



**Work package 6, task 1:**  
**Identify target groups (subgroups of highly vulnerable patients) for potential interventions to manage multi-morbidity**

**The Netherlands**

Petra Hopman  
Mieke Rijken  
Marianne Heins  
François Schellevis

## Two databases with different focus:

1. 1. Quality of life:
  1. National Panel of people with Chronic illness or Disability (NPCD)
2. 2. Healthcare utilization:
  1. - NIVEL Primary Care Database
    1. combined with
  2. - National Medical Registration (hospital data)

## Quality of life | *Method*

### National Panel of people with Chronic illness or Disability:

- Nationwide prospective panel-study on the consequences of chronic illness in the Netherlands
- Patient selection based on medical diagnoses of chronic disease(s) registered in general practices
- Currently: 3500 panel members
- Patients' perspective = central
- Themes: **quality of life** and perceived health, use of health services, quality of care, social position
- Information is collected by patient surveys twice a year

## Quality of life | *Method*

### (Multi-)morbidity:

- International Classification of Primary Care (ICPC)
- All diagnosed somatic chronic diseases of the panel members registered by GPs

## Quality of life | *Method*

### Quality of life (QoL) measure:

- 6-item EQ-6D (*Krabbe et al., 1999; Hoeymans et al., 2005*)  
= 5-item EQ-5D + 'cognition'-item

### Research questions / analyses:

- Difference between people *with* and *without* multimorbidity?
- Difference between *subgroups* of multimorbid patients?
  - Cluster analysis based on EQ-6D
    - Different QoL/need patterns?
    - Underlying characteristics (patient/illness)?

## Quality of life | *Results*

### Quality of life (% self-reported problems; EQ-6D)

	>1 chronic diseases <i>n</i> =561	1 chronic disease <i>n</i> =531	<i>p</i>
Mobility	46,7	30,0	<.001
Self care	12,0	6,8	<.005
Usual activities	44,9	34,6	<.001
Pain/discomfort	67,5	55,1	<.001
Anxiety/depression	21,9	20,0	n.s.
Cognition	24,9	19,3	<.05

## Quality of life | *Results*

People with >1 ( $n=561$ ) vs. 1 ( $n=531$ ) chronic condition:

- More often male
- Older
- Lower educated
- Lower health literacy
- Longer post diagnosis time-span
- Poorer health status
- Higher prevalence of diseases
- Lonelier
- Less happy

## Quality of life | *Results*

### Cluster analysis multimorbid patient (N=520):

Cluster 1 (n=205)	Cluster 2 (n=23)	Cluster 3 (n=271)	Cluster 4 (n=21)
<i>Poor QoL (EQ-6D):</i> - Mobility - Usual activities - Pain/discomfort	<i>Poor QoL (EQ-6D):</i> - Mobility - Usual activities - Pain/discomfort - Self care - Anxiety/depression	<i>Poor QoL (EQ-6D):</i> --	<i>Poor QoL (EQ-6D):</i> - Cognition
Women	Women, younger	Men	Men, older
	Living alone	With a partner	
Low health literacy		High health literacy	
More chronic diseases (M=2.68)		Less chronic diseases (M=2.42)	
Less medically controllable	More progressive/degenerative	Favourable health status	



## Quality of life | *Planning*

- Manuscript submission: November
- Journal: Quality of Life Research
- Manuscript also to Graziano (input report Task 1)

## Healthcare utilization | *Method*

### NIVEL Primary Care Database:

- 386 Dutch primary care practices, 1.2 million patients
- Longitudinal data derived from patients' electronic medical records (EMR)
- Consultations, morbidity, drug prescriptions, and referrals

### National Medical Registration (secondary health care information):

- Dutch nationwide registry (hospitals)
- Hospitalizations, place of discharge after hospitalization

## Healthcare utilization | *Method*

### Multimorbidity:

- International Classification of Primary Care (ICPC)
- $\geq 2$  out of 28 common chronic diseases

### Research questions / analyses:

- Difference between people *with* and *without* multimorbidity?
- Difference between *subgroups* of multimorbid patients?  
→ Cluster analysis

## Healthcare utilization | *Results (prelim.)*

	>1 chronic diseases <i>n</i> =12,759	1 chronic disease <i>n</i> =7,8752	<i>p</i>
Gender (female)	54,5%	52,3%	<.005
Age (years)	49,6 (23,0)	42,5 (22.7)	<.001
GP contacts	5,5 (6,6)	3,9 (4,9)	<.001
Different drug prescriptions, ATC3	4,4 (4,3)	2,9 (3,4)	<.001
≥1 Day admissions	10,0%	7,4%	<.001
≥1 Clinical admissions	10,5%	7,2%	<.001

*Observation year: 2010*

## Healthcare utilization | *Results (prelim.)*

Cluster analysis (subgroups of multimorbid patients)

→ To be performed

## Healthcare utilization | *Planning*

- Definitive findings expected in November
- Tables to Graziano (input report Task 1)
- Manuscript planned
  - Submission: by the end of the year
  - Journal: to be decided

**THIS PRESENTATION ARISES FROM THE JOINT ACTION ON CHRONIC DISEASES AND PROMOTING HEALTHY AGEING ACROSS THE LIFE CYCLE (JA-CHRODIS) WHICH HAS RECEIVED FUNDING FROM THE EUROPEAN UNION, IN THE FRAMEWORK OF THE HEALTH PROGRAMME (2008-2013)**



**NIVEL HAS ALSO RECEIVED FUNDING FROM THE NETHERLANDS MINISTRY OF HEALTH, WELFARE AND SPORTS TO CONTRIBUTE TO THIS JOINT ACTION**