
CONFERENCE ABSTRACT

Modelling mental healthcare improvement in highly integrated care systems: the case of the Basque Country (Spain)

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Carlos R. Garcia-Alonso¹, Nerea Almeda¹, Jose A. Salinas-Perez¹, Mencia R. Gutierrez-Colosia¹, Luis Salvador-Carulla²

1: Universidad Loyola Andalucia, Cordoba, Cordoba, Spain;

2: Centre for Mental Health Research, Australian National University, Canberra, ACT, Australia

Introduction: Currently there is growing interest in providing integrated mental health care between hospital (acute residential care) and community-based services (… and other health systems). Mental health systems are complex due to the high disorder prevalence, socio-economic burden, stigma associated, and high gap of unmet population needs. Mental health can be considered an ecosystem related to, at least, physical health and social services ones. Decision support systems are robust tools for guiding and improving planning and management of health ecosystems by integrating methods like Bayesian networks. These models identify critical variables, domains and constructs and their corresponding causal relationships. The objective of this research is to design an integrated and integral theoretical Bayesian network for guiding mental health planning and management, and in consequence, improving mental health care delivery.

Methods: The setting is the Mental Health Network of Gipuzkoa and Bizkaia (Basque Country, Spain). Data collection was carried out in 2013 for the Mental Health Atlas of Gipuzkoa and Bizkaia (2015). The main indicators are grouped in: availability, placement capacity, workforce capacity, discharges, average length of stay, readmissions, utilization of health day care services, and incidence, prevalence and visits for outpatient care services.

The domains, subdomains and constructs were standardized by using the DESDE-LTC codification system. The causal relationships were identified and described by using explicit expert knowledge from mental health managers and researchers from Spain, United Kingdom, Finland, United States and Australia. Expert knowledge was elicited by using the Expert-based Cooperative Analysis (EbCA) model. In addition, we consider the results obtained in two previous systematic reviews on Mental Health planning and management.

Results: The analysis identified the following constructs: mental health promotion and mental disorder prevention, information for care, self-help and voluntary help, community pharmacy, primary care, outpatient care, day care and residential care, being these the core of the Bayesian network. The constructs are interrelated bi-directionally. In addition, causal relationships between the core and the ecosystems physical health and social services were identified, linking the Mental Health ecosystem with the health environment. The identified constructs were developed in domains and subdomains, according to the DESDE-LTC codification system, in order to represent the real status (availability and adequacy) of a specific Mental Health ecosystem. Finally, variables are the seeds of the Bayesian network.

Conclusions: This is the first theoretical Bayesian network model that will let us to assess how balanced and integrated any real Mental Health ecosystem is. This model identifies the availability of the elements and their causal relationships can be used to assess an adequacy index according to the basic Mental Health community care model. The Bayesian network can be used in any Mental Health ecosystem worldwide.

Lessons Learned: To improve mental health care planning and management, it is required to make evidence-informed decisions taking into account population needs, local characteristics and global influences.

Limitations: The number of variables (seeds of the model) is critical as well as the limitations of the DESDE-LTC codification system that has to be extended to include other types of care.