



Cardiac rehabilitation uptake in the Netherlands

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Background and purpose

Despite its documented efficacy and cost-effectiveness, cardiac rehabilitation (CR) is still not well implemented in current clinical practice. It was recently estimated that fewer than half of eligible cardiovascular patients receive CR in Europe. The purpose of the present study was to assess precise rates and identify determinants of CR uptake in the Netherlands.

Methods

The cohort consisted of persons insured with Achmea Zorg, a Dutch health insurance firm covering approx. 17% of the Dutch population (2,8 million insured persons). We identified patients with an acute coronary syndrome (ACS) and patients that underwent percutaneous coronary intervention (PCI), coronary artery bypass grafting (CABG) or valve surgery, through insurance claims in 2007. Patients were categorized as having received CR when an insurance claim for CR was filed within the first 12 months after the cardiac event or intervention. We evaluated the relation between CR uptake and disease-related, demographic, and geographic factors using logistic regression analysis.

		Patients (n)	Patients receiving CR (n)	CR uptake rate (%)
Intervention	CABG / valve surgery	2,257	1,325	58.7
	PCI acute	1,735	889	51.2
	PCI elective	3,017	761	25.2
No intervention	ACS with ST elevation	391	117	29.9
	ACS without ST elevation	4,800	390	8.1
Total		12,200	3,482	28.5

Results

A total of 12,200 patients were included. The table shows CR uptake rates across diagnostic groups: the overall CR uptake rate was 28.5%. Several factors were associated with lower CR uptake rates in patient:

- Female sex (OR 0.68)
- Absence of revascularisation following an ACS (OR 0.15)
- Older age (> 70 yrs) (OR 0.48)
- Larger distance to the nearest provider of CR (> 10 km) (OR 0.83)
- Presence of co-morbidity (lung disease, psychiatric disease, disease related to locomotor apparatus and/or diabetes) (OR 0.74)

Conclusion

A minority of patients with an ACS and/or cardiac intervention received CR within the next twelve months. Strategies aiming at increasing CR uptake should focus on females, patients not undergoing coronary intervention following an ACS, elderly patients (> 70 yrs), patients with long travelling distances to the nearest CR provider, and patients with co-morbidities.