resources required for the deployment of the good practice (personnel, equipment, facilities, ICT and other resources required)	
<ol style="list-style-type: none"> 1. - A motivated team 2. - A full-time nurse 3. - A neurologist at part-time 4. - Smartphones 5 - Support to the management team (health department, hospital management, etc.) 	
Total budget of the Good Practice	€100.00 - €499,999
Source of funding	Regional funding
The main actions that have to be done to deploy the Good Practice	
<p>It is necessary to have an expert nurse in respiratory patients (COPD) and a pulmonologist at the hospital, coordinated with the primary care team and the call- centre. To achieve such coordination and enable communication between different actors is necessary to develop a computer application and provide smartphones to the team. It is therefore necessary to coordinate with the software and technology resources provider. With respect to the patient, it is necessary a training to make him/her able to understand their disease even better, to distinguish the symptoms of an exacerbation and to act according to the program guidelines. Finally, it is reasonable the necessity to be in constant communication with the health managers (health administration and hospital) to maintain and develop the program.</p>	
Issues during the implementation of the Good Practice	
It has been very difficult to get economic resources to maintain the program.	
Additional resources required to scale up Good Practice	
No.	

Basis to support sustainability of the Good Practice

- Maintain constant contact with the health administration on the status of the program. If possible, include health administration as members of the program steering committee.
- Integrate the program aimed at the more fragile COPD group, in a global practice to control the disease (COPD). - Insist on coordination tasks (primary care, call-centres).
- Develop steadily the program (continuous improvement program).
- Maintain motivation in the team.

Evidence to observe the Good Practice

A visit to implementation site.

Part 4: Viability assessment of the Good Practice

Time needed to deploy the Good Practice

Less than a year.

Using our inclusion criteria, the steps are:

- Select potential patients from the hospital database.
- Select an experienced nurse or respiratory disease COPD should be involved from the beginning of the project.
- Workstation (computer) nurse.
- Develop and adapt the software application according to the area where it will be used.
- Information about the software operation to doctors and nurses in primary care.

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

No available calculation.

Evidence behind the Good Practice

Documented evidence. Evidence is based on systematic qualitative and quantitative studies.

The evidence regarding the effectiveness of telemedicine in COPD is controversial. The main reason is that in general, telemedicine is included in a package that includes other interventions besides telemonitoring. Therefore, establishing which is the intervention that matters is complicated. There are jobs in the literature for and against. Make meta- analysis is complicated because jobs are very heterogeneous (inclusion criteria, study population, intervention, monitoring). Our intervention is different since it does not focus on COPD in general but in a subgroup of patients with COPD, with continuous readmissions.

<p>Maturity of the Good Practice</p> <p>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.</p>
<p>Estimated time of impact of the Good Practice</p> <p>Long term and sustainable impact - e.g. a long time after the pilot project ended and routine day-to-day operation began.</p>
<p>Impact observed</p> <ul style="list-style-type: none"> • Better quality of life (societal) • Results in the use of health resources • Lower rate of hospitalizations • Reduced use of hospital emergencies • Lower average stay if hospitalized • Lower rate of readmissions • Health results in the patient with respect to the control group • Stability, therefore lower drop of the quality of life, exercise capacity and limitations in daily life
<p>Transferability of the Good Practice</p> <p>The innovative practice has been transferred in other locations or regions or national scale in the same country.</p>

Part 5: Your organisation

Name of the organisation	Integrated Care Organisation Barrualde-Galdakao
Address of the organisation	Barrio Labeaga, s/n 48960 Usansolo
Type of organisation	Integrated Care Organisations
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