CONFERENCE ABSTRACT

Investigating the association of integrated care on healthcare costs: evidence from a large retrospective cohort study in the Netherlands

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Introduction: In the Netherlands, bundled payments were introduced gradually after 2010 to stimulate the integration of primary care services for different chronic conditions including diabetes, vascular risk management, COPD, depression, asthma, as well as for the elderly. The expectation for this reform was that integrated care could control healthcare expenditure by improving efficiency in primary care and promoting prevention. However, little is known whether this expectation is fulfilled. The aim of this study was to investigate the association between integrated care and healthcare costs in the Netherlands.

Methods: Claims data from 2008 to 2017 from all Dutch health insurers was used. Enrolment of individuals in an integrated care programme was identified based on payment codes for integrated care services. Individuals entered integrated care at different points during this period. The control cohort consisted of individuals who were not enrolled in any integrated care programme and who were matched with individuals in the intervention cohort based on gender, age, socio-economic status, and type and number of chronic conditions. Cost were available on spending from basic health insurance in multiple categories e.g. GP, medication, and medical-specialist per person per half year from 2008 to 2015. Descriptive statistics and a preliminary analysis with an ordinary least squares were conducted.

Preliminary Results: The intervention group consists of 2.8 million and the control group of 1 million persons. In 2008, both were of similar age median 70 and gender female 51%, and had similar costs €1600, semi-annual. More people in the intervention group used medical care, for example, for medication 87% vs. 77% and secondary care 64% vs. 53%. The largest integrated care programme in 2015 was for diabetes 675,000 people. From the people who started integrated care in 2008 over 55% stayed in the full 8 years. Patients with more than one chronic condition had higher costs €3640 vs €1236.

For individuals who had been enrolled in integrated care at the time, mean total costs remained virtually stable between the first half-year of 2008 and the first half-year of 2015 from €2558 to €2543. For those who had not been enrolled in integrated care at the time, the costs increased €1538 to €1964.
Preliminary regression analysis showed that people in integrated care had increased costs of around €180 and that this amount did not reduce over time.

**Discussion:** Preliminary results indicate that integrated care programmes were associated with higher costs. Further analysis based on type of costs needs to indicate whether cost differences were likely to be due to severity of disease for integrated care patients or due to integrated care itself. Sensitivity analysis will be performed to assess robustness of the results. Future analysis will focus on the effect of different types of financing for these programmes and whether integrated care has a different effect on people with multi-morbidity.

**Keywords:** bundled payment; integrated care; health care costs