
CONFERENCE ABSTRACT

In the era of remote access to the healthcare system, the accurate measures of patient's health complexity is a mainstay for a person-centred service allocation

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Gerard Carot-sans^{1,2}, Montse Clèries^{1,2}, David Monterde^{2,3}, Emili Vela^{1,2}, Marc Coca^{1,2},
Damià Valero-Bover^{1,2}, Júlia Folguera^{1,2}, Òscar Solans^{1,2}, Pol Pérez-Sust¹, Jordi Piera-
Jiménez^{1,2,4}

1: Catalan Health Service, Barcelona, Spain

2: Digitalization for the Sustainability of the Healthcare System (DS3), IDIBELL

3: Information Systems, Catalan Institute of Health

4: Open Evidence Research Group, Universitat Oberta de Catalunya

Introduction: The digital transformation of healthcare systems worldwide has changed the way patients access healthcare services. The ease of access to the system through digital pathways increases the number of requests, often outstripping the capacity for human-driven demand management. The shift from human- to computer-driven patient prioritization and service allocation may jeopardize the patient-centred approach to healthcare delivery. In this context, appropriate tools for measuring patient complexity based on the information available in electronic health records become a mainstay for high-quality, patient-centred care.

Theory: When it turns to allocate services without a human-driven assessment, the sole view to the main diagnostic (or even the unweighted count of chronic illnesses) is likely to provide a biased perspective of the patient's complexity. For instance, two patients with diabetes and another chronic illness who consult because of inadequate glycaemia control may require different care approaches depending on whether the secondary diagnostic is hypothyroidism or severe asthma. Likewise, a recent acute process such as hip fracture may change the patient's health complexity entirely and, therefore, the care approach. Hence, health complexity should be measured using exhaustive and weighted counts of all chronic conditions and relevant acute events.

Results: We developed a case-mix tool (i.e., the Adjusted Morbidity Groups, AMG) for measuring patient complexity based on the weighted summary of all chronic diagnostics and relevant acute conditions. The AMG, which retrieves both, a numeric index and a risk-group for each patient, **has** shown high discrimination capacity of key health outcomes, including mortality (AUROC 0.952), non-scheduled hospital admissions (0.897), admission to a long-term care facility (0.971), high use of medicines (0.945), and high rate of visits to the emergency room (0.838), and the primary care centre (0.904) [1,2]. In our population of nearly 7.5 million people, these performance values were higher than those of other measures of multimorbidity, including non-weighted counts of limited lists of chronic conditions (often used as a measure of the comorbidity burden) and for-profit tools, such as the Clinical Risk Groups™. The AMG strata have been included as a key piece of clinical

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information in the electronic health records and clinical workstations of primary and specialized care in our area for aiding clinicians in their decision-making.

Conclusions: The AMG is a non-commercial tool that reflects the patient's complexity and can be, therefore, used as a stratification tool for a patient-centred service allocation. The progress towards integration of social and health care information systems will allow including the social perspective to the stratification tool, with an expected higher capacity to predict health outcomes.

Implications for applicability: We herein propose a model for using the AMG index in resource allocation and prioritization of the demands received through eConsultation and online service request platforms. The capacity of the AMG to be tailored to other populations warrants its use in a different healthcare environment with adequate information systems.