

# Determinants of self-rated health 3 months after stroke

L. P. Larsen<sup>1,2</sup>, G. Andersen<sup>3</sup>, S.P. Johnsen<sup>4</sup>, N.H. Hjellund<sup>1,4</sup>

<sup>1</sup>AmbuFlex/Westchronic, Regional Hospital West Jutland, Herning, Denmark

<sup>2</sup>Department of Health Science, University of Aarhus, Denmark

<sup>3</sup>Department of Neurology, Aarhus University Hospital, Aarhus, Denmark

<sup>4</sup>Department of Clinical Epidemiology, Aarhus University Hospital, Aarhus, Denmark

## BACKGROUND

Due to improvements in treatment of stroke, the stroke mortality rate has decreased, but the absolute number of strokes and stroke survivors continues to increase because of the ageing population.

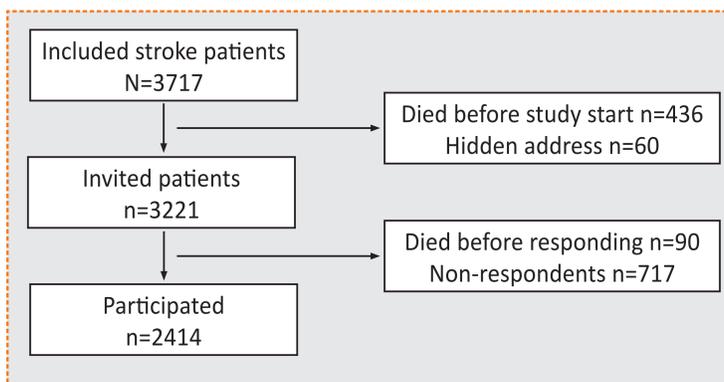
It is evident that measurements of mortality, neurological status and disability are not sufficient to assess the entire range of stroke sequela. Self-rated health consists of multiple dimensions of health and is found to be associated with endpoints as long-term mortality and return to work.

## AIM

The aim of this study was to compare self-rated health in a population of stroke patients to the general Danish population and to analyze to what extent clinical and patient-related factors influence self-rated health 3 months after stroke.

## METHODS

We sent questionnaires on self-rated health (SF-12) to all patients younger than 80 years with first time stroke admitted to any hospital in the Central Denmark Region between October 1, 2008 and December 31, 2011 (N=2414). Only patients living in their own homes before the stroke were contacted. Information on possible clinical and patient-related determinants of self-rated health were obtained from population-based national health registers.



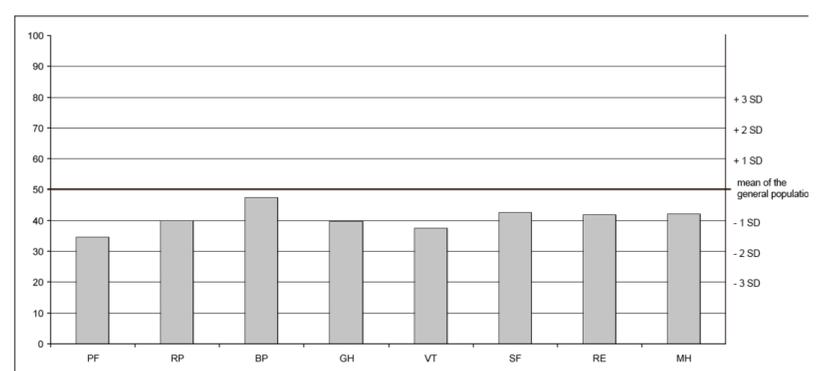
## CONCLUSION

Stroke had a marked impact on self-rated health and in particular in physical health. Higher stroke severity and level of co-morbidity were important risk factors of reduced self-rated health.

## RESULTS

### Comparison to the general Danish population

Overall, stroke patients rated their health lower than the general Danish population on all the SF-12 scales, and in particular regarding vitality, general health, physical functioning and role limitations due to physical problems.



### Influence of determinants on self-rated health

Stroke severity and comorbidity were found to be the strongest determinants for reduced mental as well as physical health 3 months after stroke. Smoking, low educational level and age also influenced the self-rated health significantly.

Adjusted mean differences in self-rated health among stroke patients according to demographic and stroke-related factors at the time of stroke.

	Score differences*	
	MCS (95%CI)†	PCS (95% CI)
Total	2412	2412
<b>Gender</b>		
Female	ref	ref
Male	3.3(2.0;4.6)	0.9(-0.1 ; 2.0)
<b>Age</b>		
< 59	ref	ref
60-69	3.4(2.0;4.6)	-0.1(-1.3;1.1)
70-	3.8(2.4;5.3)	-1.8(-3.1;-0.5)
<b>Educational level</b>		
Low (<11 y)	ref	ref
Medium (11-14 y)	0.2(-1.1;1.3)	2.3(1.1;3.3)
High (>15 y)	1.1(-0.7;2.9)	4.0(2.6;5.4)
<b>Comorbidity</b>		
Charlson Index 0	ref	ref
Charlson Index 1-2	-1.9(-3.1;-0.7)	-2.4(-3.4;-1.3)
Charlson Index 3+	-4.6(-6.5;-2.7)	-5.8(-7.6;-4.0)
<b>Stroke severity</b>		
Mild	ref	ref
Moderate	-1.6(-3.1;-0.5)	-4.6(-5.9;-3.3)
Severe	-2.6(-4.9;-0.4)	-7.6(-9.9;-6.0)
Very severe	-3.8(-7.2;-0.4)	-9.6(-12.4;6.9)
<b>Smoking</b>		
Current	ref	ref
Former	2.5(1.0;3.9)	1.1(-0.1;2.3)
Never	3.8(2.4;5.2)	2.3(1.2;3.5)

\* Every risk factor adjusted for the other risk factors

† MCS=Mental Component Summary, PCS=Physical Component Summary

## Contact

Louise Pape Larsen, AmbuFlex/WestChronic

Regional Hospital West Jutland, Herning, Denmark

E: anl@rm.dk

W: ambuflex.dk