Multi-morbidity is the norm rather than the exception. Patients with multi-morbidity (specially with chronic diseases) show lower quality life scores, and demand higher health care resources. We need to measure the (multi) morbidity burden in order to stratify the population in risk.

There are some morbidity stratification tools like the Adjusted Clinical Groups (ACG) or the Clinical Risk Groups (CRG).

Morbidity Stratification tools are useful in different ways:

Theme 1. Value-Based Integrated Care
Improving system efficiency and health outcomes
Measuring & evaluating costs and outcomes

Theme 2. Population Health Management
Risk stratification & Big data

Theme 4. Funding Integrated Care
New models for funding and payments
Measuring & evaluating costs and outcomes

Theme 5. Vulnerable Populations and Populations at Risk
Frail Elderly
People with complex multi-morbidity

In the Catalan Health Service we have develop our own morbidity stratification tool: the Adjusted Morbidity Groups (GMA). We try to explain the complexity in terms of morbidity. We have taken into account outcomes like mortality, hospitalization risk, or visits in primary care. The main difference from other stratification tools (like ACG or CRG) is that we do not use the total cost as an outcome in order to develop the final software.
There are 31 finals groups divided in seven major groups: healthy people, acute disease, chronic disease in 1 system, chronic disease in two or three systems, chronic disease in four or more systems, and active cancer. And any major group (except healthy people) is divided in five complexity levels.

The GMA software offers, additionally to the GMA, a health profile and a morbidity burden index at patient level. The health profile is a label that contains the main diseases present on the patient. And the morbidity burden index is a numerical value that measures the complexity in terms of morbidity for any patient. This last value let us directly stratify the population in risk.

The final stratification of a population depends on different factors: age, sex, morbidity, social factors, economic factors, accessibility, …

We have stratified the population in Catalonia (7.5 million people) according to GMA, that is, taking into account only the morbidity factor. Our results show that GMA are capable to identify large differences between risk stratum (highest versus lowest): more than 250 times in the risk of death, more than 100 times in social workers needs, and near 100 times in the total cost.

In the Catalan Institute for the Health the GMA let us to save more than 120,000€ per year contracting proprietary risk tools.

The GMA have been installed in thirteen regions in Spain with an agreement with the Spanish Ministry of Health. At that moment the Spanish Ministry of health is taking into account the possibility that the GMA were the stratification tool for the National Health System.

The GMA are flexible and can be adapted and recalculated in other organizations.

**Keywords:** multimorbidity; stratification tools; risk adjustment