
CONFERENCE ABSTRACT

Comparison of healthcare costs between an implemented Integrated Diabetes Care unit and the traditional National Health System

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Introduction: Diabetes is a chronic condition that generates presently a considerable burden on healthcare and social support systems, a reflex of having a huge impact on patient quality of life, premature disability and death. Although recognisable for having different aetiologies, type 1 (T1DM) and type 2 diabetes (T2DM) have in common multiple health complications, with impact on virtually all body systems. Currently, prevention of complications is based, on the one hand, on therapeutic education and patient self-management support, and on the other hand on periodical screening strategies.

In this respect, the introduction of integrated diabetes healthcare has been seen as beneficial to achieve better diabetes control and prevention of complications, especially the ability to provide care through multidisciplinary teams of professionals. However, this strategy is generally confronted by the traditional organization of dispersed healthcare speciality services. To support the wider implementation of integrated diabetes care, and overcome organizational inertia, studies must be developed that evaluate effective gains in quality of care and clinical outcomes, but also that address comparisons in terms of healthcare costs.

Practice description: A diabetes outpatient clinic, managed by a Portuguese non-profit patient association, has designed a series of integrated care pathways with special focus on specialized care for all diabetes related aspects (nutrition, physical activity, medication, etc.) and complications (cardiology, ophthalmology, podology, nephrology, mental health, etc.) pivoting around their core metabolic control services (endocrinology and diabetology). This has been enhanced by the provision of a wide set of educational services tailored to the patients' needs and developmental stage of the disease to reinforce knowledge and foster self-management. These capabilities have been internationally recognized, the center has been certified by IDF (International Diabetes Federation), as an education center, and by the SWEET paediatric diabetes network.

The aim of this research work was to assess the value of the implemented integrated care model, as well as to depict a map of the costs associated to the treatment of different groups

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of patients in this framework. A comparative study of the costs was done: of those incurred in this model at an outpatient clinic to 8354 diabetic patients (1078 T1D and 7276 T2D) during 2012 versus the ones that the Portuguese National Health Service (PNHS) would have incurred with standard care, provided that patients followed the same programs of care and accessed to similar amounts of consultations and treatments.

This structured costs analysis was performed using a segmentation model to identify the exact needs of care in each group of patients breaking down the processes related to the delivery of care (time, equipment, patient flows, and salaries). Data was extracted from the clinic own electronic health records (EHR), and from group interviews with professional teams. The process was replicated for the PNHS through information obtained from the "Analytical Elements Database, ACSS, 2009". The segmentation model proposed is based on the combination of the health profile of patients in different developmental stages of their disease(s) with the intrinsic medical needs that patients may have in those stages, also related to the age profile of the groups. This model has been developed by Med tronic Iberica as a result of the work completed in the projects METABO and Managed Outcomes.

Key findings: Consultation costs were found to be 21% lower for T1DM and 38% lower for T2DM patients in the integrated model clinic than the same services provided in the Portuguese National Health System. This is explained mainly by delayed diabetes complications. The final comparison was based on consultation costs because interventional treatments are provided by the PNHS regardless of the organization where the patients are being followed. The model is however prepared to consider these costs.

Highlights: This highlights the need for more detail into segmentation of patient needs, to better adapt healthcare services but also to allow the estimation of financial impact. Sustainability of the integrated diabetes healthcare model, and the referral of diabetes patients from the NHS to private specialized units, must be explored if we intend to have effective initiatives towards wider transferability.

Conclusion: The present study supports the implementation of organizational models that tackle integrally chronic diseases like diabetes, for having the potential to impact on the long term onset of the illness generating significant increases in quality of life for patients and cost savings to Health Systems worldwide.

Keywords: diabetes; integrated care; costs; disease complexity; segmentation model
