

# Multicare cohort study - patterns of multi-morbidity in primary health care

<b>Submission date</b>	<b>Recruitment status</b>	<input type="checkbox"/> Prospectively registered
27/09/2011	No longer recruiting	<input checked="" type="checkbox"/> Protocol
<b>Registration date</b>	<b>Overall study status</b>	<input type="checkbox"/> Statistical analysis plan
09/11/2011	Completed	<input checked="" type="checkbox"/> Results
<b>Last Edited</b>	<b>Condition category</b>	<input type="checkbox"/> Individual participant data
04/06/2025	Other	

## Plain English summary of protocol

### Background and study aims

Multimorbidity is defined as the presence of two or more chronic (long-term) medical conditions in one patient. In this study we aim to identify clusters of combinations of diseases (multi-morbidity patterns) in the elderly population and to determine their frequency and severity. We will investigate the development of these clusters over time, how they interact, and the consequences for the patient's quality of life.

### Who can participate?

Patients aged 65 to 85 with at least three chronic conditions, randomly selected from the participating GP surgeries

### What does the study involve?

Information about the patients' chronic conditions is collected using GP interviews and chart reviews. Additional data is collected in patient interviews using standard questionnaires and tests.

### What are the possible benefits and risks of participating?

Not provided at time of registration

### Where is the study run from?

Eight study centers distributed across Germany (Bonn, Düsseldorf, Frankfurt/Main, Hamburg, Jena, Leipzig, Mannheim and Munich)

### When is the study starting and how long is it expected to run for?

July 2008 to December 2013

### Who is funding the study?

Federal Ministry of Education and Research (Germany)

### Who is the main contact?

Prof. Hendrik van den Bussche

# Contact information

## Type(s)

Scientific

## Contact name

Prof Hendrik van den Bussche

## Contact details

University Medical Center Hamburg-Eppendorf  
Department of Primary Medical Care  
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Germany  
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# Additional identifiers

## Protocol serial number

01ET0725-31; 01ET1006A-K

# Study information

## Scientific Title

Patterns of multi-morbidity in primary health care: a multicentre, prospective, observational cohort study

## Study objectives

1. Identify clusters of combinations of diseases/disorders (multi-morbidity patterns) in the elderly general practice population and to determine their frequency and severity in relation to each other
2. Investigate the development of these clusters over time, especially with regard to the internal interaction between the diseases within the cluster (addition, synergism, buffer, protection)
3. Analyse the relationship of mental and somatic disorders in these patterns
4. Identify prognostic variables for the course of specific multi-morbidity patterns
5. Investigate the somatic, psychological and social consequences of multi-morbidity (patterns) for the patient's quality of life and functional status
6. Describe the utilisation of health care resources and the costs of care of multi-morbidity (patterns)

## Ethics approval required

Old ethics approval format

## Ethics approval(s)

Ethics Committee of the Medical Association of Hamburg, 14/02/2008; amended 26/11/2008, ref: 2881

## Study design

Multicentre prospective observational cohort study

**Primary study design**

Observational

**Study type(s)**

Other

**Health condition(s) or problem(s) studied**

Multimorbidity

**Interventions**

The patients will be recruited from GP surgeries in 8 study centers distributed across Germany (Bonn, Düsseldorf, Frankfurt/Main, Hamburg, Jena, Leipzig, Mannheim and Munich).

The morbidity of the patients will be registered via chart reviews, GP interviews and patient interviews in a standardized assessment of 46 diagnosis groups including duration and severity. The other data will be collected in comprehensive patient interviews. It is projected to perform a total of 9 waves of data collection by means of both GP and patient interviews. Each wave will take 15 months to be accomplished.

**Intervention Type**

Other

**Phase**

Not Applicable

**Primary outcome(s)**

1. The variables under study belong to four groups:
  - 1.1. Morbidity (GP and patient-reported)
  - 1.2. Functional status
  - 1.3. Resources/risk factors
  - 1.4. Socio-demographic data
2. The domain of functional status includes:
  - 2.1. Activities and instrumental activities of daily living
  - 2.2. Motor skills
  - 2.3. Senses (i.e. hearing and vision)
  - 2.4. Cognition
  - 2.5. Pain
  - 2.6. Health-related quality of life
3. Resources include:
  - 3.1. Physical activity
  - 3.2. Balanced nutrition
  - 3.3. Social support
  - 3.4. General self-efficacy
  - 3.5. Utilization of medical services
  - 3.6. Quality of medical care according to the Chronic Care Model.
4. Risk factors include:
  - 4.1. Physical inactivity
  - 4.2. Malnutrition
  - 4.3. Alcohol abuse
  - 4.4. Smoking
  - 4.5. Body mass index

#### 4.6. Waist-to-hip-ratio

5. Socio-demographic variables include:

5.1. Age

5.2. Gender

5.3. Migrant status

5.4. Marital status

5.5. Living conditions

5.6. Household size

5.7. Education

5.8. Former occupation

5.9. Income

5.10. Wealth

#### Key secondary outcome(s)

No secondary outcome measures

#### Completion date

31/12/2013

## Eligibility

#### Key inclusion criteria

Patients were randomly selected from general practitioner (GP) charts and were included if they:

1. Were born between 01 July 1923 and 30 June 1943
2. Have consulted their GP within the last completed quarter (i.e. 3 month period)
3. Have at least 3 chronic conditions out of a list of 29 diagnosis groups

#### Participant type(s)

Patient

#### Healthy volunteers allowed

No

#### Age group

Senior

#### Sex

All

#### Key exclusion criteria

1. Insufficient ability to consent (e.g. dementia)
2. Insufficient ability to participate in interviews (e.g. blindness, deafness)
3. Poorly known to the GP because of accidental consultation
4. Residence in a nursing home
5. Insufficient ability to speak and read German
6. Severe illness probably lethal within three months
7. Participation in other studies at the time of recruitment

#### Date of first enrolment

01/07/2008

**Date of final enrolment**

30/09/2009

## Locations

**Countries of recruitment**

Germany

**Study participating centre**

University Medical Center Hamburg-Eppendorf

Hamburg

Germany

20246

## Sponsor information

**Organisation**

German Federal Ministry of Education and Research (Germany)

**ROR**

<https://ror.org/04pz7b180>

## Funder(s)

**Funder type**

Government

**Funder Name**

Bundesministerium für Bildung und Forschung, refs: 01ET0725-31 & 01ET1006A-K

**Alternative Name(s)**

Federal Ministry of Research, Technology and Space, Bundesministerium für Bildung und Forschung, Federal Ministry of Education and Research, BMBF

**Funding Body Type**

Government organisation

**Funding Body Subtype**

National government

**Location**

Germany

# Results and Publications

## Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study are not expected to be made available because data are owned by the MultiCare consortium and the authors of publications are not allowed to share them with third parties.

## IPD sharing plan summary

Not expected to be made available

## Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">Results article</a>	results	03/04/2012		Yes	No
<a href="#">Results article</a>	results	01/02/2013		Yes	No
<a href="#">Results article</a>	results	15/06/2013		Yes	No
<a href="#">Results article</a>	results	24/06/2013		Yes	No
<a href="#">Results article</a>	results	03/01/2014		Yes	No
<a href="#">Results article</a>	results	01/03/2014		Yes	No
<a href="#">Results article</a>	results	17/03/2014		Yes	No
<a href="#">Results article</a>	results	01/04/2014		Yes	No
<a href="#">Results article</a>	results	08/04/2014		Yes	No
<a href="#">Results article</a>	results	18/07/2014		Yes	No
<a href="#">Results article</a>	results	07/08/2014		Yes	No
<a href="#">Results article</a>	results	01/10/2014		Yes	No
<a href="#">Results article</a>	results	07/02/2015		Yes	No
<a href="#">Results article</a>	results	01/10/2015		Yes	No
<a href="#">Results article</a>	results	06/06/2016		Yes	No
<a href="#">Results article</a>		17/09/2021	21/09/2021	Yes	No
<a href="#">Results article</a>		03/06/2025	04/06/2025	Yes	No
<a href="#">Protocol article</a>	protocol	11/08/2009		Yes	No
<a href="#">Participant information sheet</a>	Participant information sheet	11/11/2025	11/11/2025	No	Yes