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## CONFERENCE ABSTRACT

# Comparing complex chronic patients to advanced chronic patients with palliative care needs: cross-sectional study

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**Introduction:** In Catalonia, a strategy for proactive identification of complex chronic patients (CCP) by healthcare professionals in primary care, based on clinical judgment and broad criteria (encompassing clinical and psychosocial variables), has been promoted by the Chronicity Prevention and Care Program (CPCP) from the Department of Health. Identification of CCP is recorded in the Shared Clinical Record of Catalonia, a common technological platform accessible to all providers of public health network.

A differentiated identification and coding of those CCP that suffer from advanced chronic disease and present palliative care needs, coded as CCP-ACD, is recommended.

Even though population-based studies determining prevalence and characteristics of CCP-ACD in Catalonia have been performed, comparative studies between this population and those that have been identified as CCP are not available yet. The aim of this study is to compare the characteristics of CCP identified by healthcare professionals in primary care according to clinical judgment and broad criteria with the characteristics of those identified as CCP-ACD.

**Methods:** Information about demographic variables, presence of chronic diseases, use of health services and expenditure on pharmaceutical prescriptions was collected from the population morbidity database of Catalonia in 2013 (7.753.482 inhabitants). Identification of CCP and CCP-ACD was retrieved from the Shared Clinical Record of Catalonia on 31st December 2013.

Statistical tests used for comparisons were Pearson's chi-squared test for qualitative variables, parametric test for mean comparison (Student's t test) and non-parametric test for median comparison (U MannWhitney).

**Results:** Total CCP identified by healthcare professionals in primary care between 1st February and 31st December 2013 are 101415 persons (1.3% of the population of Catalonia), which are distributed in 83% PCC itself (84150 persons, 1.1% of the population of Catalonia ) and 17% CCP-ACD (17265 persons, 0.2% of the population of Catalonia ). Ratio CCP/CCP-ACD is 5/1.

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Descriptive characteristics of individuals identified as CCP itself respect those identified as CCP-ACD present a higher percentage of women (55.5% vs 53% ,  $p<0.001$ ), less older -among 65 and 84 years- (55% vs 43.5% ,  $p<0.001$ ), diabetes mellitus II (44.5% vs 36.1% ,  $p<0.001$ ), arthritis (41.2% vs 37.1% ,  $p<0.001$ ), ischemic heart disease (31.1% vs 28.3% ,  $p<0.001$ ), asthma (8.5% vs 6.7% ,  $p<0.001$ ), visits to primary care mental health/year (max. 23 vs 12  $p<0.05$ ), visits to hospital care mental health/year (max. 30 vs 3  $p<0.05$ ) and pharmaceutical expenditure  $>1000$  €/year (43.5% vs 38% ,  $p<0.001$ ).

Descriptive characteristics of individuals identified as CCP-ACD respect those identified as CCP itself present a higher percentage of mortality (19.9% vs 4.1% ,  $p<0.001$ ), elderly  $\rightarrow$ 84 years (46.5% vs 35% ,  $p<0.001$ ), cancer (41.5% vs 22.5% ,  $p<0.001$ ), dementia (27.8% vs 18.8% ,  $p<0.001$ ), chronic renal failure (23.5% vs 19.8% ,  $p<0.001$ ), cirrhosis (5.3% vs 2.9% ,  $p<0.001$ ), visits to primary care/year (30 vs 27 (mean),  $p<0.001$ ), hospitalizations/year (1 vs about 1 ,  $p<0.05$ ), urgent hospitalizations/year (1 vs about 1 ,  $p<0.05$ ), visits to emergency room/year (2 vs 1 ,  $p<0.05$ ), use of long-term services (4.2% vs 2.6% ,  $p<0.001$ ), use of mid-term services (15.5% vs 7.3% ,  $p<0.001$ ), use of specialty palliative care teams at home (13.9% vs 2.1% ,  $p<0.001$ ), use of specialty palliative care teams at hospital (12.1 % vs 5.7% ,  $p<0.001$ ) and spending on hospital outpatient dispensing medication  $>€3000$ /year (7% vs 3% ,  $p<0.001$ ).

**Discussion:** Characteristics of individuals identified as CPP-ACD describe a profile, in terms of burden of disease and pattern of use of resources, typically of the end of life phase, clearly different from characteristics of individuals identified as CCP itself, suggesting that clinical judgment, promoted by CPCM as criteria for proactive identification of this population, would allow to differentiate these two groups.

Prevalence of individuals identified as CCP-ACD is lower than, according to the literature, would be expected to find at a population level (around 1%), and probably related to limited study period, of only 11 months. Yet, ratio CCP/CCP-ACD found is higher than expected (about 3/1). These results might point out that CPP-ACP population would be under-registered, probably favoured by prognostic uncertainty and difficulties in identifying the typical needs profile of advanced diseases by healthcare professionals.

**Conclusion:** Characteristics, in terms of burden of disease and pattern of use of resources, of individuals identified as CCP-ACD by healthcare professionals in primary care are clearly different from those identified as PCC, which would justify the implementation of health policies and models of care specific to each level of complexity.

Additional studies are needed to overcome limitations of the present study, to establish the population prevalence of both CCP and CCP-ACD and to identify the possible causes of under-registration of CCP-ACD by healthcare professionals in primary care.

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**Keywords:** advanced chronic patients; palliative care needs; complex chronic patients; complex care needs; integrated health and social care

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