



rivm

National Institute
for Public Health
and the Environment

Trends in activity limitations

From 1990 to 2007

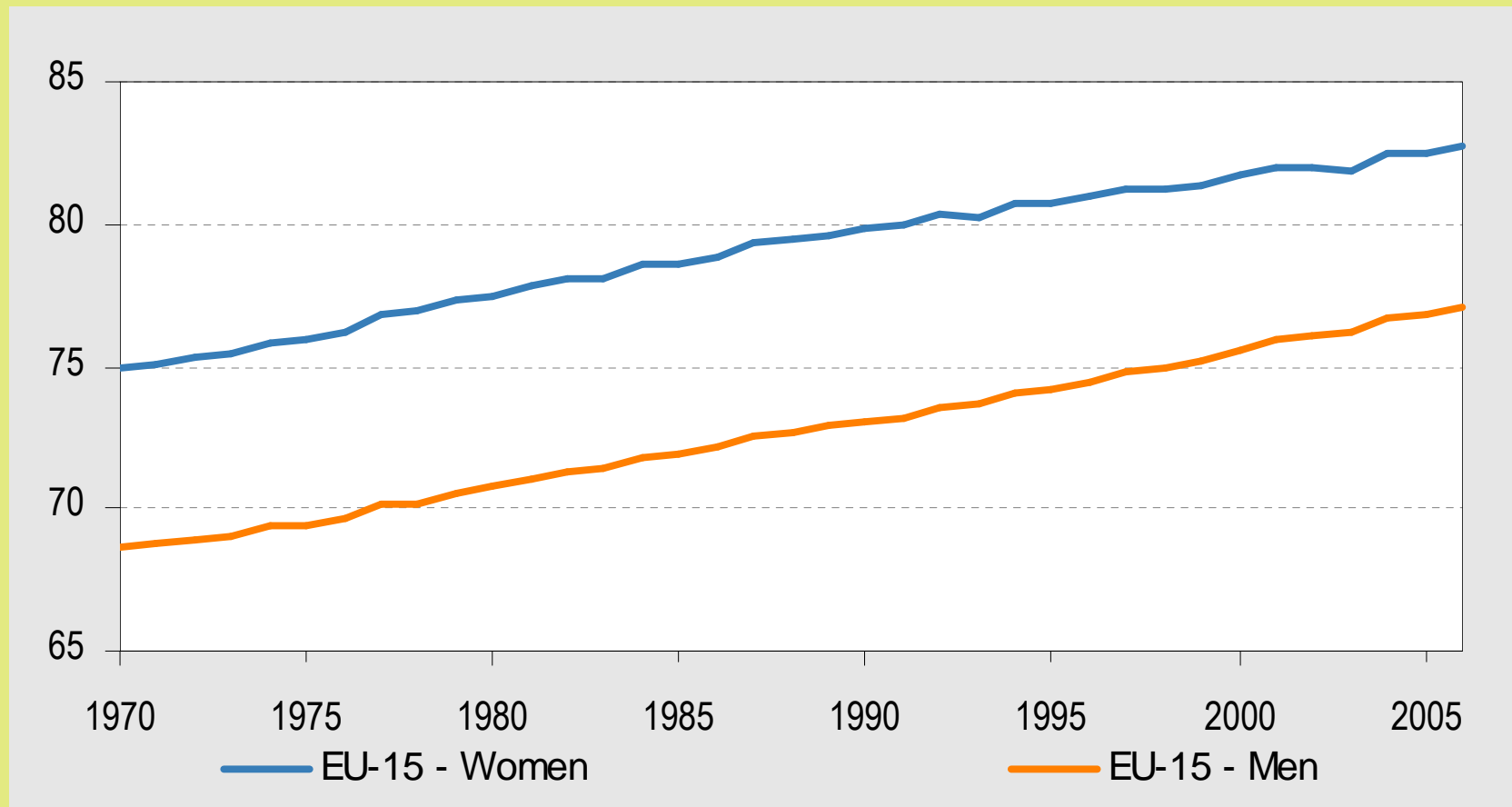
TRENDDS project team

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- Dorly Deeg, VUmc Amsterdam
- Mirjam de Klerk, SCP The Hague
- Wilma Nusselder, Erasmus MC Rotterdam
- Martin van Boxtel, UM Maastricht
- RIVM: Susan Picavet, Albert Wong,
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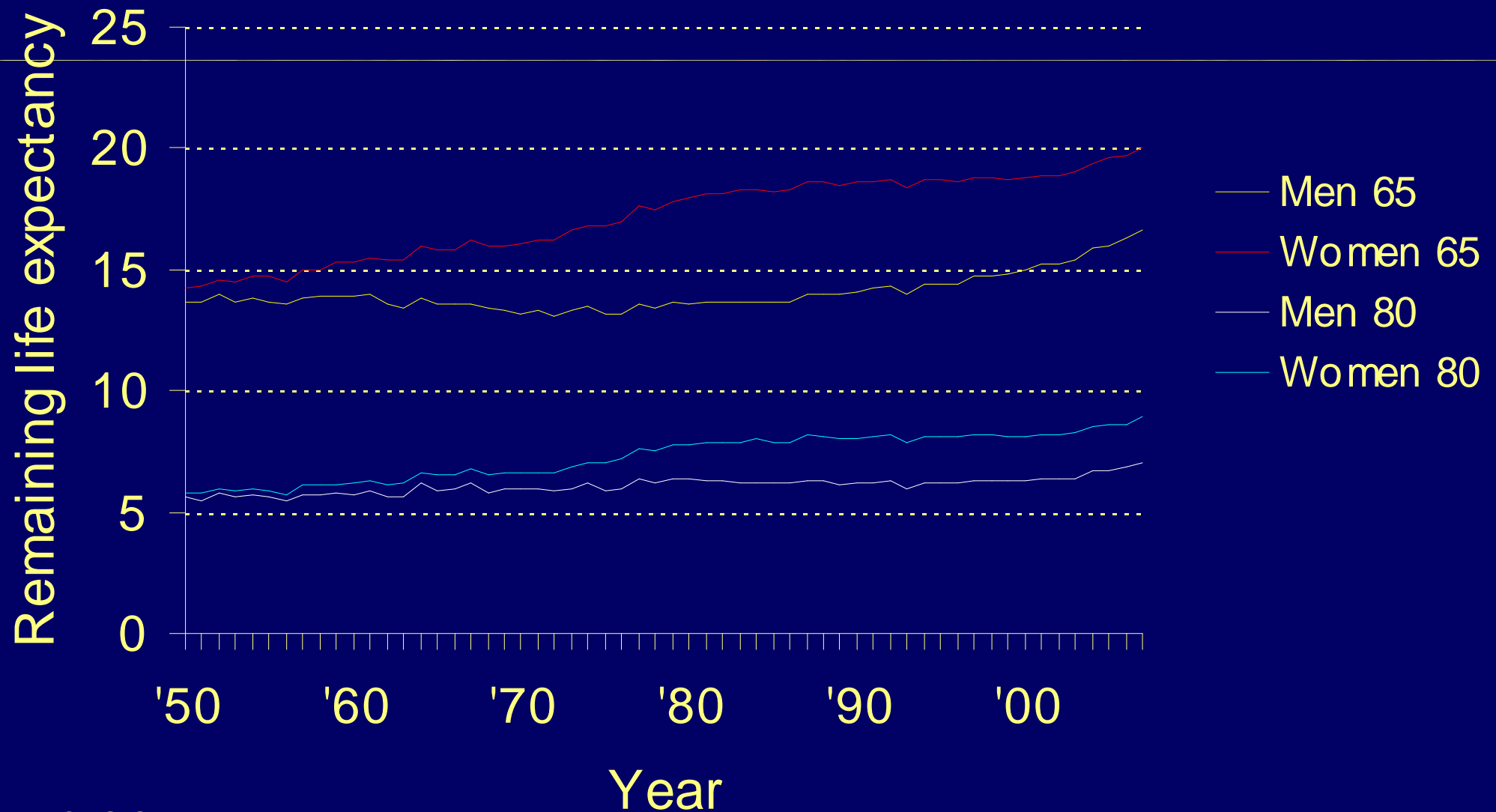
Why study activity limitations?

- Increase of life expectancy



(source: Dutch National Health Compass, 2008)

Development of life expectancy from ages 65 and 80, the Netherlands

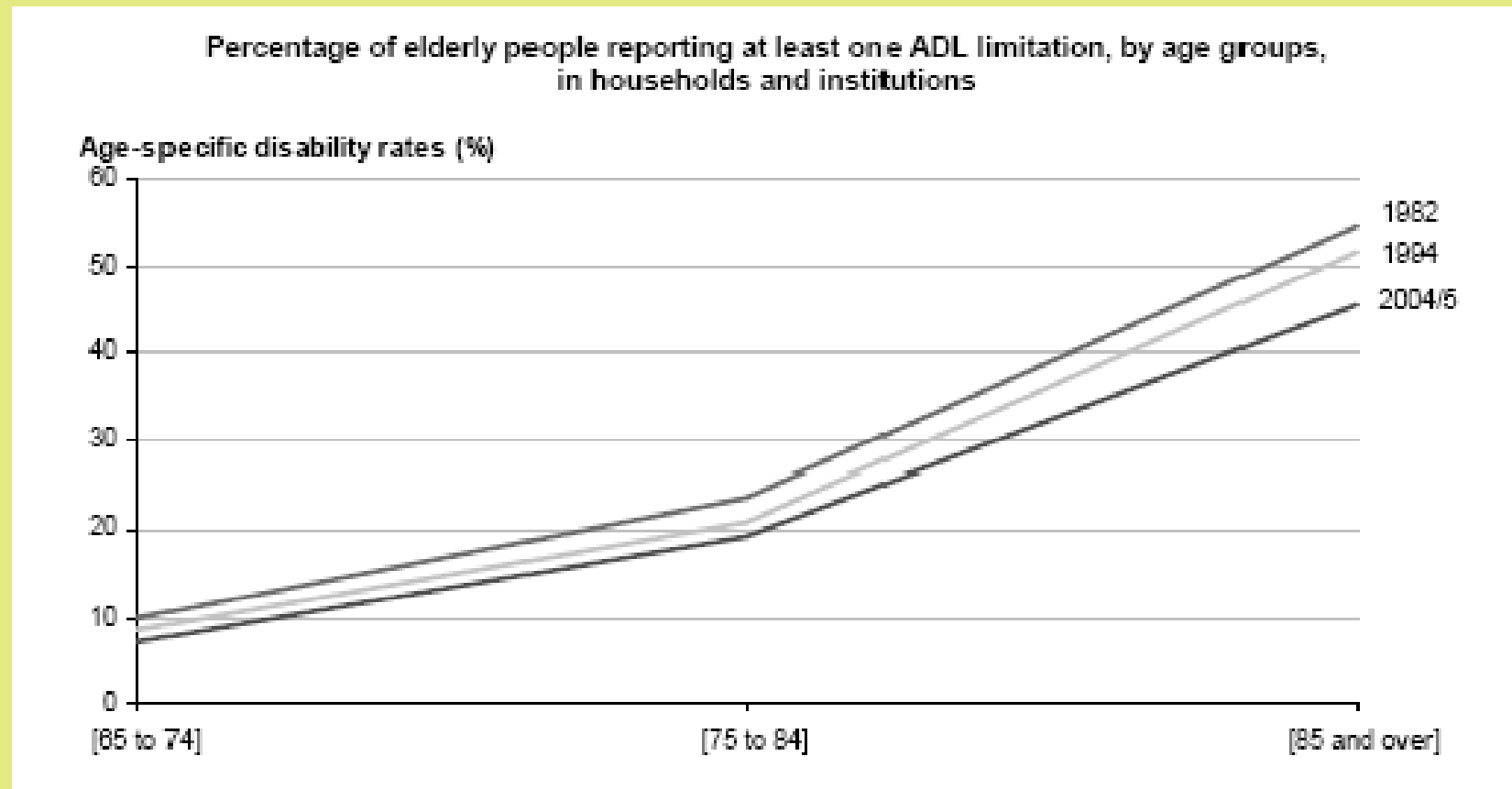


Activity limitations?

- ‘Activity Limitations’
 - WHO International Classification of Functioning, Disability and Health (ICF)
 - Self-reported difficulties executing certain activities
- Which domains:
 - Self care (ADL): washing o. self / eating / toileting / getting dressed
 - Living independently (IADL): preparing meals / household chores
 - Mobility: stair climbing / walking / using public transportation / carrying a 5 kg bag of groceries for 10 meters

OECD: mixed trends in activity limitations

- Decrease of activity limitations (US)



(source: LaFortune & Balestat, 2007; NLTCS)

Why study trends in activity limitations in the Netherlands?

- Internationally:
 - Increase in life expectancy;
 - Decrease in (severe) activity limitations
- Netherlands:
 - Life expectancy began increasing again
 - Conflicting findings on trends in activity limitations
(e.g., Puts et al 2008, Portrait et al in press)

Study objectives

- Give best estimates of the time trend in activity limitations for the Dutch population aged 55-84:
 - Same instruments as much as possible
 - Identical distinction in severity
 - Identical age groups
 - Identical analyses

Study methods (1)

- Population-based studies
- Collecting original data on activity limitations
- Over period of 10 years minimum
- With 3 data collection points minimum
- Both genders represented
- Ages 55-84 or smaller age range within this bracket
- Excluding institutionalised

Study methods (2)

1. Repeated surveys

- | | <i>Mode</i> |
|---|-------------|
| - AVO (Amenities and Services Utilisation survey; SCP; 1991-2003) | Quest |
| - POLS (Permanent Life Situation Survey; SN; 1990-2005) | Int+Quest |

2. Longitudinal studies

- | | |
|--|-----------|
| - LASA (Longitudinal Aging Study Amsterdam; VUmc; 1996-2006) | Int+Quest |
| - MAAS (Maastricht Aging Study; UM; 1994-2006) | Quest |
| - DCS (Doetinchem Cohort Study; RIVM; 1995-2007) | Quest |

Common data on stair climbing, walking, and getting (un)dressed, over period 1990 – 2007

Study methods

At least moderate limitations

Study	Instrum.	Wording	No lims.	At least moderate limitations	
AVO	ADL	Ability to execute activities	Without difficulty	With difficulty	Only with help
POLS	ADL	Difficulty with activities	Without difficulty	Some difficulty / Great difficulty	Only with help
LASA	ADL	Ability to execute activities	Without difficulty	Some difficulty / Great difficulty	Only with help / No
MAAS	SF36	Limited in activities by health	Not at all	A little	Severe
DCS	SF36	Limited in activities by health	Not at all	A little	Severe

Severely limited

Analyses

Using a 3-step approach for 12 limitation outcome measures:

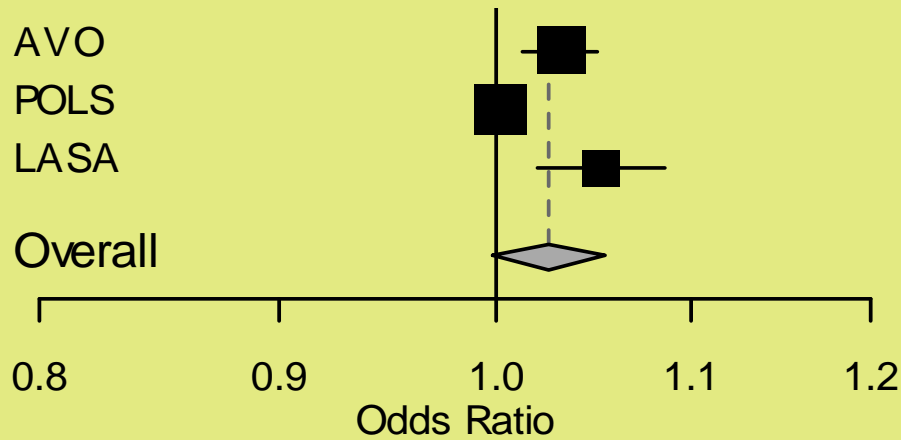
1. First: for each study, logistic GEE analyses using time as an independent variable to predict limitations, adjusted for age, gender
2. Then: for each study, calculate OR's from GEE analyses to odds ratios and confidence intervals
3. Finally: meta-analyses of study specific odds-ratios

<i>Age</i>	<i>Severe limitations</i>	<i>ADL</i>	<i>SF-36</i>
55-64	Stair climbing	stable	stable
	Walking	stable	stable
	Getting (un)dressed	stable	stable
65-74	Stair climbing	stable	stable
	Walking	stable	stable
	Getting (un)dressed	stable	stable
75-84	Stair climbing	stable	stable
	Walking	stable	Not av.
	Getting (un)dressed	stable	Not av.

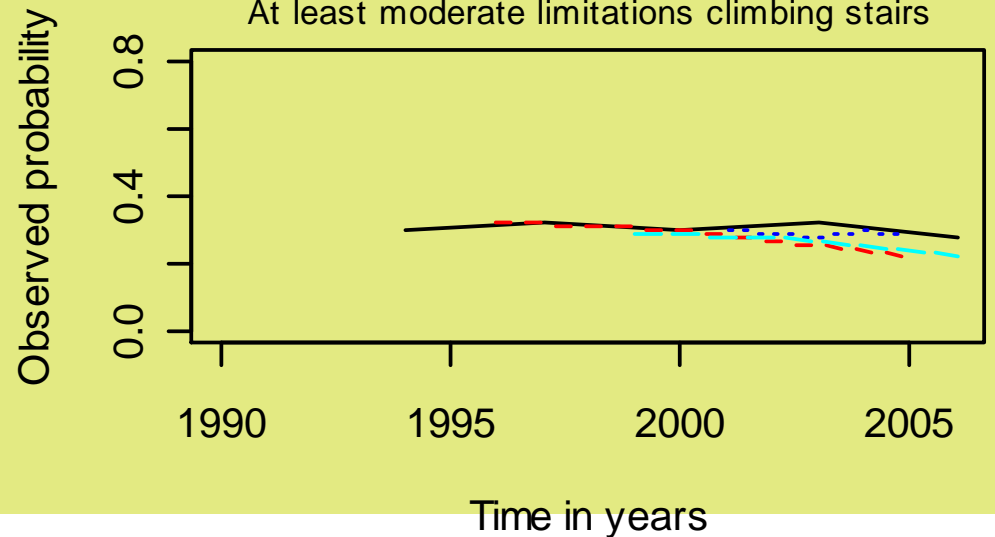
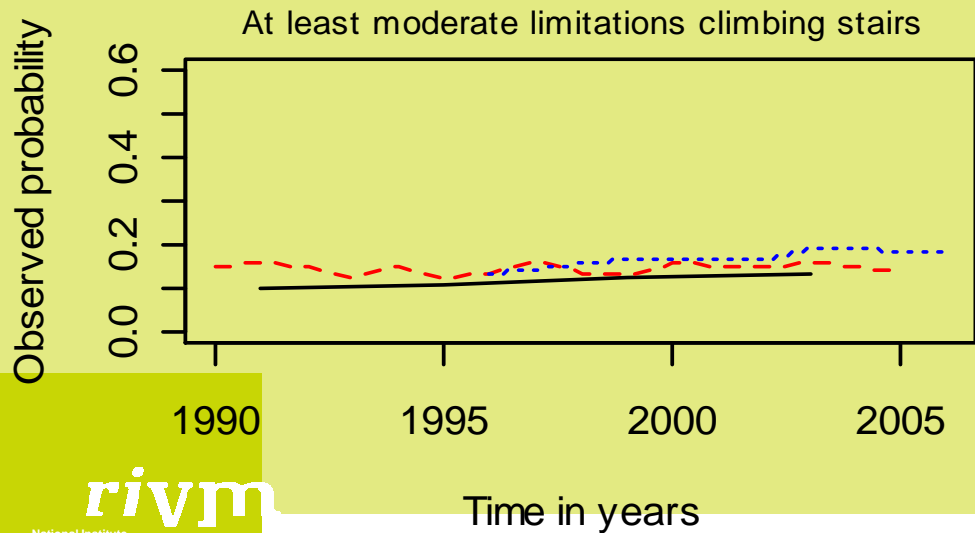
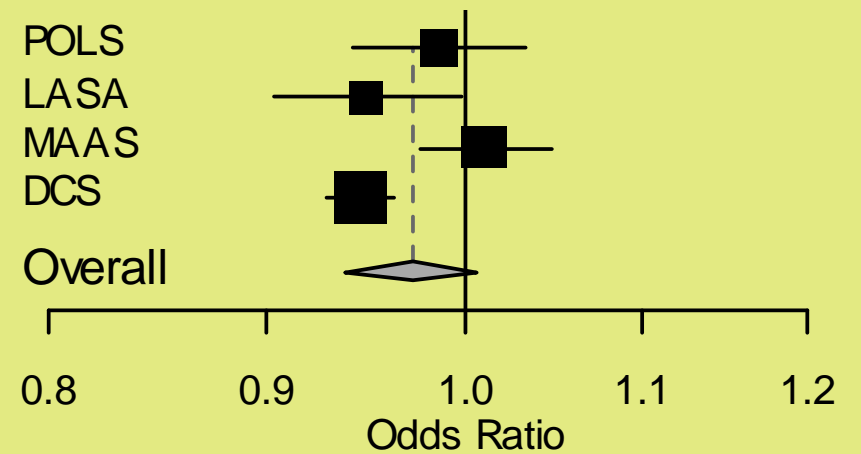
<i>Age</i>	<i>At least moderate limitations</i>	<i>ADL</i>	<i>SF-36</i>
55-64	Stair climbing	↑*	stable
	Walking	stable	stable
	Getting (un)dressed	stable	stable
65-74	Stair climbing	stable	stable
	Walking	stable	stable
	Getting (un)dressed	↑*	stable
75-84	Stair climbing	↑*	↑*
	Walking	stable	Not av.
	Getting (un)dressed	stable	Not av.

age 55-64, ADL (left) SF-36 (right)

Climbing stairs, moderate

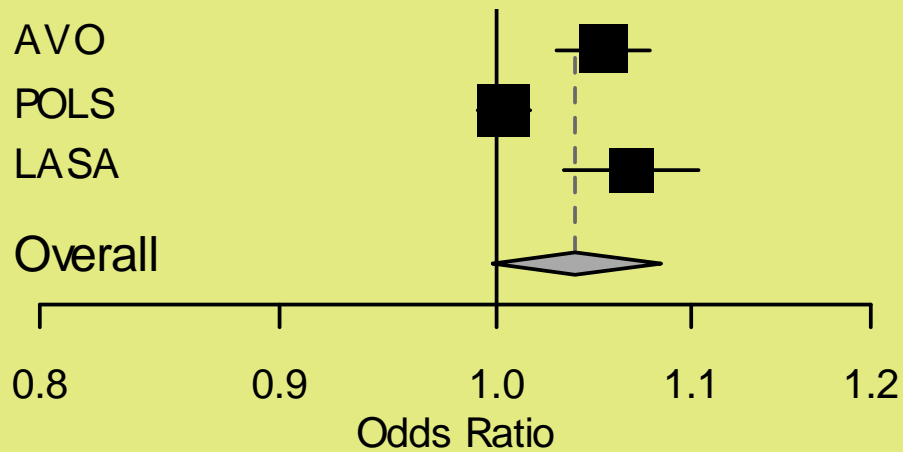


Climbing stairs, moderate

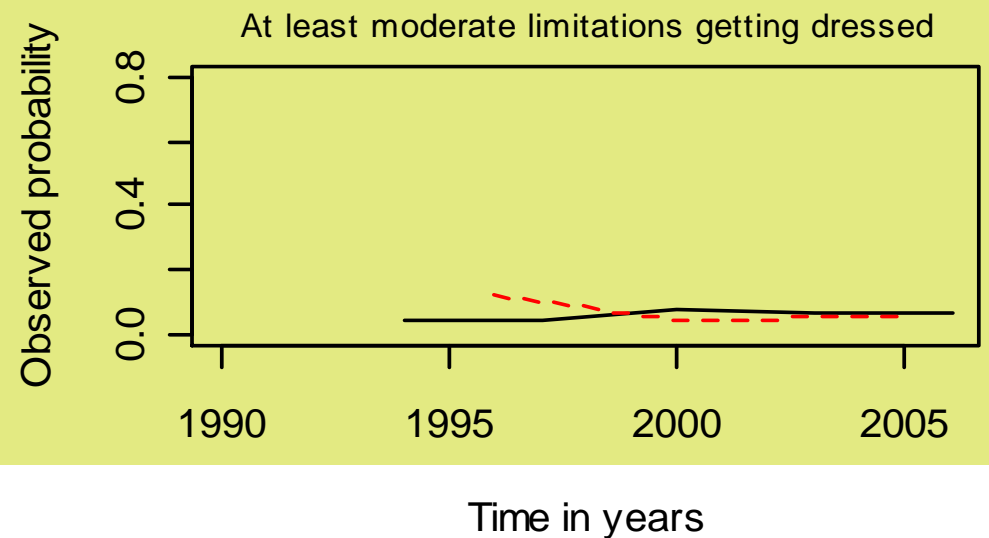
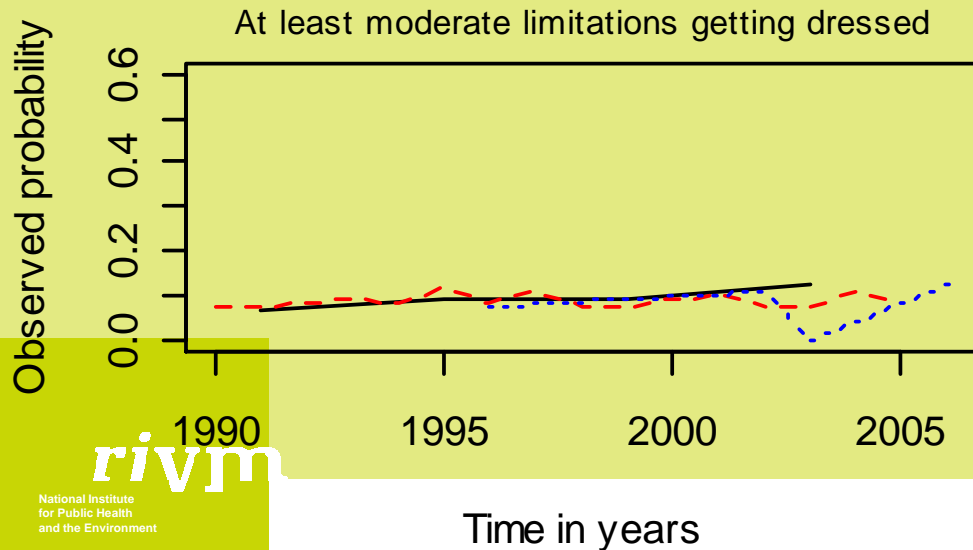
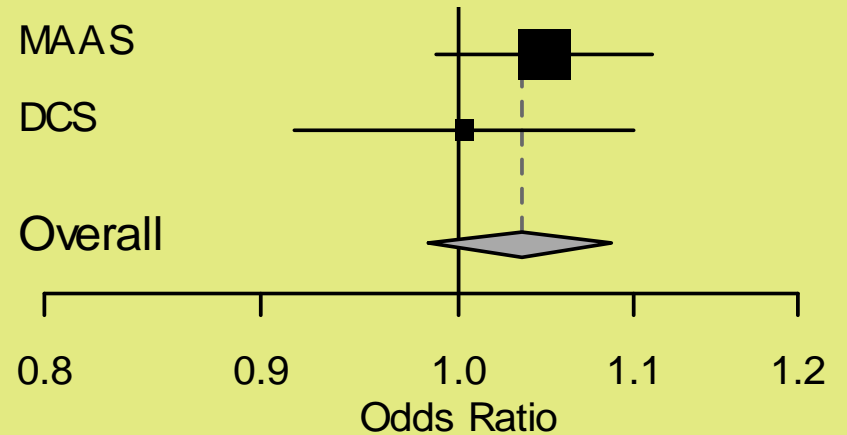


age 65-74, ADL (left) SF-36 (right)

Getting dressed, moderate

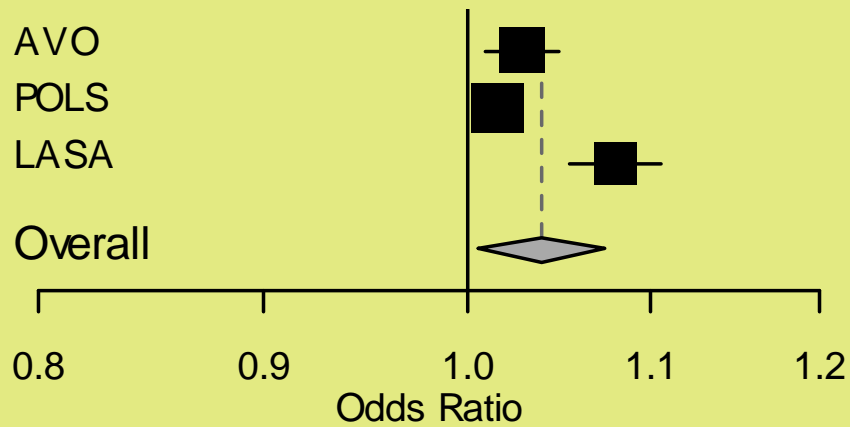


Getting dressed, moderate

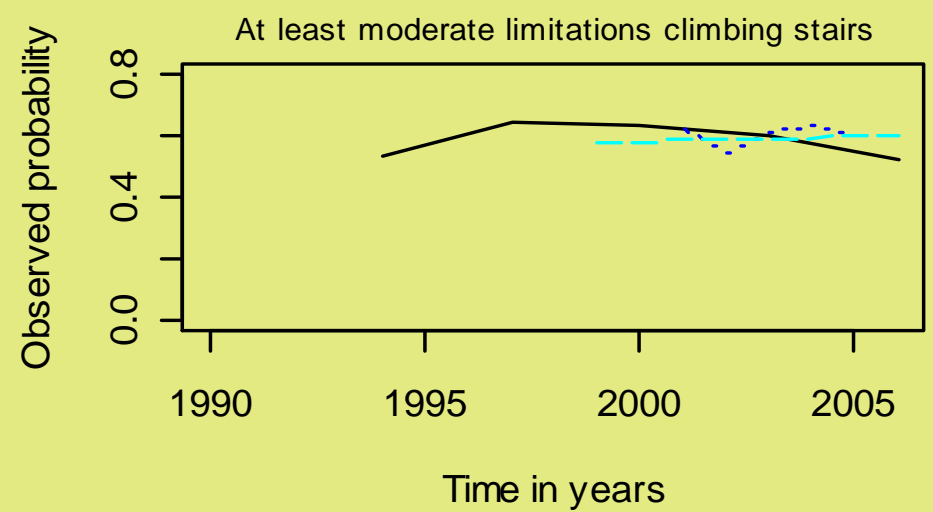
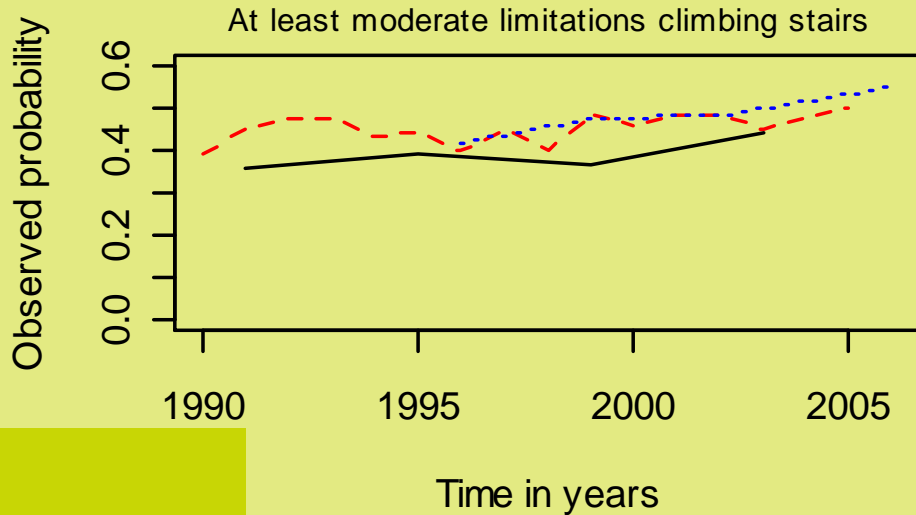
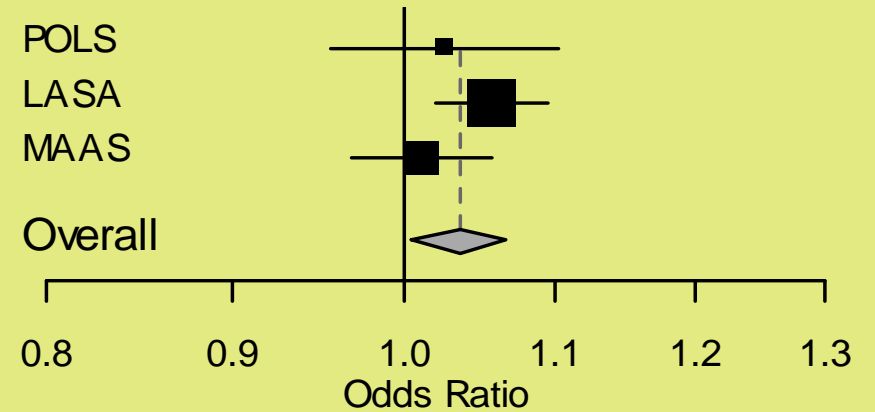


age 74-85, ADL (left) SF-36 (right)

Climbing stairs, moderate



Climbing stairs, moderate



Conclusions

- Overall trend = stability in **severe** activity limitations
increase in **some moderate** limitations
- Different concepts SF-36 (health limiting ...) and ADL (difficulty)
- More older aged persons, increase in life expectancy, but no decrease in activity limitations...
- Conflicting developments may balance out
institutionalisation ... life style ... assistive devices ...
treatment of chronic conditions ... acceptance ...

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