

# The SHELTER project

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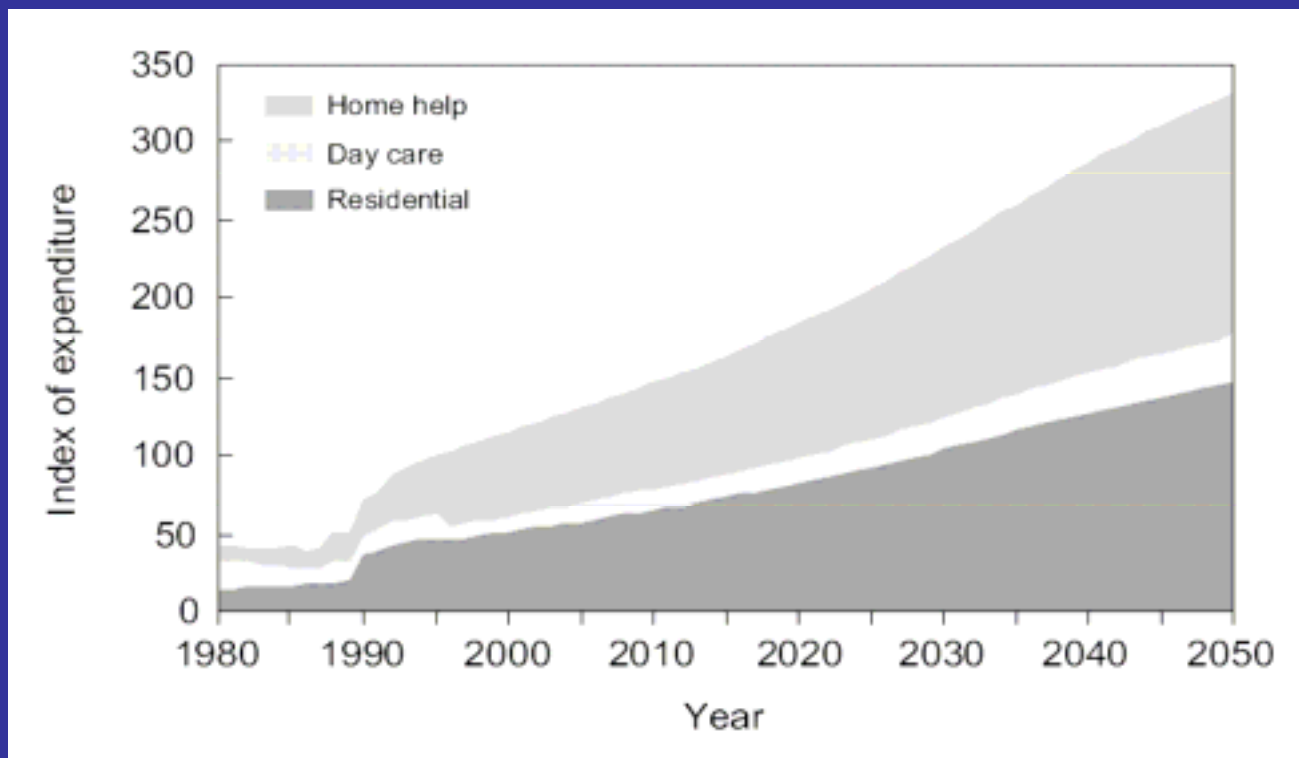
*Graziano Onder*  
*Centro di Medicina dell' Invecchiamento*  
*Università Cattolica del Sacro Cuore*  
*Roma*

**Project full title:** Services and Health for Elderly in Long TERM care

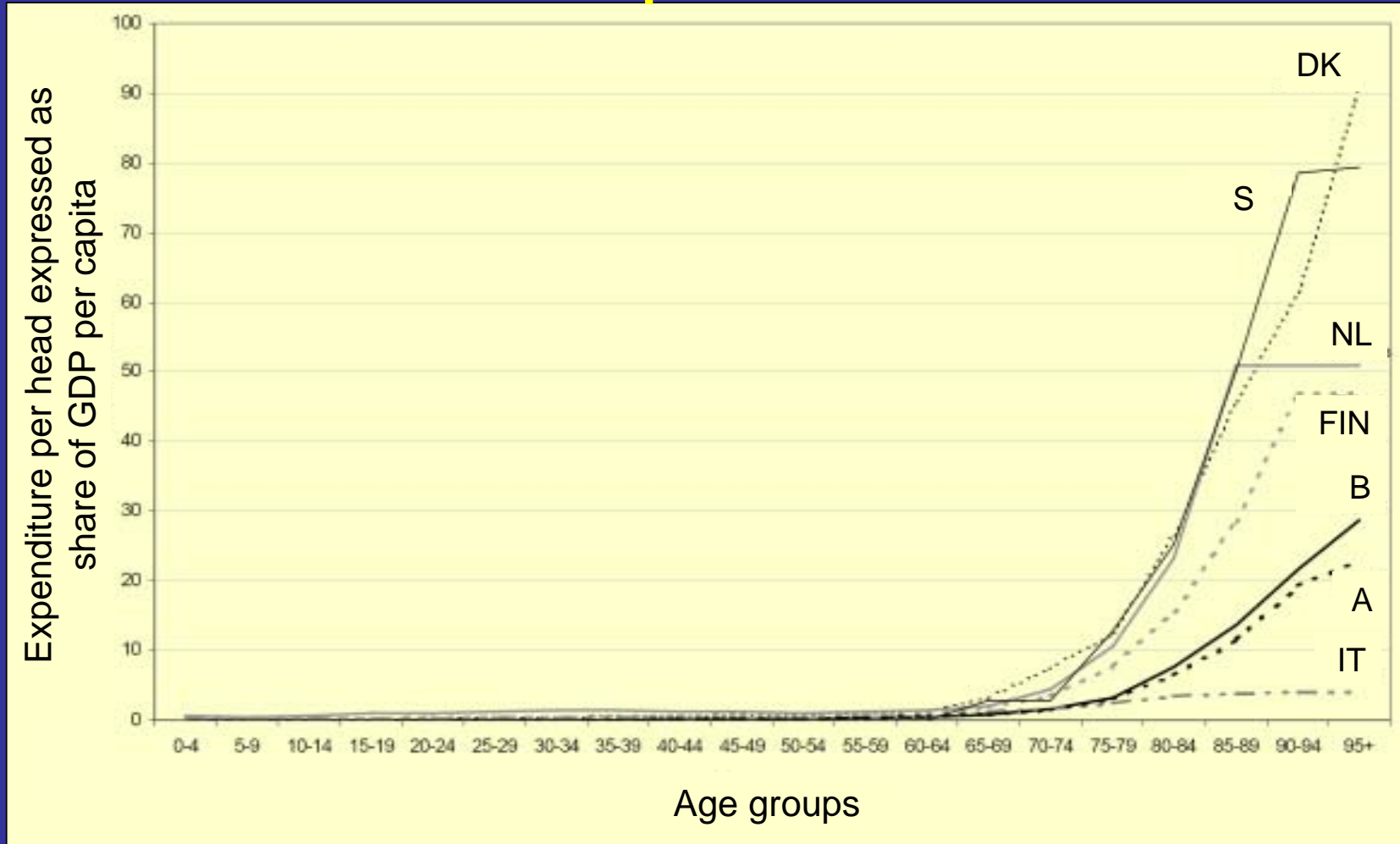
**FP7 Area:** HEALTH-2007-3.2-2: Develop and validate a methodology to analyze the provision of long-term care across European health systems ...

**PI:** Prof. Roberto Bernabei

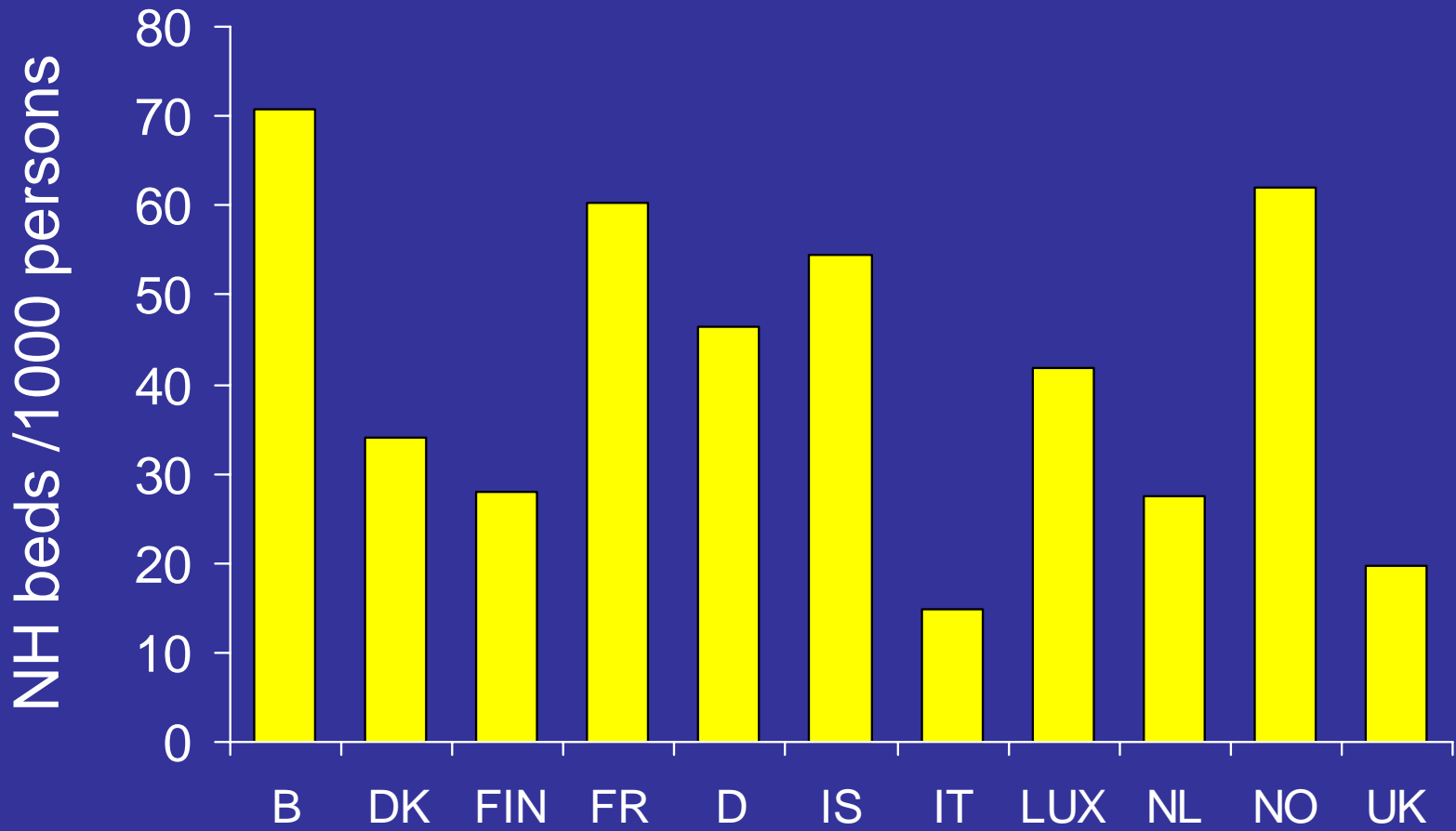
# Growth in public expenditure on elderly care services



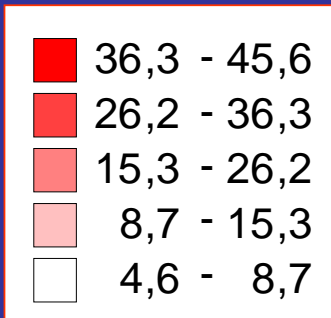
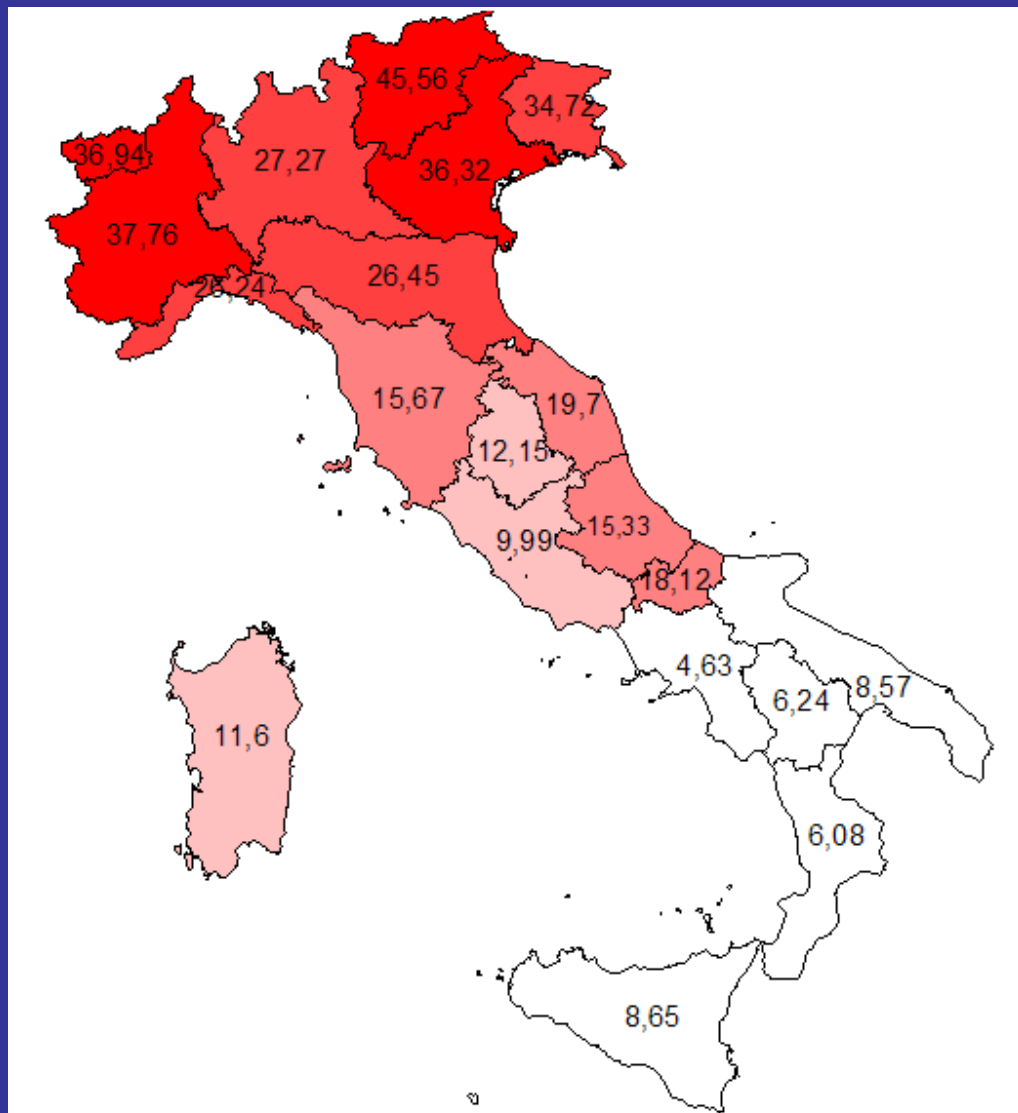
# Public expenditure on long-term care per head



# NH beds /1000 persons 65 or older



# NH residents /1000 persons 65 or older



# Lack of data on NH organization and patients characteristics

- Lack of comparable data and evidence and analysis within Europe.
- Data from individual countries;
- Very low level of comparability of the data collected in national surveys;
- Data and analysis from third countries (US) despite different organizational arrangements of the health care sector.

# Problems

- NH services are so different and have so many stakeholders that almost nobody has a total overview of the system;
- Care and services are orientated on supply rather on demand;
- Standardized and validated methodologies to assess health care delivery and quality of care in NH are not routinely used in EU.



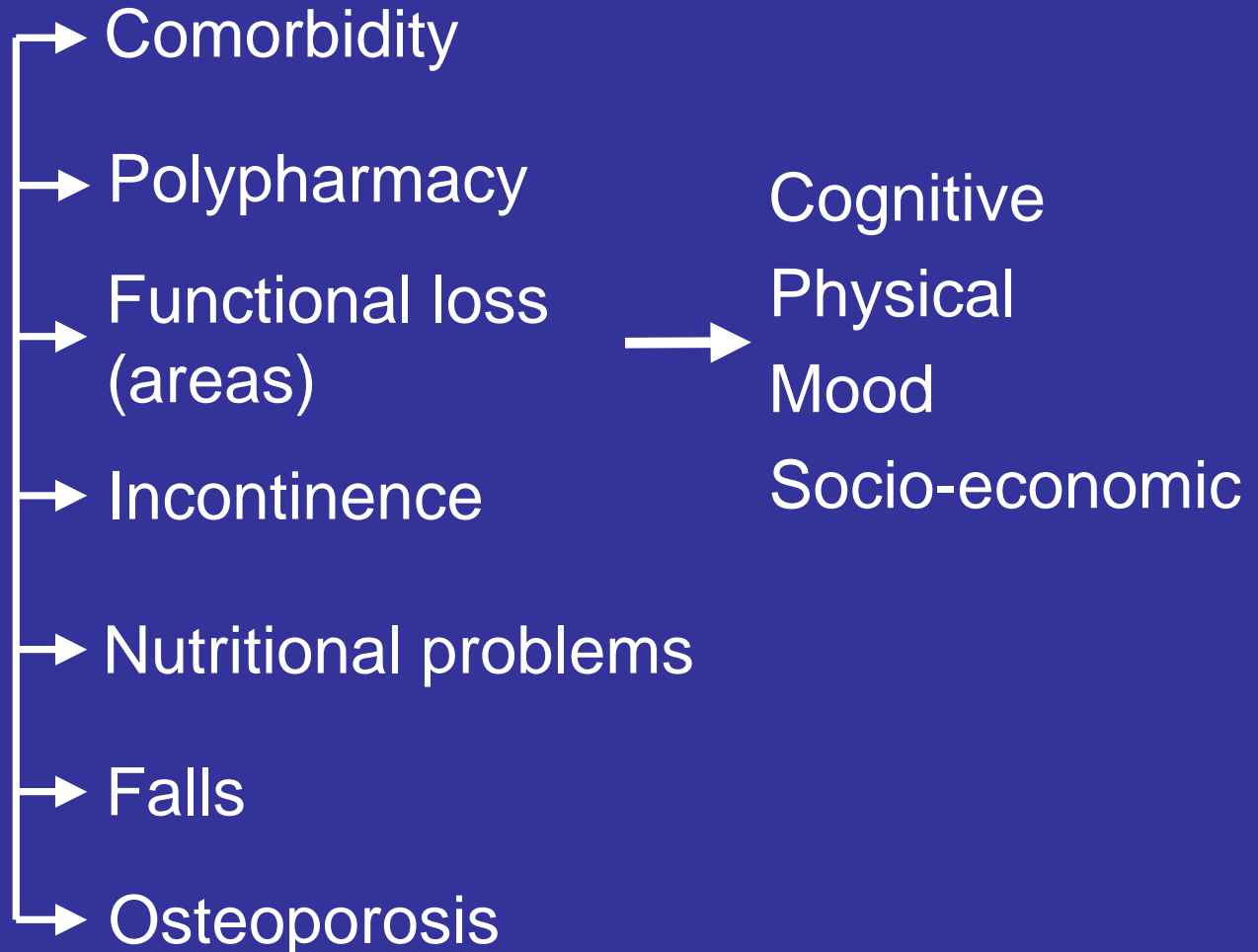
# Need for new methodology

Need for developing and validate a methodology:

1. to analyse the provision of NH care across European health systems;
2. develop of eligibility criteria;
3. ensure quality of services;
4. construct quality indicators;
5. resource allocation.

# Geriatric patient

FRAILTY



# interRAI Mission Statement

interRAI believes that standardized assessment provides crucial information about the needs of the elderly population which is rapidly growing world-wide.

Comprehensive evaluation, including functional, psychosocial and environmental needs, is the key to care planning decisions resulting in quality care for the individual and information for wider policy issues.

# Minimum Data Set

- There has been no common “language” across care settings and provider to assess and plan care for patient care
- Common, standardized items and instruments are the most important single vehicle for achieving commonality of language across settings and providers

# Examples of Areas Assessed

- Cognition
- Communication
- Mood
- Behavior
- Psycho-social well-being
- Functional Status
- Continence
- Disease diagnosis
- Health conditions
- Nutritional status
- Skin condition
- Activity pursuits
- Social supports
- Medications
- Treatments

# MDS Implementations

- All US nursing homes
- 10 US states – home care
- Switzerland, Hong Kong (home care)
- Iceland and Estonia (nursing home, home care)
- 7 Canadian provinces

# SHELTER - Aims

To **validate** the use of MDS LTCF as a methodology to assess provision of care in NH in Europe. Such methodology will allow to:

- a. measure patients outcomes and identify predictors of outcomes;
- b. evaluate and monitor quality of care and identify incentives to improve quality;
- c. develop eligibility criteria and resource utilization groupings

# SHELTER - Study design

**Study design:** cross-national, prospective, observational study in NH residents in European countries.

**Participating countries:** Italy, Czech Republic, Germany, Finland, France, Israel, The Netherlands, United Kingdom.

**Study sample:** 500 individuals from each country.

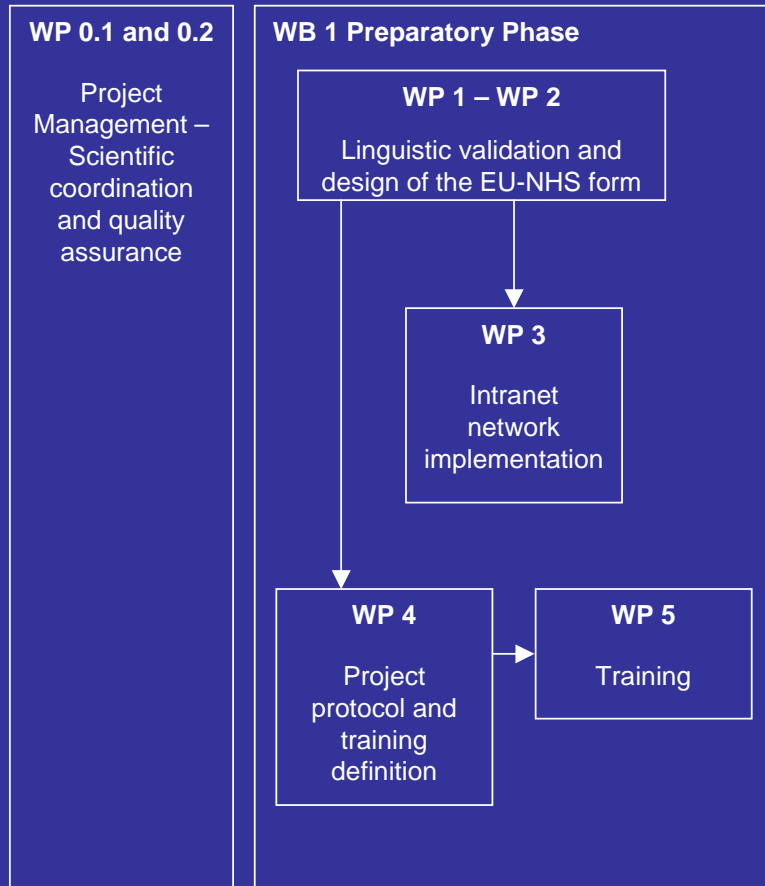
**Follow up:** 1 year



# Participants

IT	Universita' Cattolica Sacro Cuore
CZ	Charles University - First Medical Faculty
D	University of Ulm
FI	National Research And Development Centre For Social Welfare And Health
FR	Ambroise Paré Teaching Hospital
IL	University of Haifa
NL	Vree University Medical Centre
UK	University of Kent at Canterbury

# SHELTER - Pert diagram

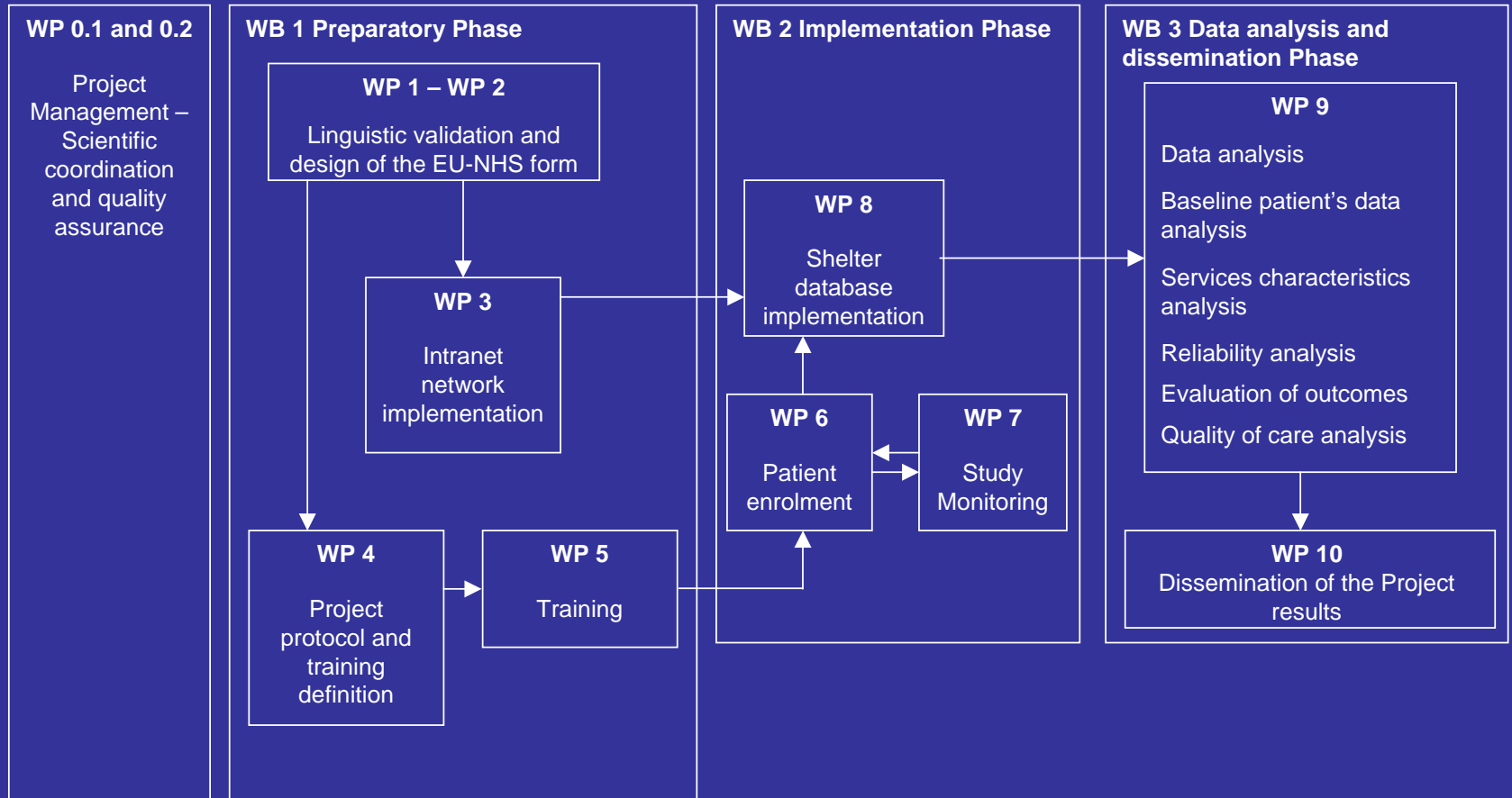


# SHELTER - Validation

To make the MDS LTCF instrument applicable to a large European population, the SHELTER will assess:

1. linguistic validity of the instrument in different translations
2. face validity of items included in the translated versions of the instrument
3. test-retest and inter-rater reliability of each item

# SHELTER - Pert diagram



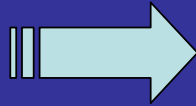
# SHELTER - Database

The SHELTER study proposes to implement and apply on a large scale the MDS LTCF, leading to the creation of a database that will allow the opportunity to:

1. measure residents outcomes and identify predictors of outcomes
2. develop eligibility criteria and resource utilization groupings
3. monitor services delivery and analyse quality measures

# Comprehensive Geriatric Assessment

Patient level



Make the physical exam complete

Better care plan

Population level



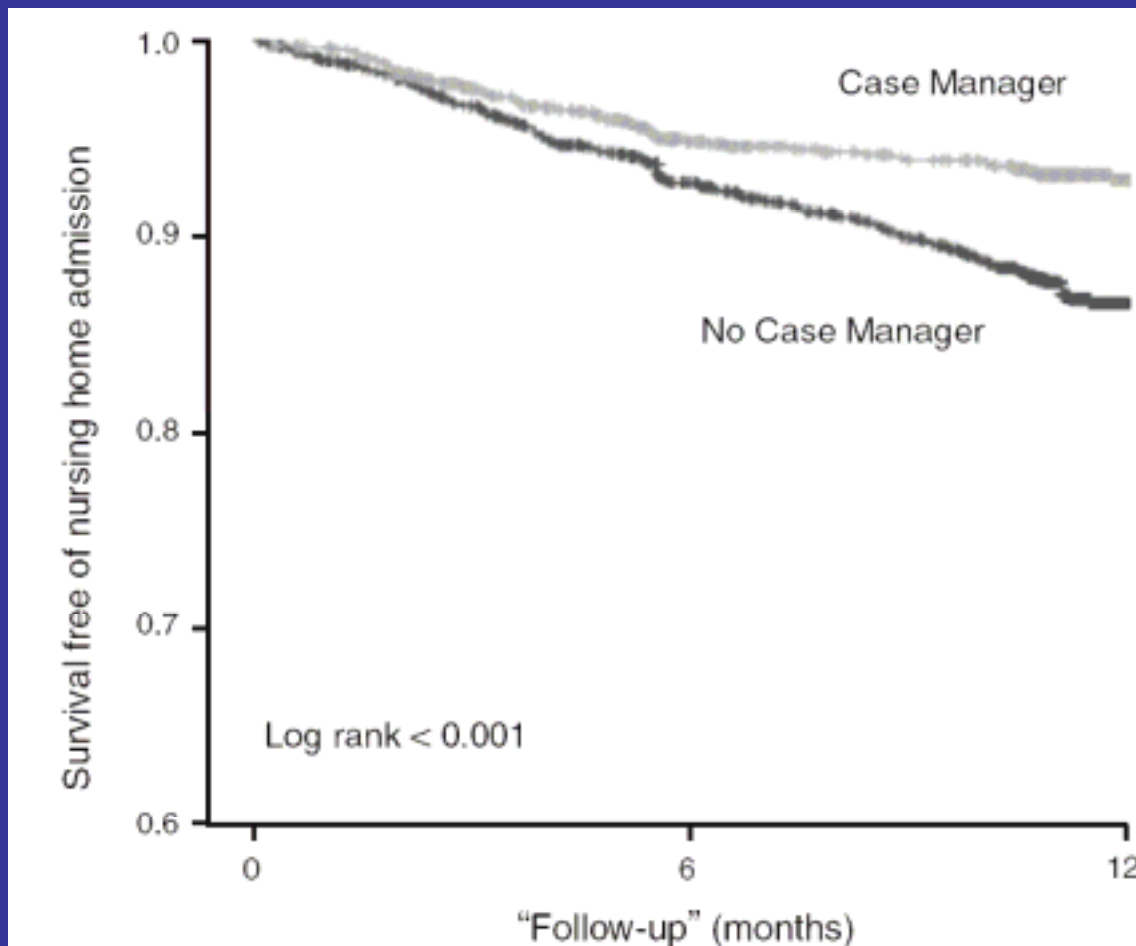
Database

Outcomes -  
predictors

Quality  
indicators

Comparisons

# Case manager and Risk of NH Admission



# Risk of hospitalization for hip fracture among antipsychotic users relative to non users

	Crude HR	Adj. HR	95% CI
Risperidone	1.62	1.39	1.08-1.78
Olanzapine	1.61	1.15	0.72-1.84
Clozapine/quetiapine	1.15	1.08	0.46-2.53
Conventionals	1.52	1.38	1.07-1.77
More than 1 antipsychotics	1.93	1.91	0.98-3.72



# Comprehensive Geriatric Assessment

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# Prevalence Quality Indicators

## Nutrition

- Inadequate Meals
- Weight Loss
- Dehydration

## Pain

- Disruptive/Intense Pain
- Unmanaged Pain

## Physical function

- No Assistive Device for Clients with Difficulty in Locomotion
- ADL/Rehabilitation Potential and No Therapies

## Psychosocial function

- Social Isolation with Distress
- Delirium
- Negative mood

## Medication

- No medication review

## Safety/Environment

- Falls
- Any injuries
- Neglect/Abuse

## Other

- No Influenza Vaccination
- Hospitalization

# Incidence Quality Indicators

## Incontinence

Failure to improve/ incidence of bladder continence

## Ulcers

Failure to improve/ incidence of skin ulcers

## Physical function

Failure to improve/ incidence of decline in ADL

Failure to improve/ incidence of impaired locomotion in the home

## Psychosocial function

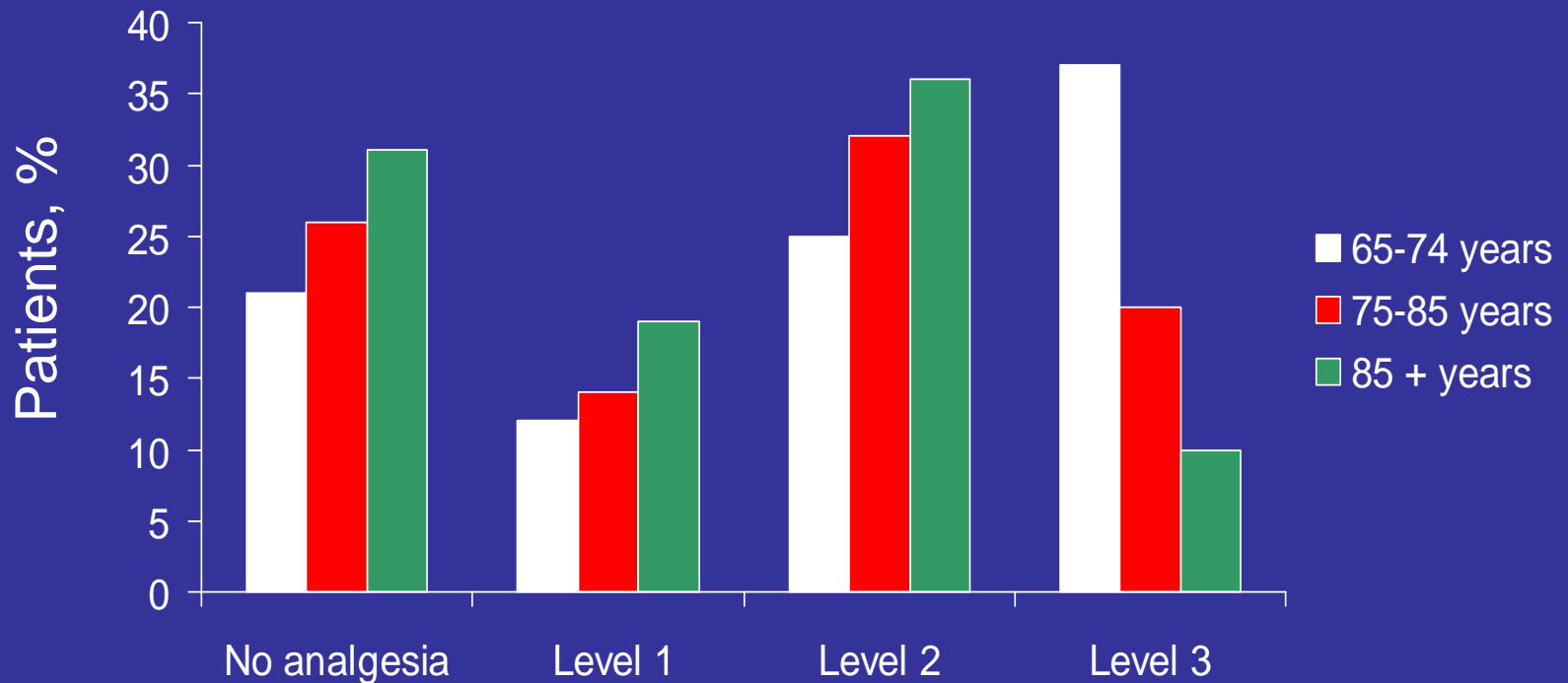
Failure to improve/ incidence of cognitive decline

Failure to improve/ incidence of difficulty in communication

## Other

Increased health instability

# Pharmacological treatment of pain in cancer patients



Bernabei et al. JAMA 1998; 279: 1877-1882

# Nursing Home Quality Indicators Profile

Facility Name: ABC Manor

Report Period: 7/1/00 to 12/31/00

<u>Domain/Quality Indicator</u>	<u>Number with QI</u>	<u>Number in Denom</u>	<u>Facility Percentage</u>	<u>Peer Group Percentage</u>	<u>%ile Rank</u>
<b><u>Accidents</u></b>					
1. Incidence of New Fracture	1	79	1.3%	1.8%	40
2. Prevalence of Falls	14	79	17.7%	13.3%	81
<b><u>Behavioral/Emotional</u></b>					
3. Prevalence of Behavioral Symptoms	21	79	26.6%	21.2%	76
High Risk	19	56	33.9%	26.4%	79
Low Risk	2	23	8.7%	10.2%	58
4. Symptoms of Depression	23	79	29.1%	15.1%	91
5. Symptoms of Depression without Antidepressant Therapy	13	79	16.5%	7.9%	93
<b><u>Clinical Management</u></b>					
6. Use of 9+ Medications	22	79	27.8%	27.6%	52
<b><u>Cognitive Patterns</u></b>					
7. Onset of Cognitive Impairment	1	24	4.2%	10.3%	19



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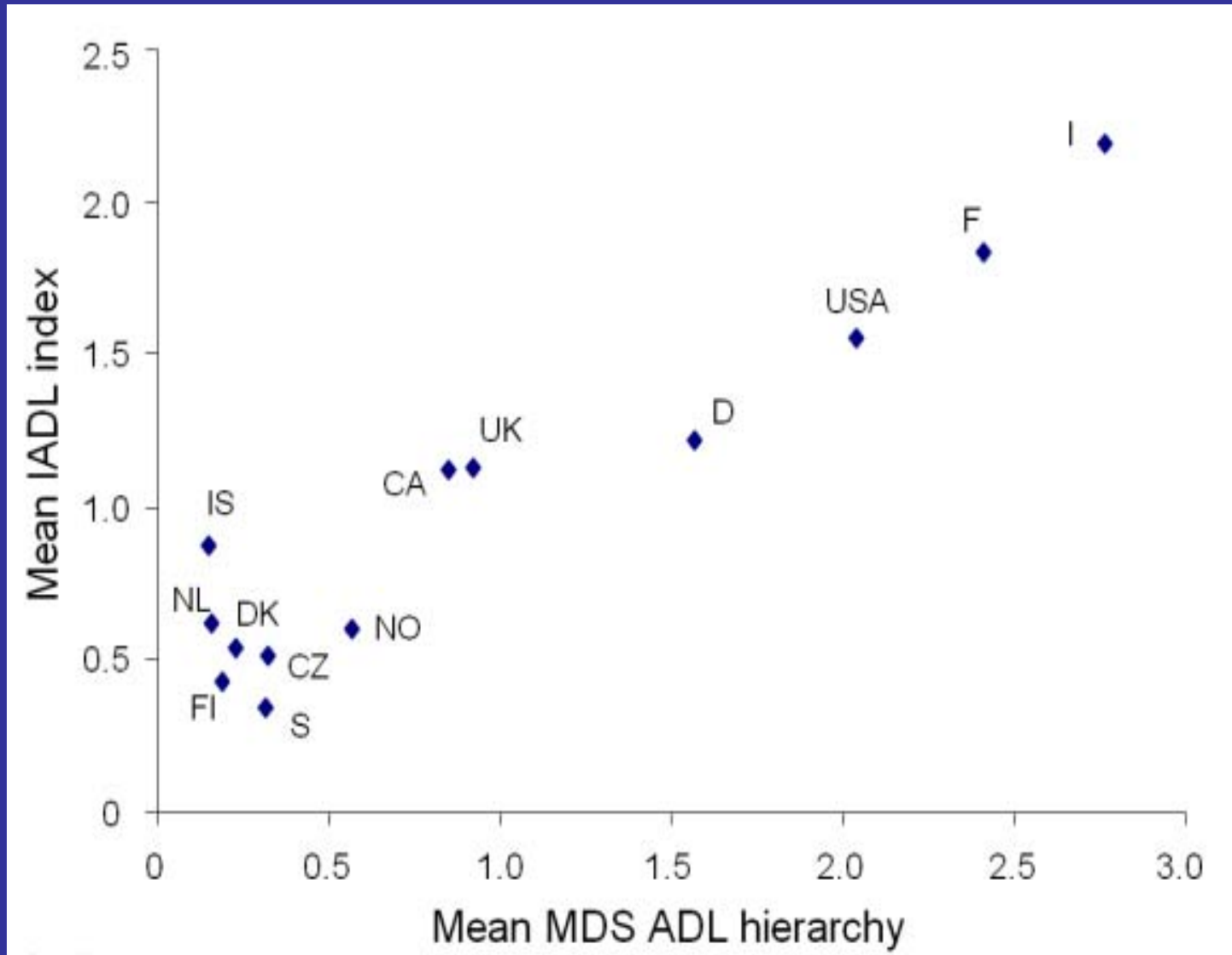


Database

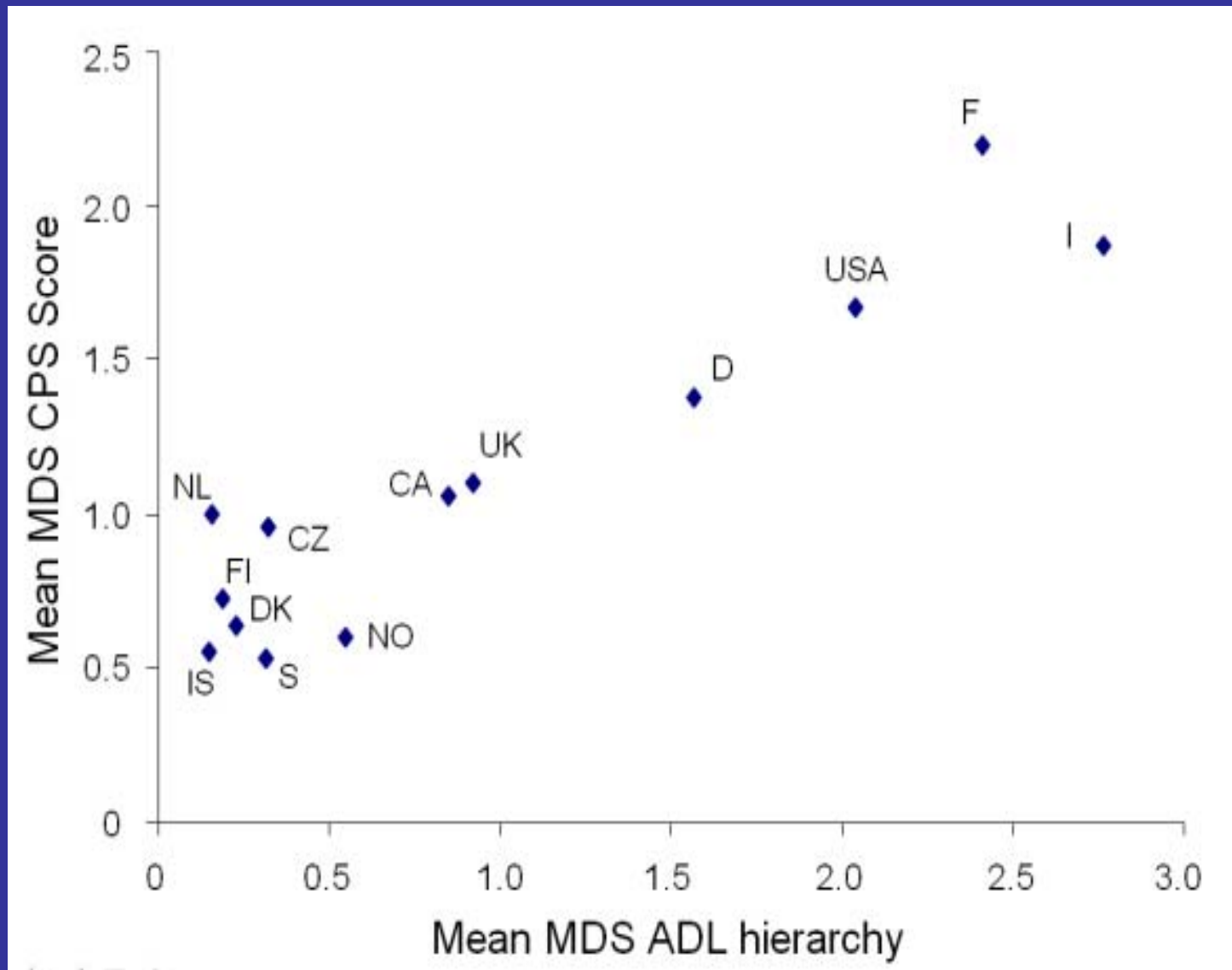
Outcomes - predictors

Quality indicators

Comparisons



Bernabei R et al 'International Gerontology' in Hazzard's Principles of Geriatric Medicine and Gerontology, Sixth Edition.



Bernabei R et al 'International Gerontology' in Hazzard's Principles of Geriatric Medicine and Gerontology, Sixth Edition.



# Conclusion

- After the SHELTER will be completed the MDS LTCF could be used on a large scale as a common and standardised assessment instrument for NH residents in Europe, allowing to compare characteristics of NH residents in different countries, to assess quality of care, resources utilisation and patients outcomes.