

## Elderly People with Chronic Diseases: A Vision Of The Future

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Rec date: May 23, 2017, Acc date: Jun 9, 2017, Pub date: Jun 19, 2017

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### Short Communication

The Spanish Constitution in its article 43 establishes the Right to Health and its development, through the General Health Law, urges the Sistema Nacional de Salud (SNS) and los Servicios Sanitarios de las Comunidades Autónomas (CCAA) to develop Comprehensive Plans or Autonomic Health Plans.

In 2003, the Law was approved (16/2003) on Cohesion and Quality of SNS, that recommends the elaboration of Comprehensive Health Plans for the most prevalent, relevant or special pathologies involving a socio-family burden, guaranteeing comprehensive health care that includes prevention, diagnosis, treatment and rehabilitation.

According to the World Health Organization (WHO), Chronic Diseases (CD) was the cause of 63% of global mortality in 2008 and is expected to account for 75% by 2020. These data do not indicate an improvement in conditions of life with greater life expectancy, but reflects that the pattern of diseases and attention towards them should be changing. 45.6% of the population over 16 years of age suffers from at least one chronic disease while 22% suffers from two or more of them [1]. The ageing and the occurrence of CD often overlaps thus increasing their dependency to health services.

The challenge is not CD but its chronicity. It is not only about diagnosing and treating a disease, but to help the person who is suffering to adapt to the environment in which they live. Addressing chronicity must be to protect and promote health, combining individualized attention and the participation of different social agents at all levels of society.

For the last two decades several CD management models have been developed with the intention of preparing strategies against chronicity. All of them obtain the best results in health when the patient is active, informed and worked with a proactive and prepared professional team.

In the need to solve the problems regarding CD, different International Organizations such as the OECD, the UN and the European Parliament have come forward and addressed this issue [2]. In our country, we must highlight the Strategy to meet the challenge of Chronicity in the Euskadi [3] and obey the consensus reached in the "Saevilla Declaration" [4]. Among sixteen Scientific Societies, the Health Services of seventeen Autonomous Communities (CCAA), the Ministry of Health and the Spanish Patients Forum, advocated for the realization of a Comprehensive Autonomous Plan Care for patients with CD in each of the Autonomous Communities (CCAA), the Health Plan of Catalonia 2011-2015 [5], the Plan of Care for patients with CD of the Valencian Community (CV) [6] or the Health Plans of the CV [7] itself, within an integrated National Strategy and approved by the Inter territorial Council of the SNS, on June 27, 2012.

Currently, the predominant epidemiological pattern of CD reveals increased life expectancy, improvement in public health and health

care. These demographic and epidemiological changes have made the NHS to not only act from a biomedical perspective but also work with a sustainable model of prevention and management of chronic health conditions and fulfill its social function.

Chronicity and dependence are closely related, producing a need for health and social services. From the change of model of the integral management and coordination of the different social agents, emerges the strategy for the approach against chronicity by the Ministry of Health, Social Services and Equality, participation of Scientific Societies, Patient Associations and Health Departments of the CCAA.

Patients with pluripatology, comorbidity or special complexity find more difficulties to access and move to the health system. Usually older patients with functional limitations, generate greater demand for health care and greater consumers of health and social resources.

These patients not only need continuous follow-up and care, but the approach of their chronicity requires the work in interdisciplinary teams (health and social professionals) that guarantee the continuity with maximum participation of the patient and their environment.

It is not only important to apply a theoretical model or provision to develop a health care for fighting chronicity [8], but also to strengthen Primary Care Teams (Equipos de Atención Primaria (EAP)), to reorganize care and involve patients in the knowledge and care of their illness.

In 2011, 17% of the population over 65 suffered from chronic disease, which is estimated to be 20% by 2020 (one in five Spaniards) and reaching 35% in 2050.

Currently, 35% of the Spanish population (5% of the total) are people older than 80 years and have two or more CD.

According to WHO, in 2005, CDs produced 60% of global mortality, 70-80% of total health expenditure, 80% of Primary Care (PA) consultations, 60% of income And 75% of nursing homes. The costs of patients with more than one CD were multiplied by six compared to patients with one or none CD. More than five CDs multiplies the sanitary expenditure by seventeen times and twenty-five times the hospital expenses [9].

An example of the repercussions of CD in our country is Chronic Heart Failure (CHF) [10]:

- Prevalence of 10% in people over 70 years.
- Most frequent cause of hospitalization and re-admissions in people over 65 years.
- Costs for hospitalization twice as much as cancer.
- 3rd cause of mortality in Spain.
- Consume 1-2% of total health expenditure.
- 10% of hospital beds with an average stay of 7 days.

- High comorbidity: 78% is associated with two or more CD and 54% with three or more.
- 60% of patients are 80 years of age or older.
- High drug consumption: 8.69 d mean with a range of 1-23.

The Strategy for the Approach of Chronicity in the NHS is as follows:

- Mission: establish objectives and recommendations to improve the health of the population, prevent health conditions and limitations in chronic activity and comprehensive care.
- Vision: to adapt the health system to meet the socio-health care needs that lead to aging, the chronicity of health conditions and the limitation of activity, guaranteeing quality, safety, continuity of care, equity and Social participation.

### Goals

- Decrease the prevalence of CD.
- Reduce premature mortality.
- Preventing associated complications.
- Improve Life Quality.

### Guiding principles

- People are the center of the NHS.
- Population health approach.
- Life-cycle perspective and social determinants of health.
- PA as the focus of chronic care.
- Continuity of care.
- Health professionals and citizens sharing responsibility in health care and in the use of socio-health resources.

### The strategic lines

- Health promotion.
- Prevention of chronic conditions.
- Continuity of care.
- Reorientation of health care.
- Equity in health and equal treatment.
- Research and innovation.

In the context of chronicity, of the Valencian Community, as estimated in its III Health Plan [11], 78% of health care will be directed to chronic pathology and should be adapted to a management model, focused on prevention and care. This management model should define the segmentation or stratification of the population according to needs by identifying three levels of intervention according to the complexity of the chronic patient:

- Level 3: patients with greater complexity and with frequent comorbidity. Comprehensive case management.
- Level 2: high risk patients with lower comorbidity. Disease management.
- Level 1: patients with CS in incipient stages. Self-management.

According to data from the National Institute of Statistics (Instituto Nacional de Estadística (INE)), in 2009, life expectancy in the CV was 81.19 years on average (84.11 years for women and 78.27 for men), consolidating a progressive aging of the population, aged 80 years and over (aging of aging).

This progressive aging is associated with an increase in the number of chronic patients and therefore disability, dependence and greater morbidity and mortality.

At present, it is estimated that approximately 60% of the adult population suffers from some CD, which consumes between 70 and 80% of total health expenditure, requiring an adequate chronicity management to guarantee the sustainability of the health system.

Chronic CV pathology accounts for 80% of primary care (Atención Primaria (AP)) visits, 60% of hospital admissions and 2/3 of emergency visits, the majority of which are chronic, polymedicated patients. Major ECs include CHF, COPD, Asthma, Ischemic Heart Disease, HBP and Diabetes.

The objective of the project ESCARVAL (Predictive Project), is Cardiovascular disease Prevention of the Ministry of Health (Conselleria de Sanitat) of the CV. Investigation in the clinical practice of the primary care of Valencian population, reveals that it worked through the management tool of the History of Electronic Health (HSE) as Abucasis II and performs a specific scale of vascular risk for CV. In general, it can be seen that the number of visits to Primary care increases as the number of patient suffers from the chronic pathologies increases. Screening to identify the main risk factors in CV reveals alcohol consumption, smoking, hypertension, DM or dyslipidemia, produces a great impact in the prevention of CD. The objective of the care strategy for patients with chronic diseases in CV is to reduce the consequences of the disease and its dependence and to adapt the services to each incident and situation to obtain better health outcomes, greater socio-care satisfaction and better life quality.

His vision includes:

- A model of care adapted to meet the real needs of these patients and offering the best care.
- Promote primary care, work management of patients and provide professionals with working tools in the best conditions.
- Organizational improvements with the support of the technologies, an appropriate management and more rational resources.

Specific objectives are:

- Assistance strategies adapted to the characteristics of patients with CD.
- Adequate use of health resources.
- Telemedicine and new technological tools.
- Self-management of the disease and improve the quality of life.
- Favor the management of the patient with equipment of primary care.
- Make effective the coordination between the different welfare and social resources.
- Develop new professional skills through training and new care roles.

The implementation of this Plan should help to achieve a better quality of life, reduce unnecessary and preventable hospital admissions, delay the evolution of the disease as much as possible, enhance self-care and active participation of patients in their illness, contributing to the sustainability of the system optimizing the activity and the resources dedicated to the attention of the chronicity. In order to achieve its objectives, this Plan is divided into three strategic axes [12].

## Transform the Organization

### Plans and strategies [13-16]

- Comprehensive health care plan for the elderly and the chronically ill in the CV (2007-2011).
- Plan of attention to the stroke in the CV (2011-2015).
- Comprehensive palliative care plan of the CV (2010-2013).
- CV Cardiovascular Disease Prevention Plan (PPEV-CV).
- COPD health plan (2010-2014).
- Diabetes Plan of the CV (2006-2010).

### Office for innovation in management of patients with CD

Constituted in 2011 to coordinate the different services, units and programs that attend the chronicity, respecting the operation of each one of them.

### Segmentation in levels of risk

With two projects developed:

- The General Directorate of Pharmacy has developed a program based on creating a classification in groups of clinical risk (CGR).
- The Polytechnic University of Valencia has developed the CARS model for the segmentation of the entire population of the CV according to the level of risk related to chronicity.

### Information systems

- HSE.
- Electronic recipe.
- Therapeutic observatories.

## Involve the Professionals

### Integration and continuity of care

- Multidisciplinary teamwork.

### Professional competences

- Strengthen the primary care and develop new figures such as liaison nursing staff or hospital management that work in collaboration with the primary care Basic Units (UBAs).
- The reference internist doctor should gain importance in the care of patients with complex CD.
- Computer tools to support the professional.
- Training, Research and Dissemination of experiences.

### Involving the citizen

The Plan should encourage the sharing of decisions between doctor and patient, for which the latter must be informed, involve him in his care and ensure the follow-up of his illness [17,18].

The patient must be active, committed and responsible for his illness and care.

- Patient-centered model of care.
- Training of patients and caregivers.
- Training and group health education.

- Develop the patient's social environment.
- Forums and Self-help groups.
- Each patient is responsible for their health.
- Promotion of self-care.

In the CV, the Chronicity Plan is based on the evolution of the organizational model and the effective integration of care levels, taking into account that not only the needs of patients with CD but also the optimization of resources and the Incorporation of new technologies based on information and knowledge.

Chronic patients are already cared for in the level of basic unit for assistance by nursing and family physicians in consultation and at home, and it is in this second stage of care that the referring internist is important to correlate with other specialties and to coordinate the follow-up of the patients with the family doctor. This effective interconnection improves inter consultations through the history of electronic health of the Abucasis II program and avoids patient travel [19-20].

The CV is implemented, as a model, the Valcrónic program which incorporates innovative technologies that enable remote monitoring, tele-care and support to clinical decisions, offering patients and their professionals different services. In addition, it stratifies the population to identify levels of risk related to chronicity to act on them and develops an effective coordination of resources and levels of care in an integral and continuous manner.

In this program, information and communication technologies are key to improving the management of chronicity.

The chronic pathologies included have been selected both for the health problems they cause and for the associated health cost that they produce in a comprehensive care process.

In order to perform the patient stratification, the CARS model adapted for the program was used together with the Polytechnic University of Valencia.

With the vision of future the binomial Chronicity-Aging implemented in different Departments of Health in CV, this program allows to follow and learn the evolution of patients, articulating through a platform of Management that gives technological support to the functions of the same. According to the level of risk and chronic pathologies, a matrix is available with 16 programs (8 high risk, 6 medium risk and 2 low risk) to act adapting to the needs of the patient.

Patients are controlled by tele-monitoring with biomedidas, completing health questionnaires and has an educational and training component associated with self-control and responsibility.

To support the professionals, protocols and clinical-practical guidelines are provided for each of the chronic pathologies.

For the evaluation of the program, ten main and four secondary indicators are defined.

There are a large number of patients that suffer from chronic diseases, so in the development of present and future solutions, the management should consider shared clinical information as a key part of the activity management technology care.

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