

Health and hospital admission trends of Dutch older people

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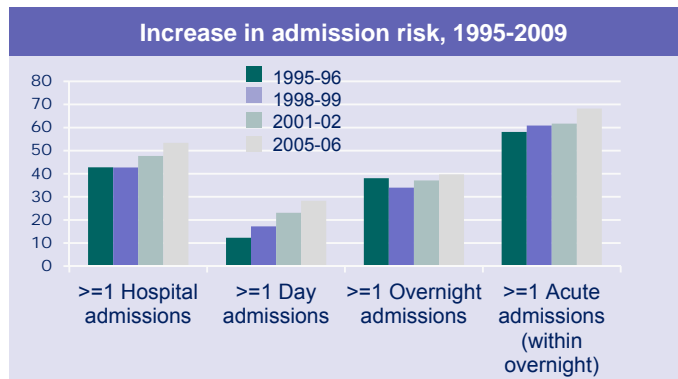
Background

- The increasing life expectancy partly results from improved (access to) health care
- It is suggested that increased hospitalisation of older adults reflects this trend
- But hospital admission trends have not been related to the changing health status of older people
- The current study examines if hospital admission trends of older adults between 1995 and 2009 can be attributed to their changing health

Methods

- Longitudinal Aging Study Amsterdam (LASA) data, linked to data from the Dutch Hospital Discharge Register
- 5681 observations of 2520 respondents (ages 65-88 years), across four waves (14 years)
- To assess contributions to time trends in hospitalization, we included in multivariate GEE models:
 - Demographic, Psychosocial, Lifestyle and Health status factors
- Outcomes within 36 months:
 - ≥ 1 Overnight admission
 - ≥ 1 Day admission
 - ≥ 1 Acute (overnight) admission

Trends in determinants, 1995-2009					
Demographic		Lifestyle		Health	
Education	+	Alcohol	=	Chronic diseases	+
Income	+	BMI	+	Funct. limitations	+
% Married	+	Smoking	-	Self-rated health	+
Urbanization	-	Sports PA	+	Contact with GP	=
		Other PA	-	Phys. performance	=
Psychosocial					
Network size	+			Medication use	+
Instrumental supp.	+			Systolic BP	-
Emotional supp.	+			Diastolic BP	=
Mastery	=			Depressive symp.	+
Soc. loneliness	+			Cognitive funct.	+
Em. loneliness	+				

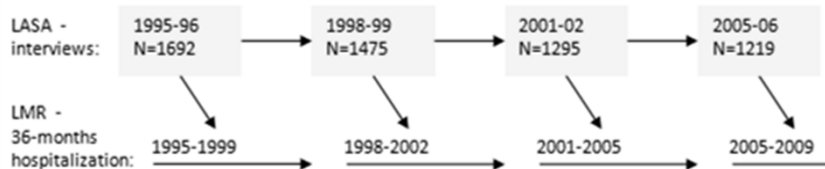


Explaining factors per type of admission		
	OR per year	% Explained
Day	1.11 (1.09-1.13)**	
Overnight	1.02 (1.00-1.03)*	
	Education	+12%
	Chronic diseases	-35%
	Functional limitations	-35%
	Self-rated health	-24%
	Medications use	-65%
With all determinants:	1.00 (0.99-1.02)	
Acute	1.04 (1.02-1.05)***	
	Smoking	+14%
	Chronic diseases	-14%
	Functional limitations	-14%
	Self-rated health	-10%
	Medication use	-21%
With all determinants:	1.03 (1.01-1.05)**	

Results

- Between 1995 and 2009, the percentage of older adults with one or more overnight admissions increased from 38.1 to 39.7%.
- The risk of acute admissions increased even more
- A more than doubled risk of day admissions over time was observed (12.3% to 28.3%),
- Most health factors showed worsening trends, accounting for 76% and 26% of the observed increase in overnight and acute admissions, respectively

Study design



Conclusions

- Older people's worsening health profiles accounted for the increase in overnight, but not day or acute, hospital admissions over time
- Although improved access and increased treatment possibilities have likely resulted in increased hospital admissions, this study showed that poorer health has certainly contributed too