

The impact of institutionalization on the profile of drug use in geriatric population in Catalonia

Toni Andreu
Director of Strategy, ACRA

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Motivation

Many studies show that older 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 develop a technological tool for implementing a monitoring system that examines the profile of drug use in a large sample of the elderly of several institutions included in ACRA

Study the profile of drug use in a large sample of the elderly of almost **1,000 people (in 21 institutions for elderly care)** 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 study was carried out on a big and representative sample of aged population institutionalized in elderly care centers in Catalonia.

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 drugs and represent a very broad sample of the most common medications among elderly people.

10 therapeutic groups with the 41 most commonly used drugs in elderly population

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

Hipolipemiants

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 ↓

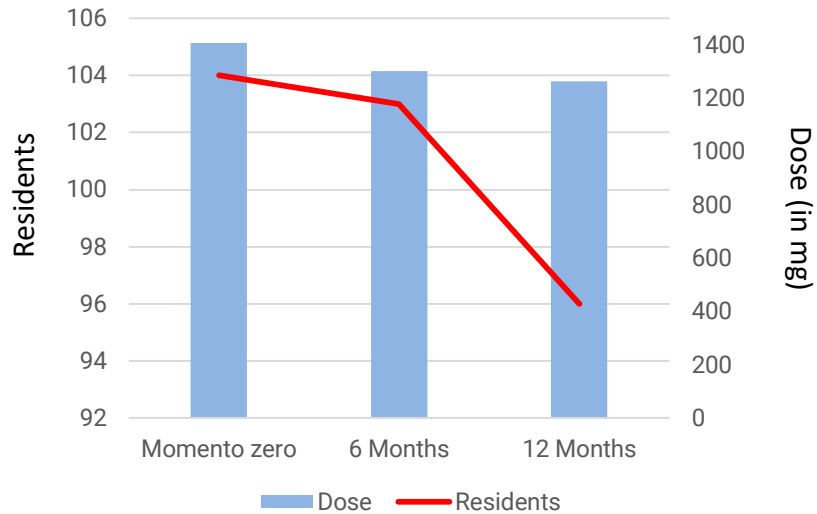
Amlodipino ↓
Metformine ↓
Risperidone ↓
Enalapril ↓
Digoxine ↓↓
Simvastatine ↓↓

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

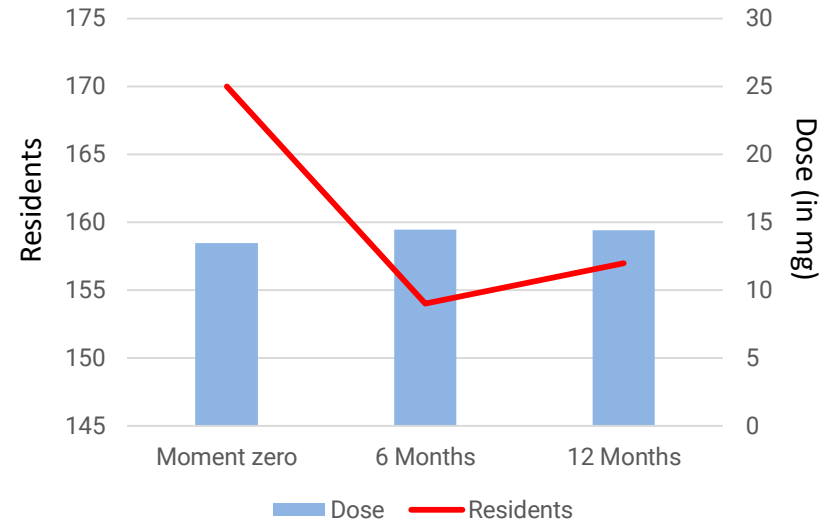
This is particularly relevant for drugs that target pathologies related to nutritional factors and healthy lifestyle habits.

Results

Metformine



Enalapril



Principal conclusion

Institutionalization in an elderly care centre



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






Better quality of life and reduction of costs for the system

Web tool

Residents


ACRA BCN

ACRA BCN



Tablero > Pacientes

ACRA BCN

 **Pacientes** [Añadir nuevo](#)

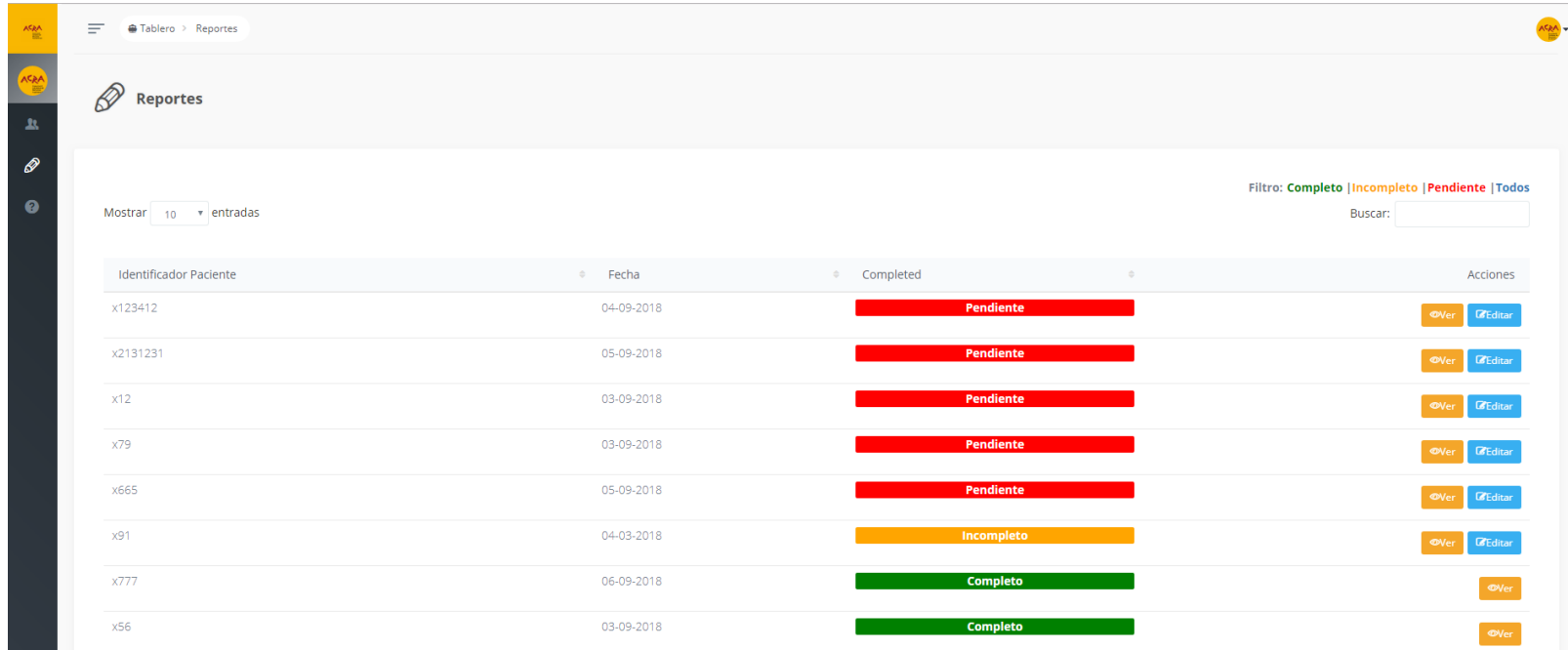
Mostrar 10 entradas

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



Reportes

Filtro: **Completo** | Incompleto | Pendiente | Todos

Buscar:

Mostrar 10 entradas

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 goal is expand this project to an European level.

2017



2018-2019



Future?



Thank you for your attention!

www.acra.cat

Toni Andreu

projectes@acra.cat

