The GCCM Home Assessment Program: survival analysis of time to institutionalization of an elderly population followed since 2006 in Monaco.

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CONFLICT OF INTEREST DISCLOSURE

I have no potential conflict of interest to report.
Monaco census 2016: 37,308 residents including 12,433 of more than 60 years old.

Since 2006, the Gerontologic Coordination Center of Monaco (GCCM) takes care of disable elderly living at home.

A Comprehensive Geriatric Assessment (CGA) is performed at home, annually or in case of disability progression, as long as elderly live safety at home.

The GCCM sets up a personalized assistance plan.
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• The GCCM sets up a personnalized assistance plan.
OBJECTIVES

• Description of the role of the GCCM

• Description of the population followed since 2006

• Estimate the time to institutionalization with a Kaplan-Meier analysis

• Investigate predictive factors of institutionalization with a Cox model
MATERIAL AND METHODS

- **Retrospective, monocentric study**
- Descriptive analysis, Kaplan-Meier analysis and Cox model

- Start of GCCM activity: September 2006
- Endpoint date: August 15, 2017

- The GCCM performs a CGA at home, including:
  - Groupe Iso-Ressources (GIR) calculation
  - Minimental Test Examination (MMS-E) calculation
  - Instrumental Activity of Daily Living (IADL) score
  - Mini Nutritional Assessment (MNA) calculation
  - Unipodal support
  - Four meter walk
  - Frailty score
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GIR : BODILY AND MENTAL ACTIVITIES

- Communicate verbally and / or non-verbally, act and behave logically and sensibly in relation to the standards accepted by society
- To find oneself in space and time,
- To make her toilet,
- Dressing, undressing,
- To serve and eat,
- Ensure the hygiene of the urinary and fecal elimination,
- To rise, to lie, to sit, to pass from one of these 3 positions to another,
- Moving inside the place of life,
- Moving outside the place of life,
- Use a means of remote communication (telephone, alarm, bell, etc.) in order to alert in case of need.
DOMESTIC AND SOCIAL ACTIVITIES

• Manage its affairs, budget and assets, recognize the monetary value of coins and notes, use money and know the value of things, complete administrative procedures, complete forms,
• Prepare meals and pack them so they can be served,
• Performs all routine housework,
• Voluntary use of a means of collective or individual transport,
• Buy voluntarily property,
• Respect the prescription of the doctor and manage his own treatment,
• Voluntarily, alone or in a group, various recreational activities.
MATERIAL AND METHODS

• A personalized assistance plan is proposed using an inter-professional approach:
  o Nurse at home
  o Other health carers (AVS, AS...)
  o Home maid
  o Meals at home
  o Alarm at home in case of emergency
  o Easy access to the memory centre
  o Daily care center

• Transmission and sharing of results and of care plan with other members of the network
MATERIAL AND METHODS

• People working at the GCCM are:
  o 1 administrative director
  o 1 medical doctor (geriatrist)
  o 2 Nurses
  o 3 Social workers
  o 1 Psychologist
  o 1 Secretary
MATERIAL AND METHODS

• The GCCM has numerous missions:
  o Phone reception of people questions
  o Advice and orientation
  o Assessment at home
  o Implement and follow up of help plan
  o Quality assessment
  o Data collection and sharing
  o Public health
MATERIAL AND METHODS

- This study focuses on only two variables: GIR and MMS-E.
- GIR score is a French score for measuring disability:
  - from 1 (very disabled)
  - to 6 (autonomous).
- The MMS-E assesses cognitive impairment from 0 to 30.
RESULTS

- **2198 patients** were seen and recorded by the GCCM since September 2006

- 166 were removed from the study because they were seen only once
  - 141 were seen for the first time, the year before the endpoint date of the study;
  - 25 were not followed.

- >>> **2032** patients are included in this report.
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2032 elderly

- 582 institutionalized
- 165 lost of follow-up
- 319 then deceased
- 750 deceased at home
- 535 still followed every year
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Means, min and max for continuous variables

- 1019 persons had 3 or more CGA
- 6497 CGA since 2006
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- Endpoint date: August 15, 2017

- Time of observation is defined as the time from the first GCA until:
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  - Death
  - Date of last news or GCA
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- Event if interest is the institutionalization

- Mean time of observation: 2.8 years
- Median time of observation: 2.09
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• Median time of observation : 2.09
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Time to institutionalization according to the sex

- 2 years after the first CGA:
  - 82% of men
  - 82% of women are still at home

![Graph showing probability of staying at home over time for men and women, with a Log-rank test p-value of 0.8.](image-url)
Time to institutionalization according to the GIR

- 2 years after the first CGA:
  - 76% of 1-4
  - 93% of 5-6 are still at home
Time to institutionalization according to the MMS-E

- 2 years after the first CGA:
  - 66% of 1-19
  - 81% of 20-24
  - 90% of 25-30 are still at home
### MULTIVARIATE COX MODEL

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<tr>
<th>Variable</th>
<th>Hazard Ratio</th>
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Age, dependance and cognitive impairment increase the risk of institutionalization.
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• Repeated practice of CGA by a medical doctor and nurses at home.

• Establishing of coordination, which keeps elderly at home as long as possible.

• Our study confirms some well-known predictors of institutionalization: age, disability and presence of cognitive impairment.

• These are our first results: more to come with all scores performed during the CGA:
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  • Frailty score
  • Instrumental Activity Daily Living score
  • Unipodal support
  • Four-meters walk
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