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Prioritizing Health Care Interventions: A Multicriteria Resource Allocation Model to Inform the Choice of Community Care Programmes

Mónica D. Oliveira[1], Teresa Rodrigues[1], Carlos A. Bana e Costa[1], Armando Brito de Sá[2]

[1] Departamento de Engenharia e Gestãoe Centro de Estudos de Gestão, Instituto Superior Técnico, Lisboa, PORTUGAL
[2] Faculdade deMedicina da Universidade de Lisboa, Lisboa, PORTUGAL

Contact: teresacrodrigues@ist.utl.pt

Objectivos (Objectives): Many countries, and Portugal in particular, are currently dealing with budget cuts and a shortage of resources in the health sector, while the demand for health care services is increasing. Within this context, the Group of Health Centres (GHC) of Northern Lisbon in Portugal faces the challenge of prioritizing community care programmes so as to decide which programmes should be funded. These programmes are currently proposed by each of its four new Community Care Divisions as an action plan (AP) composed of several community care programmes. A first analysis in 2010 of the four APs showed that it was not realistic for the Northern Lisbon GHC to implement all programmes proposed, because of shortage of financial and human resources. Consequently, a selection of programmes needed to be made within each AP. This called for transparent prioritization of health care interventions by carefully balancing the multiple costs and benefits of the programmes on a common basis. In line with a few studies that have preliminarily explored the use of Multi-Criteria Decision Analysis (MCDA) to help prioritizing health care interventions, the authors suggested the GHC board to follow a socio-technical approach using MCDA to construct a Multi-criteria Model to Allocate Human Resources in Community Care PrOgrammes (MARCCO).

Metodologia (Methodology): MARCCO was the result of a socio-technical process framed within a multicriteria resource allocation model structured and built with the decision-making group (DM) – the members of the Clinical Board and the Executive Director of the Northern Lisbon GHC – in a sequence of decision conferences during which the group was involved in the model building. The structure of the multicriteria resource allocation model is composed by: a multicriteria evaluation model that allows to measure the overall benefit of each programme by a weighted sum procedure; and these overall benefits of the programmes and the “costs” in nursing hours required to achieve them are then used to perform a portfolio decision analysis and select the portfolio of programmes that offers the best global benefit value for the limited number of nursing hours available. The methodology MACBETH (Measuring Attractiveness by a Categorical Based Evaluation Technique) was used to construct the multicriteria evaluation model. A distinctive characteristic of MACBETH is that it requires only qualitative judgements from the DM about differences in attractiveness in order to score programmes on each criterion and to weight criteria. Building MARCCO was supported by the M-MACBETH and PROBE decision support systems.

Resultados (Results): The DM have identified themselves with the results obtained by MARCCO and used them in the selection of programmes that should be implemented in each AP in 2010. Comparison of benefits across programmes has shown the DM that many programmes presented a low level of benefits; and portfolio analysis has indicated that for many projects, the additional benefit unit ‘costed’ a lot of hours. Therefore, the DM decided not to spend all the available budget, and asked Health Centres for the reconfiguration of current programmes or for the proposal of alternative ones. Robustness analysis confirmed that the portfolio chosen by the DM for each AP was highly stable to uncertainty in criteria weights and/or in programmes. MARCCO helped to improve the GHC’s information system, so that all programmes could be compared on a common basis, and to understand which programme features are valued by the GHC.

Conclusões (Conclusions): MARCCO contributes to the literature by showing how a constructive approach using MCDA methods and decision conferencing is an alternative to conventional approaches used in the prioritization of interventions in the health care sector, highlighting the usefulness of MCDA in priority setting in the health sector.