

Volume 15, 27 May 2015

Publisher: Uopen Journals

URL: <http://www.ijic.org>

Cite this as: Int J Integr Care 2015; Annual Conf Suppl; [URN:NBN:NL:UI:10-1-117012](https://nbn-resolving.org/urn:nbn:nl:ui:10-1-117012)

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Conference Abstract

Identifying and explaining the variability in development and implementation costs of disease management programs in the Netherlands

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Abstract

Background: In the Netherlands, disease management programs (DMPs) are used to treat chronic diseases. Their aim is to improve care and to control the rising expenditures related to chronic diseases. A bundled payment was introduced to facilitate the implementation of DMPs. This payment is an all-inclusive price per patient per year for a pre-specified care package. However, it is unclear to which extent the costs of developing and implementing DMPs are included in this price. Consequently, the organizations providing DMPs bear financial risk because the development and implementation (D&I) costs may be substantial. The aim of this paper is to investigate the variability in and drivers of D&I costs among 22 DMPs and highlight characteristics that impact these.

Methods: The data was analyzed using a mixed methods approach. Descriptive statistical analysis explored the variability in D&I costs as measured by a self-developed costing instrument and investigated the drivers. In addition, qualitative research, including document analysis and interviews, was conducted to explain the possible underlying reasons of cost variability.

Results: The development costs varied from €5,891 to €274,783 and the implementation costs varied from €7,278 to €387,879 across DMPs. Personnel costs were the main component of development. Development costs were strongly correlated with the implementation costs ($\rho = 0.55$), development duration ($\rho = 0.74$), and number of FTEs dedicated DMP development. Organizations with large size and high level of care prior to the implementation of a DMP had

relatively low development costs. These findings were in line with the cross-case qualitative comparison where programs with a longer history, more experienced project leadership, previously established ICT systems, and less complex patient populations had lower D&I costs.

Conclusions: There is wide variation in D&I costs of DMPs, which is driven primarily by the duration of the development phase and the staff needed to develop and implement a DMP. These drivers are influenced by the attributes of the DMP, characteristics of the target population, project leadership, and ICT involved. There are indications of economies of scale and economies of scope, which may reduce D&I costs.

Lessons learned for research development: D&I costs of DMPs are substantial and should be incorporated in economic evaluation studies. In addition, the case-mix of patients included in a DMP is associated with the D&I costs.

Limitations: The costs that facilitated the DMP development and occurred prior to it were not available.

Future research: should investigate whether the D&I costs per patient decrease in the longer term due to the broader inclusion of patients in DMPs.

Keywords

chronic disease; disease management; integrated care; costs; the netherlands

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