

The effects of institutionalization on health indicators on geriatric population in Catalonia

Part I: Drug consumption in geriatric population

15th September 2018



Motivation

Many studies show that elderly people consume **many more medications** than adult people. At least, **70%** of people older than 65 years old have one drug in-take, and **20%** more than 3.

Drugs have **beneficial effects on the control of health problems** in old people, but polymedication (more than 3-4 drugs on a regular basis) represents a clear risk factor.

Increased medication results in a decrease in **adherence** and an **increase in side effects and undesirable effects** that do not result in an improvement in the clinical situation.

This situation involves the risk of having a **"therapeutic cascade"** (administration of new drugs in an attempt to solve a clinical problem derived from the administration of another drug).

Goals: general and specifics

This report presents the results of a work carried out throughout 2017 and whose objective is to implement a monitoring system that examines the profile of drug use in a large sample of the elderly of several institutions included in ACRA. We want to understand the impact of institutionalization in a residence on the profile of consumption of medications taken by users.

Study the profile of drug use in a large sample of the elderly of almost 1,000 people before and after the institutionalization.

Detect possible variations in the consumption profile related to the institutionalization process.

To find out if the institutionalization results in a rationalization of the consumption of medicines.

Methods

This report allowed us to work with a big and representative sample of old population institutionalized in geriatric residencies in Catalonia. It could be considered the first and more extended work of this characteristics in the world.

In collaboration with 21 residencies members of ACRA, counting with data of 1.007 residents from 2012 to 2015, the period studies was for one year for each resident (moment zero, six months after, and twelve months after institutionalization). Among data, variables collected include: genre, age, previous situation, year of entrance, quantity in milligrams of each drug, frequency of in-take, etc).

We have studied the most commonly used drugs in the geriatric population grouped into 10 therapeutic groups. These 10 groups grouped a total of 41 active ingredients and represent a very broad sample of the most common medications among elderly people.

10 therapeutic groups with 41 active principles

Analgesics

Paracetamol
Ibuprofen
Metamizol sodic
Tramadol
Tramadol mixed

Antiparkinson

Levodopa with
inhalator
Of descarboxilasa
Biperidene
Pramipexol
Rasagiline
Rotigotine

Antithrombotic

Acid acetilsalicilic
Acenocumarol
Clopidogrel
Enoxaparina
Trifusal

Diabetics

Metformine
Gliclazide
Insuline
Metformine and
sitagliptine
Repaglinide

Hipolipemiantes

Simvastatine
Atorvastatine
Pravastatine
Fenofibrato
Genfibrozilo

Antihypertension

Enalapril
Amlodipino
Enalapril and diuretics
Losartan
Losartan and diuretics

Antipsychotics

Quetiapine
Risperidone
Olanzapine
Aripiprazol
Sulpiride

Anxiolytics

Lorazepam
Alprazolam
Lormetazepam
Diazepam
Potasium
Clorazepato

Diuretics

Hidroclorotiazida
Furosemida
Torasemida
Espironolactona
Inadapamida

Digoxine

Results



Results

Furosemida ↑↑
Quetiapina ↑↑
Paracetamol ↓
Lorazepam ↓
Acid acetilsalicílic ↓

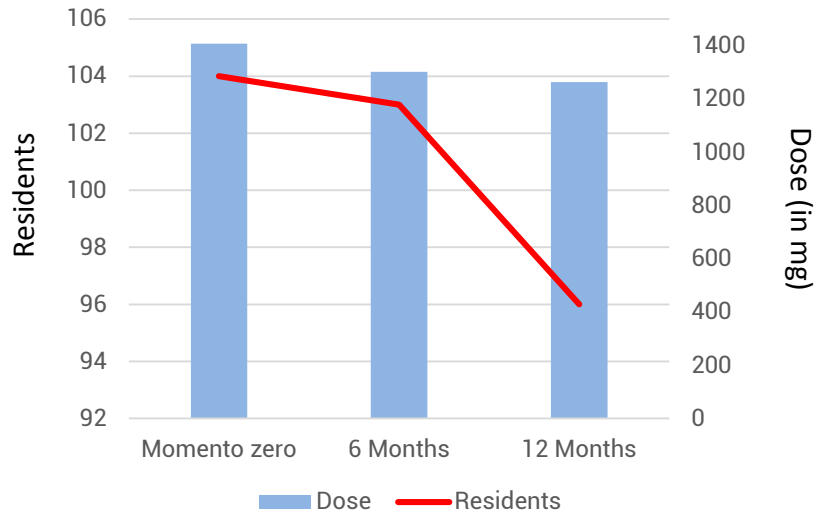
Amlodipino ↓
Metformine ↓
Risperidone ↓
Enalapril ↓
Digoxine ↓↓
Simvastatine ↓↓

In general, it is observed that, for most medications, after 12 months of the entrance there is a decrease in people who take a specific medication (approximately 6% on average).

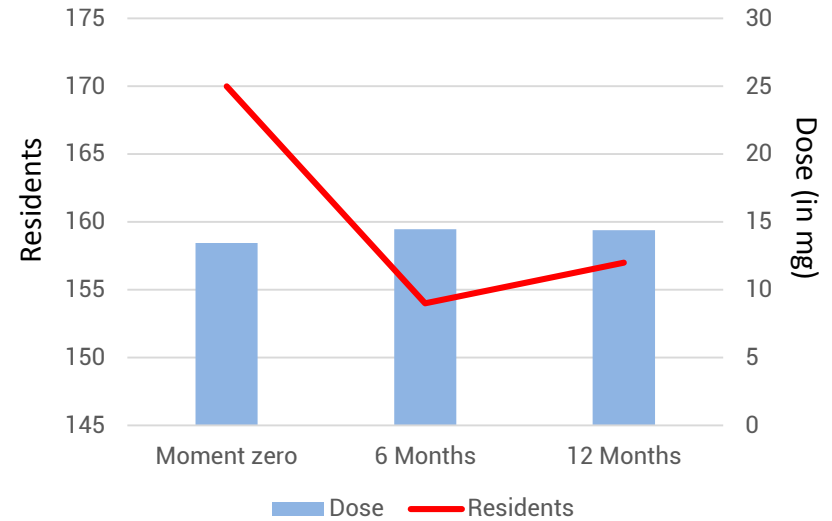
This is particularly relevant for drugs that have to do with pathologies related to nutritional factors and healthy lifestyle habits.

Results

Metformine



Enalapril



Principal conclusion

Institutionalization in a residential centre



Decreased drug use (6%) from the entry to 12 months caused by qualified professional care
(better nutrition and life habits, better pharmacological guidelines)






Maintenance of the quality of life of the users

Web tool

Residents


ACRA BCN

ACRA BCN



Tablero > Pacientes

ACRA BCN

 **Pacientes** [Añadir nuevo](#)

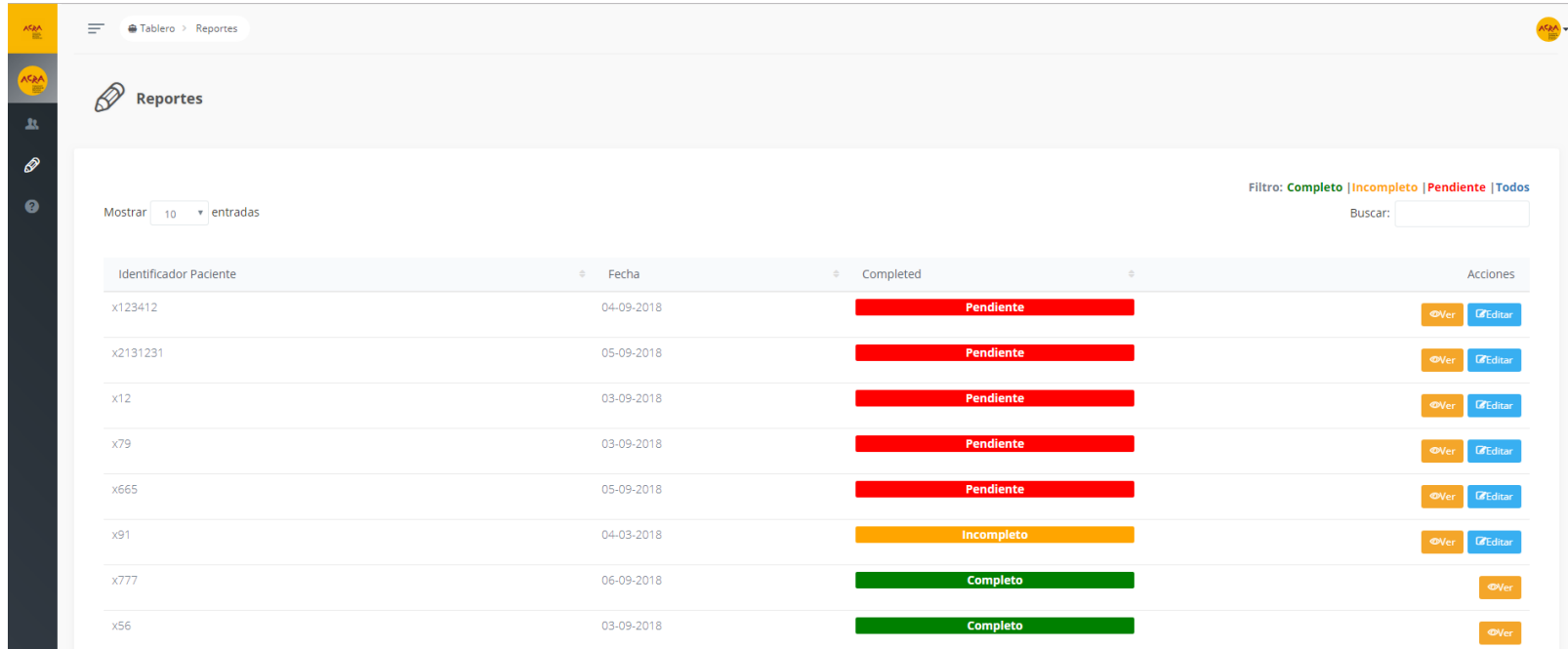
Mostrar 10 entradas

Buscar:

Identificador	Género	Año de nacimiento	Fecha de Ingreso	Próximo Reporte	Acciones
x56	Masculino	1930	03-09-2018	03-03-2019	Ver Editar
x12	Femenino	1915	03-09-2018	03-03-2019	Ver Editar
x79	Masculino	1916	03-09-2018	03-03-2019	Ver Editar
x91	Masculino	1920	04-03-2018	04-03-2019	Ver Editar
x123412	Femenino	1927	04-09-2018	04-03-2019	Ver Editar
x665	Femenino	1920	05-09-2018	05-03-2019	Ver Editar
x2131231	Masculino	1920	05-09-2018	05-03-2019	Ver Editar
x777	Masculino	1919	06-03-2018	06-03-2019	Ver Editar

Web tool

Reports on residents



Identificador Paciente	Fecha	Completed	Acciones
x123412	04-09-2018	Pendiente	Ver Editar
x2131231	05-09-2018	Pendiente	Ver Editar
x12	03-09-2018	Pendiente	Ver Editar
x79	03-09-2018	Pendiente	Ver Editar
x665	05-09-2018	Pendiente	Ver Editar
x91	04-03-2018	Incompleto	Ver Editar
x777	06-09-2018	Completo	Ver
x56	03-09-2018	Completo	Ver

Web tool includes a helpdesk, a telephone number and an e-mail for help.

Further steps

Starting with our pilot test in 2017, we developed the web-tool in 2018 and 2019 funded by Spanish Health Minister. Our intention is translate this project to an European level.

2017



2018-2019



Future?



Thank you for your attention!

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