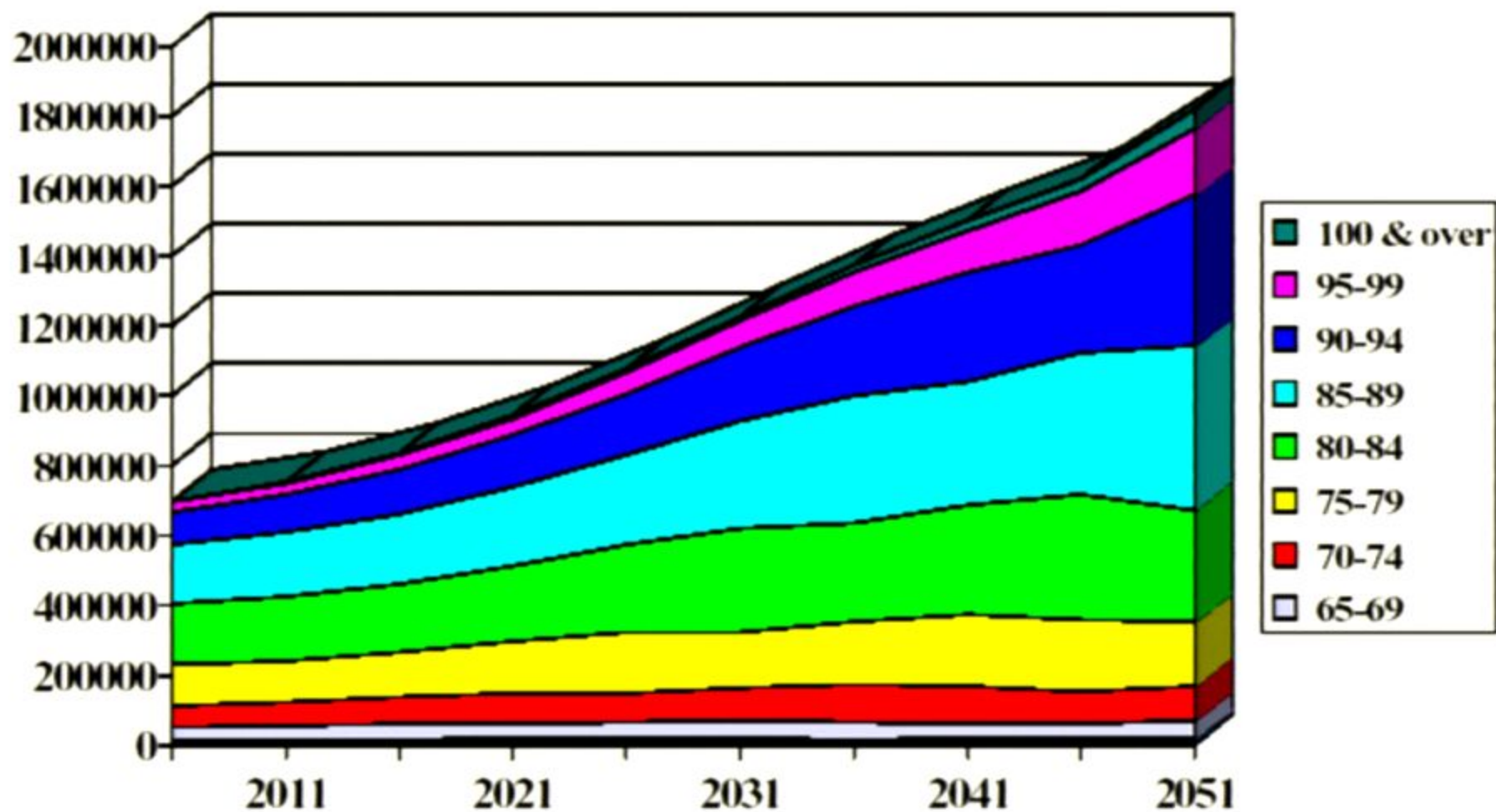


Prevalenza di demenza per età



Paziente geriatrico



Comorbidity

disease-centered perspective

combination of additional diseases
beyond an index disorder

Multimorbidity

individual-centered perspective

co-occurrence of two or more chronic or
acute diseases within one person

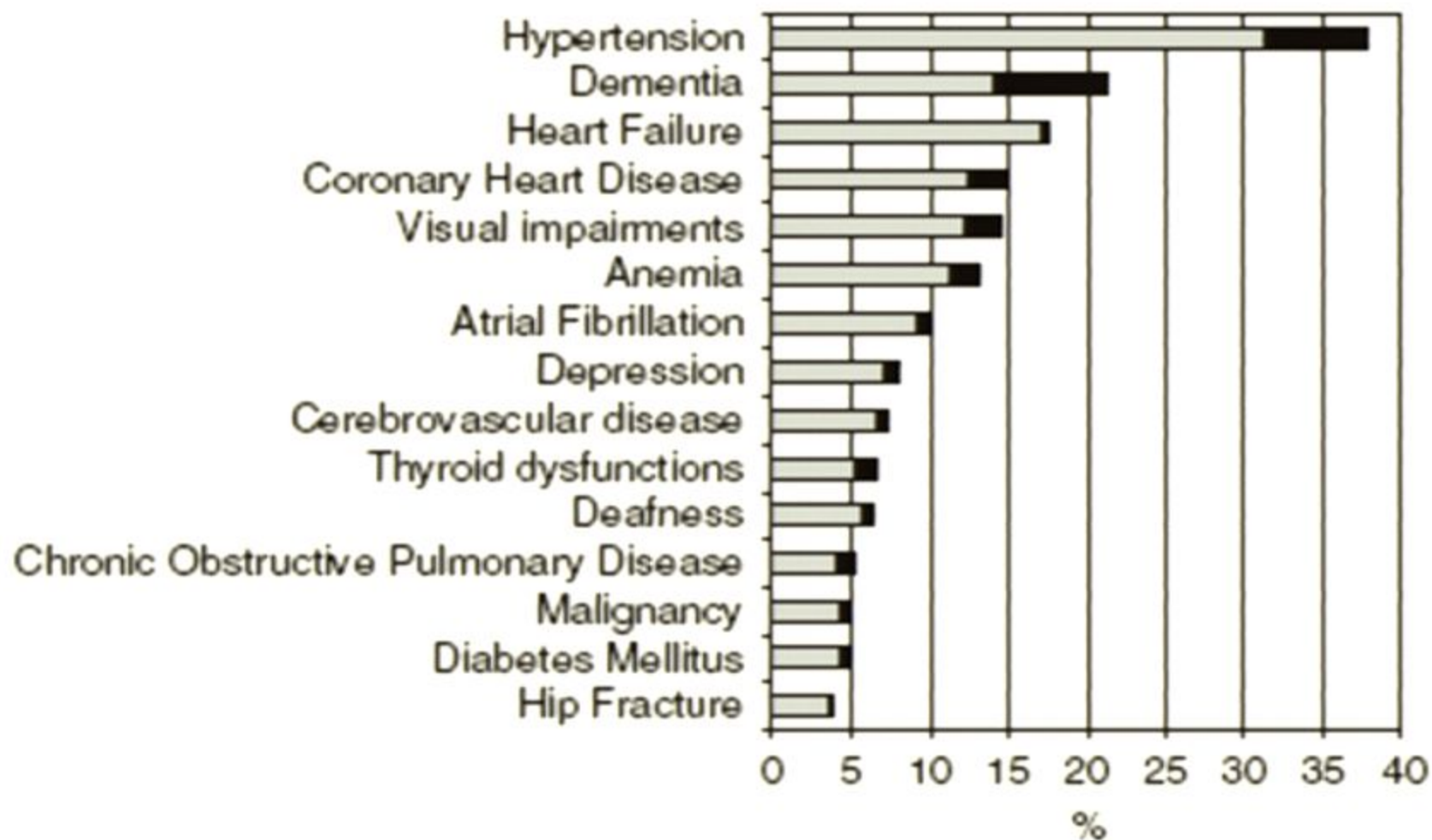


Figure 1. Prevalence per 100 of most frequent chronic diseases occurring independently of comorbidity (gray + black) or without any comorbidity (black).

Sarcopenia and Physical frailty IN older people: multi-component Treatment strategies (SPRINTT)



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www.caretek.it



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www.parisdescartes.fr



ISTITUTO NAZIONALE DI RIPOSO E CURA PER
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NOVARTIS
Novartis Pharma AG
www.novartis.com



JAGIELLONIAN UNIVERSITY
www.uj.edu.pl



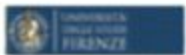
SANOFI
Sanofi-Aventis Research and
Development
<http://en.sanofi.com/index.aspx>



Roessingh
Roessingh Research and Development BV
www.rhd.nl



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Università degli Studi di Firenze
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GSK
GlaxoSmithKline
GlaxoSmithKline Research and
Development LTD
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Lilly
Eli Lilly and Company Ltd
www.lilly.com



Hôpitaux de Toulouse
Centre Hospitalier Universitaire de Toulouse
www.chu-toulouse.fr



Heeringa
Heeringa Institute University of Heerlen
www.heeringa.nl



M
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Services Médicaux De Santé
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Universitätsmedizin Göttingen, Georg-August-Universität,
Stiftung Deutscher Akademischer Austauschdienst
www.med.uni-goettingen.de

**Finanziamento totale: circa
50 milioni di euro
(50% da fondi UE
+ 50% in personale e servizi
delle case farmaceutiche)**

Trial Clinico Randomizzato

Esecuzione, Centri di reclutamento, numerosità del campione

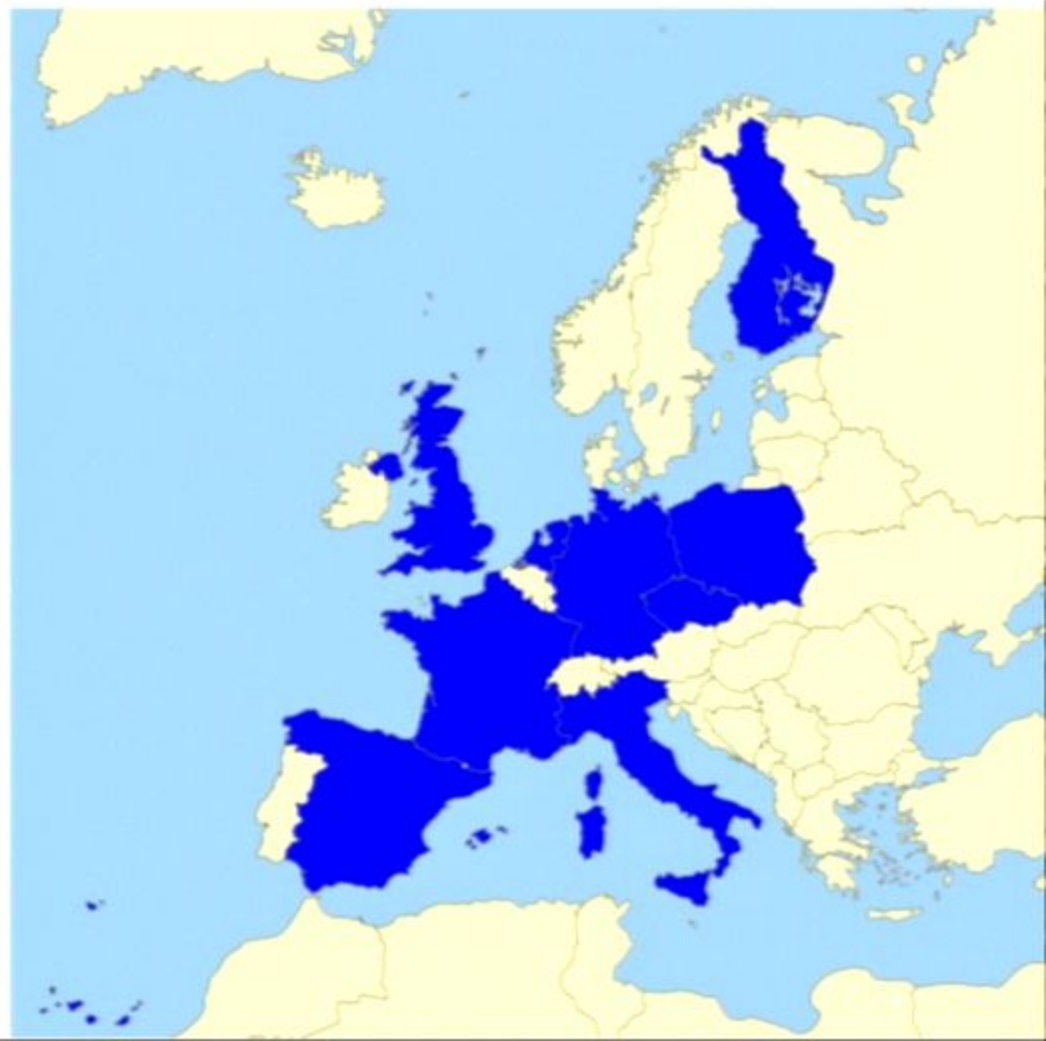
1,500 partecipanti

Arruolamento: 12 mesi

Follow-up: fino a 36 mesi

14 centri clinici

9 Paesi Europei coinvolti



SPRINTT RCT

- 1,500 anziani residenti in comunità, età:70+
- Ridotta massa muscolare (DXA, FNIH)
- SPPB 3-7 (n = 1,200) e 8-9 (n = 300)
- In grado di eseguire il test dei 400m
- Criteri di esclusione: incapacità o rifiuto di esprimere consenso informato, malattie in fase terminale, patologie in fase di instabilità clinica, deficit cognitivo (MMSE<24), emodialisi, progetto di trasferimento in altra località durante il periodo dello studio
- **Due bracci di trattamento: Intervento Multicomponente e Programma di Educazione alla Salute**

Paziente con Demenza

Frailty

- declino cognitivo
- Declino funzionale
- BPSD
- Multimorbilità/polifarmacoterapia
- Incontinenza
- Problemi nutrizionali
- Cadute
- Isolamento sociale
- Caregiver distress

Valutazione Multidimensionale

Geriatric
Assessment
Technology:
The State of the Art

L.Z. Rubenstein
D. Wilford
R. Bernabei

- I pazienti con demenza rappresentano il paradigma dell'anziano fragile
- La valutazione multidimensionale (VMD) fornisce una metodologia standardizzata di assessment, volta all'individuazione delle diverse aree problematiche e allo sviluppo di un piano di cura individualizzato.

CES-D Rosow-Breslow
GDS ADL-Katz Barthel Index

Quale strumento di VMD?

S.C.A.G. Inter-RAI Norton scale
MMSE IADL-Lawton CIRS NAGI scale
Tinetti scale
Disability Rating Scale SVAMA Hamilton Rating scale

Esempi di aree valutate

- Stato cognitivo
- Comunicazione
- Umore
- Comportamento
- Sfera psico-sociale
- Stato funzionale
- Continenza
- Malattie somatiche
- Malattie psichiche
- Stato nutrizionale
- Pelle
- Engagement sociale
- Supporto sociale
- Farmaci
- Trattamenti

Limiti degli strumenti tradizionali

- Descrittivi
- Nessuna inferenza eziologica possibile
- Assessment di un'area singola
- dati non confrontabili

Multidimensional Geriatric Assessment: Back to the Future

Second and Third Generation Assessment Instruments: The Birth of Standardization in Geriatric Care

Roberto Bernabei, Francesco Landi, Graziano Onder, Rosa Liperoti, and Giovanni Gambassi



- Omnicomprensivo
- inferenza eziologica possibile
- 'Care planning oriented'
- possibili i confronti

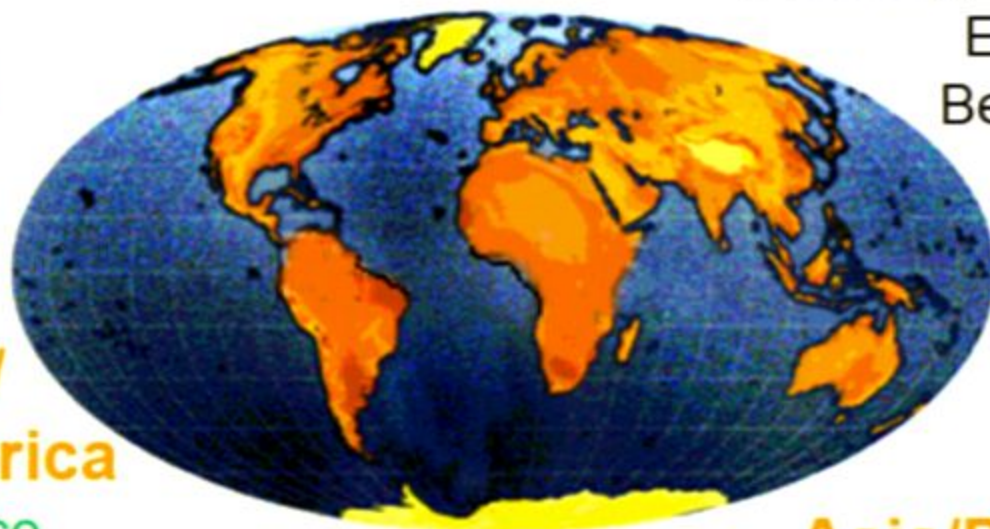
interRAI

North America

Canada
USA
Mexico

Central/ South America

Chile, Mexico,
Brazil, Belize,
Peru, Cuba



Europe

Iceland, Norway, Sweden, Denmark, Finland
Netherlands, Germany, UK, Switzerland,
France, Poland, Italy, Spain,
Estonia, Czech Republic,
Belgium **Austria, Portugal,
Lithuania**

Middle East

Israel

Asia/Pacific Rim

Japan, South Korea, Taiwan, China,
Hong Kong, Australia, New Zealand, India

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.

InterRAI Suite tools

- Nursing Home (LTCF)
- Home Care (HC)
- Post-Acute Care (PAC)
- Assisted Living (AL)
- Palliative Care (PC)
- Independent settings in the Community (Community Health Assessment - CHA)
- In-patient Mental Health Care (MH)
- Community Mental Health Care (CMH)
- Community Cognitive InterRAI assessment
- Setting for persons with Intellectual Disabilities (ID)
- interRAI Acute Care Hospitals (AC)

interRAI Long-Term Care Facility (LTCF) ©

SECTION C. COGNITION

1. COGNITIVE SKILLS FOR DAILY DECISION MAKING

Making decisions regarding tasks of daily life—e.g., when to get up or have meals, which clothes to wear or activities to do

0. **Independent**—Decisions consistent, reasonable, and safe
1. **Modified independence**—Some difficulty in new situations only
2. **Minimally impaired**—In specific recurring situations, decisions become poor or unsafe, cues/supervision necessary at those times
3. **Moderately impaired**—Decisions consistently poor or unsafe, cues / supervision required at all times
4. **Severely impaired**—Never or rarely makes decisions
5. **No discernable consciousness, coma** [Skip to Section G]

2. MEMORY/RECALL ABILITY

Code for recall of what was learned or known

0. Yes, memory OK 1. Memory problem

- a. **Short-term memory OK**—Seems / appears to recall after 5 minutes
- b. **Long-term memory OK**—Seems / appears able to recall distant past
- c. **Procedural memory OK**—Can perform all or almost all steps in a multitask sequence without cues
- d. **Situational memory OK**—Both: recognizes caregivers' names / faces frequently encountered AND knows location of places regularly visited (bedroom, dining room, activity room, therapy room)

3. PERIODIC DISORDERED THINKING OR AWARENESS

[Note: Accurate assessment requires conversations with staff, family or others who have direct knowledge of the person's behavior over this time]

0. Behavior not present
1. Behavior present, consistent with usual functioning
2. Behavior present, appears different from usual functioning (e.g., new onset or worsening, different from a few weeks ago)

- a. **Easily distracted**—e.g., episodes of difficulty paying attention, gets sidetracked
- b. **Episodes of disorganized speech**—e.g., speech is nonsensical, irrelevant, or rambling from subject to subject, loses train of thought
- c. **Mental function varies over the course of the day**—e.g., sometimes better, sometimes worse

4. ACUTE CHANGE IN MENTAL STATUS FROM PERSON'S USUAL FUNCTIONING—e.g., restlessness, lethargy, difficult to arouse, altered environmental perception

0. No 1. Yes

5. CHANGE IN DECISION MAKING AS COMPARED TO 90 DAYS AGO (OR SINCE LAST ASSESSMENT)

0. Improved 2. Declined
1. No change 3. Uncertain



interRAI Home Care (HC) ©

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0. Improved 2. Declined
1. No change 3. Uncertain

VMD: scopi

Livello
paziente



Completa esame fisico; piano
di cura individualizzato

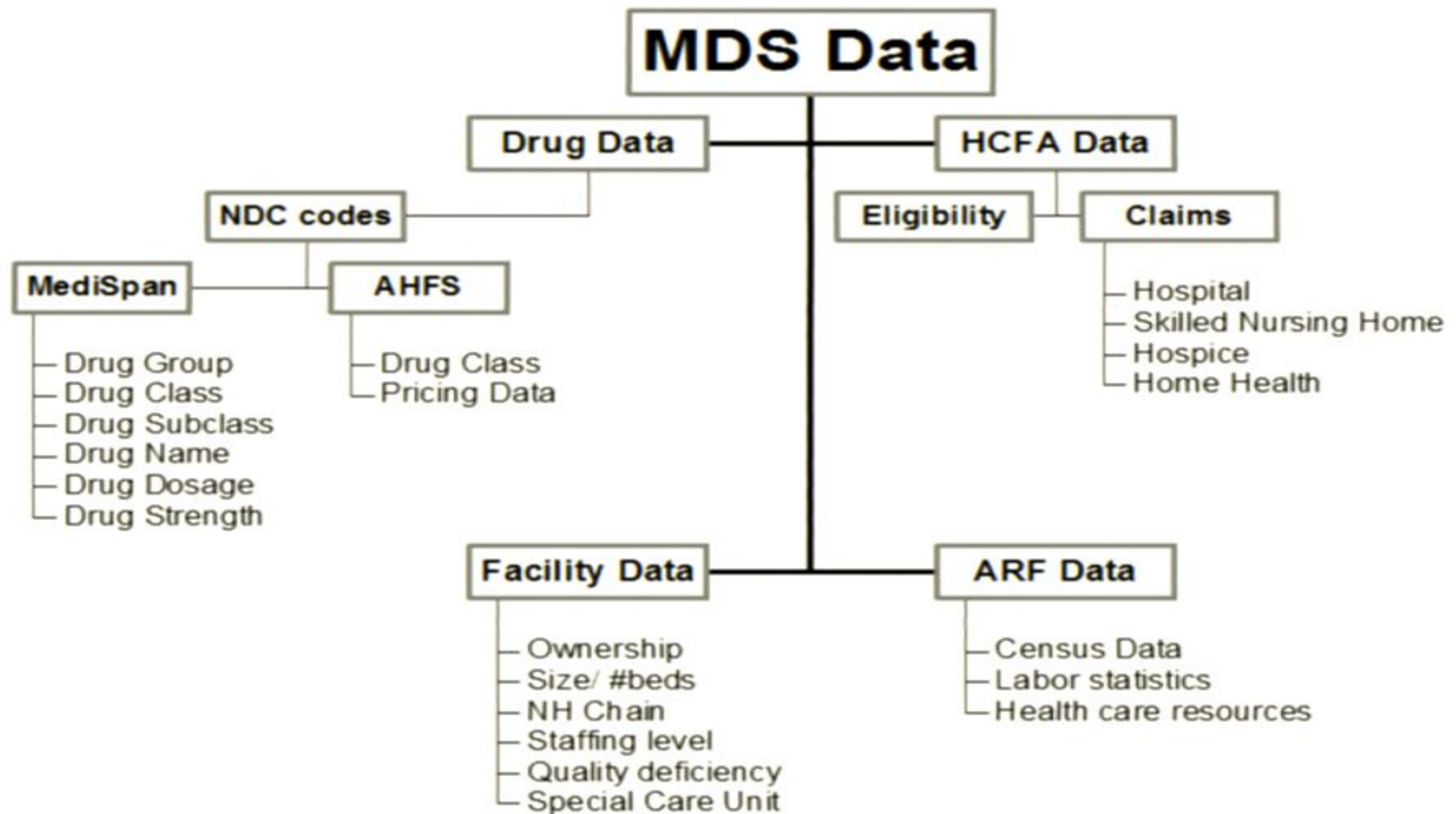
Livello
popolazione



Database

- Dati descrittivi
- Bisogni assistenziali
- Allocazione delle risorse
- Fattori prognostici
- Indicatori di qualità
- Studi di outcome
- confronti

The SAGE database





U.S. Food and Drug Administration

CENTER FOR DRUG EVALUATION AND RESEARCH

FDA Public Health Advisory

Deaths with Antipsychotics in Elderly Patients with Behavioral Disturbances

- **The treatment of behavioral disorders in elderly patients with dementia with atypical antipsychotic medications is associated with increased mortality.**
- **Most were either due to heart related events (e.g., heart failure, sudden death) or infections (mostly pneumonia).**
- **The Agency will ask the manufacturers of these drugs to include a Boxed Warning in their labeling describing this risk and noting that these drugs are not approved for this indication.**

April 11, 2005

ORIGINAL ARTICLE

Risk of Death in Elderly Users of Conventional vs. Atypical Antipsychotic Medications

Wang et al., NEJM 2005;
353:2335-41.

Convenzionali vs.
atipici

Adj. HR (95% CI)

1.37 (1.27-1.49)

n=22,890

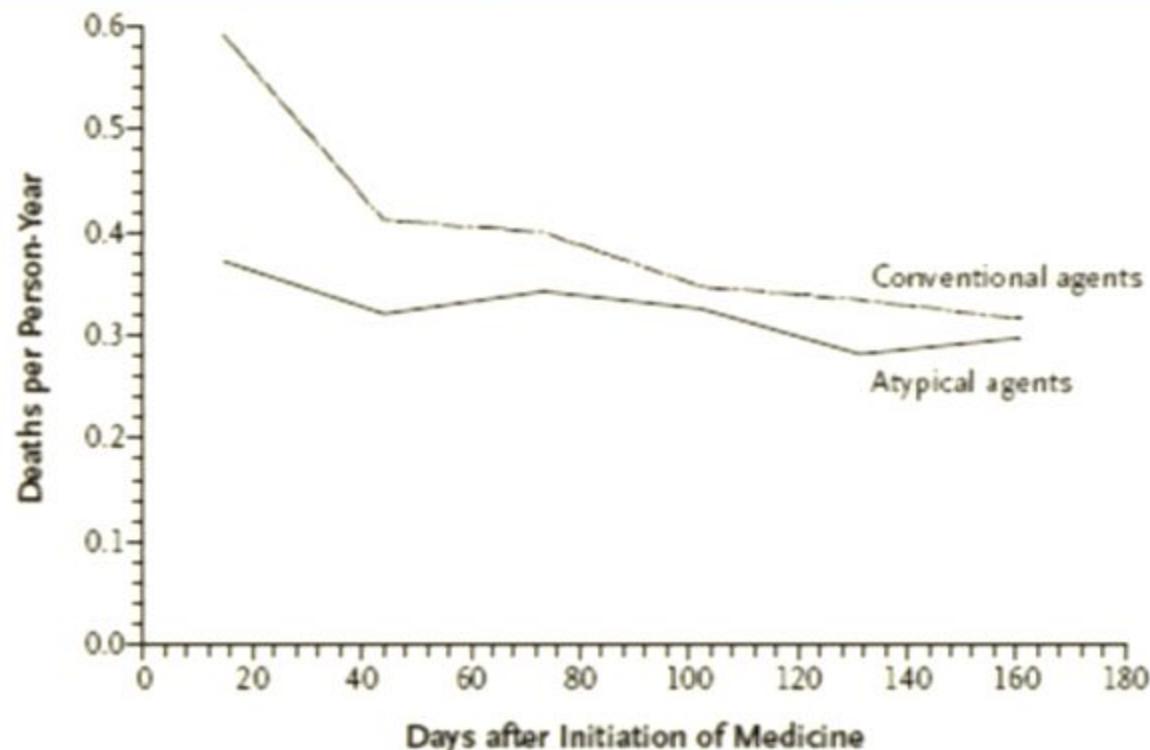


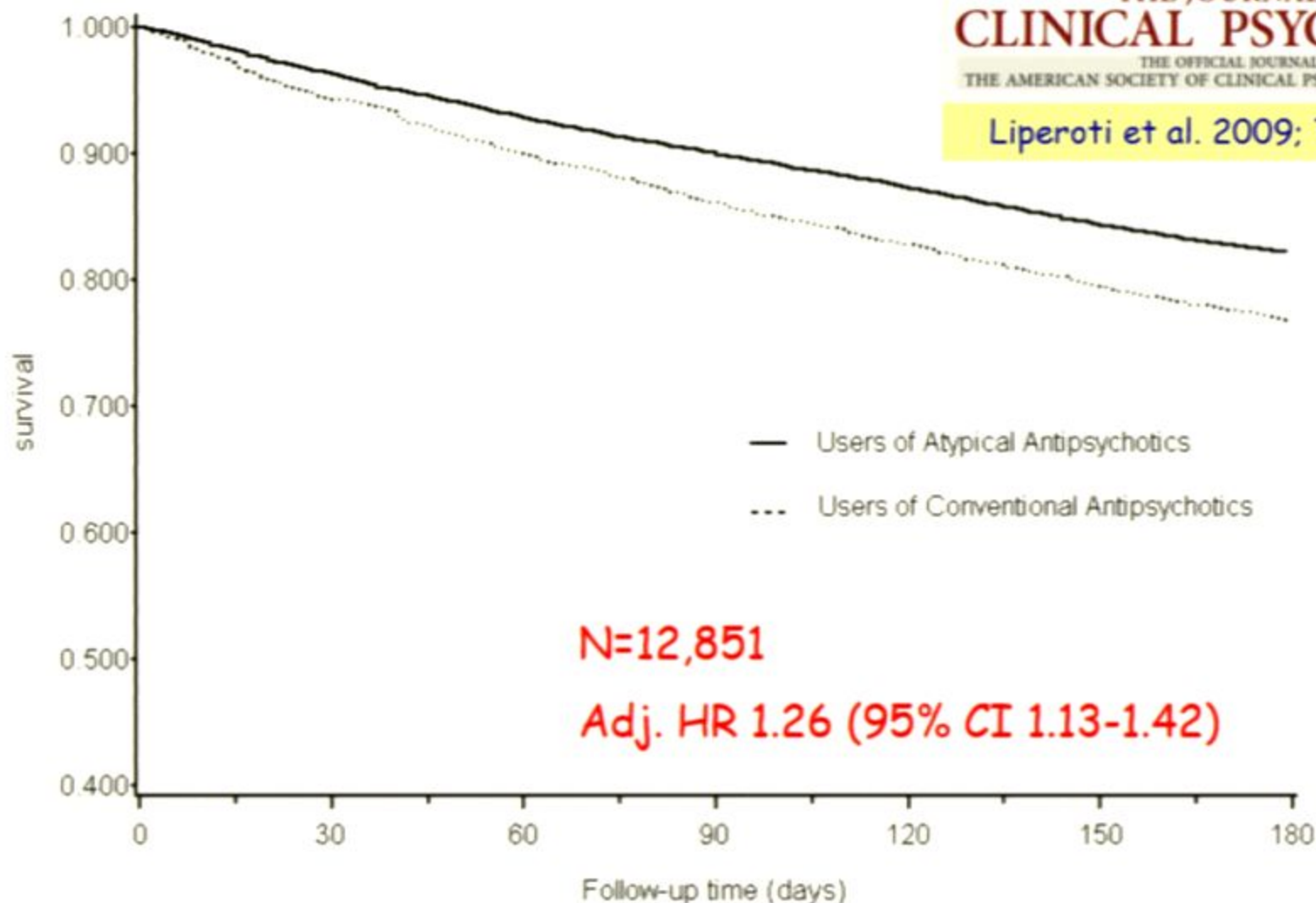
Figure 1. Rates of Death after the Initiation of Conventional and Atypical Antipsychotic Medications.

The rate of death before 10 days was not calculated, owing to insufficient data.

Risk of death associated with the use of atypical and conventional antipsychotics

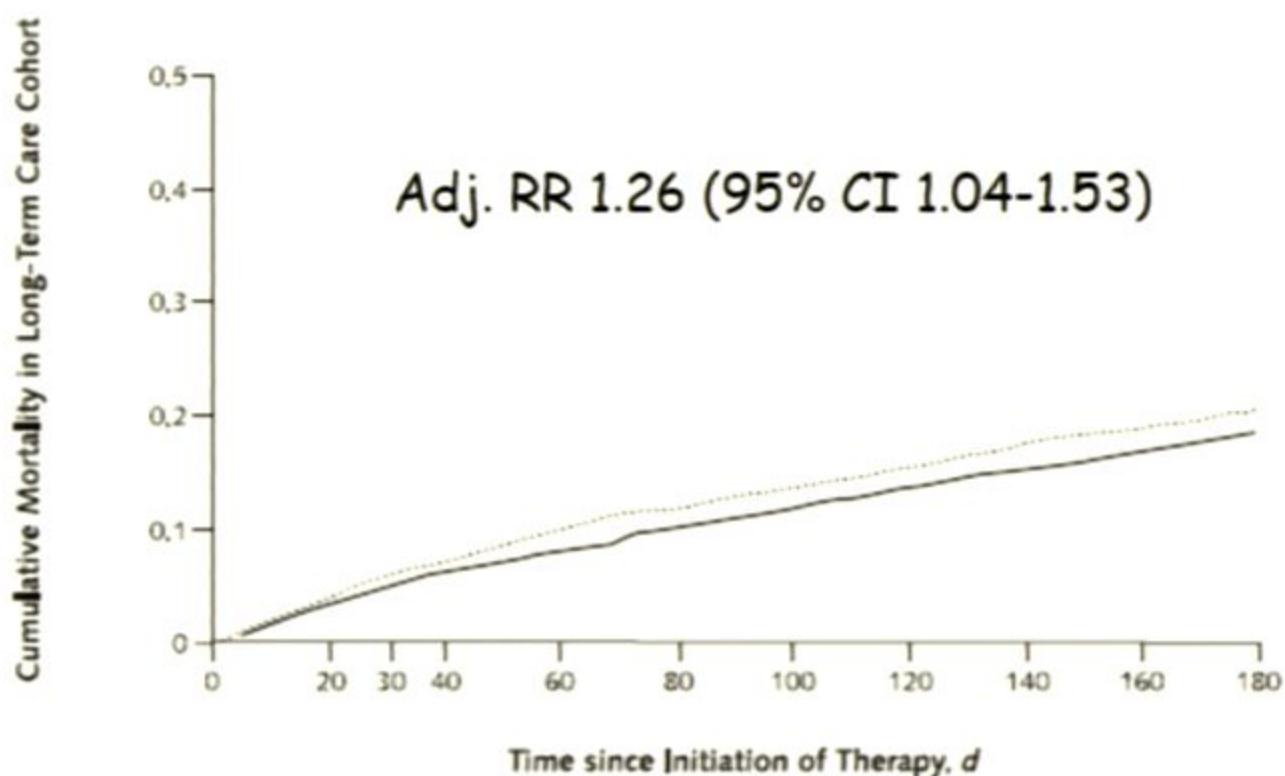
THE JOURNAL OF
CLINICAL PSYCHIATRY
THE OFFICIAL JOURNAL OF
THE AMERICAN SOCIETY OF CLINICAL PSYCHOPHARMACOLOGY

Liperoti et al. 2009; 70:1340-7.



Antipsychotic Drug Use and Mortality in Older Adults with Dementia

Sudeep S. Gill, MD, MSc; Susan E. Bronskill, PhD; Sharon-Lise T. Normand, PhD; Geoffrey M. Anderson, MD, PhD; Kathy Sykora, MSc; Kelvin Lam, MSc; Chalm M. Bell, MD, PhD; Phillip E. Lee, MD; Hadas D. Fischer, MD; Nathan Herrmann, MD; Jerry H. Gurwitz, MD;



Patients at risk, <i>n</i>	0	30	60	90	120	150	180
Atypical antipsychotic users	7235	5327	3873	3158	1861		
Conventional antipsychotic users	7235	4419	2557	1841	932		



Information on Antipsychotics

Audience: *Neuropsychiatric and geriatrics healthcare professionals*

[Posted 06/16/2008] FDA notified healthcare professionals that **both conventional and atypical antipsychotics** are associated with an **increased risk of mortality in elderly patients treated for dementia-related psychosis.** In April 2005, FDA notified healthcare professionals that patients with dementia-related psychosis treated with atypical antipsychotic drugs are at an increased risk of death. Since issuing that notification, **FDA has reviewed additional information that indicates the risk is also associated with conventional antipsychotics.** Antipsychotics are not indicated for the treatment of dementia-related psychosis. The prescribing information for all antipsychotic drugs will now include the same information about this risk in a BOXED WARNING and the WARNINGS section.

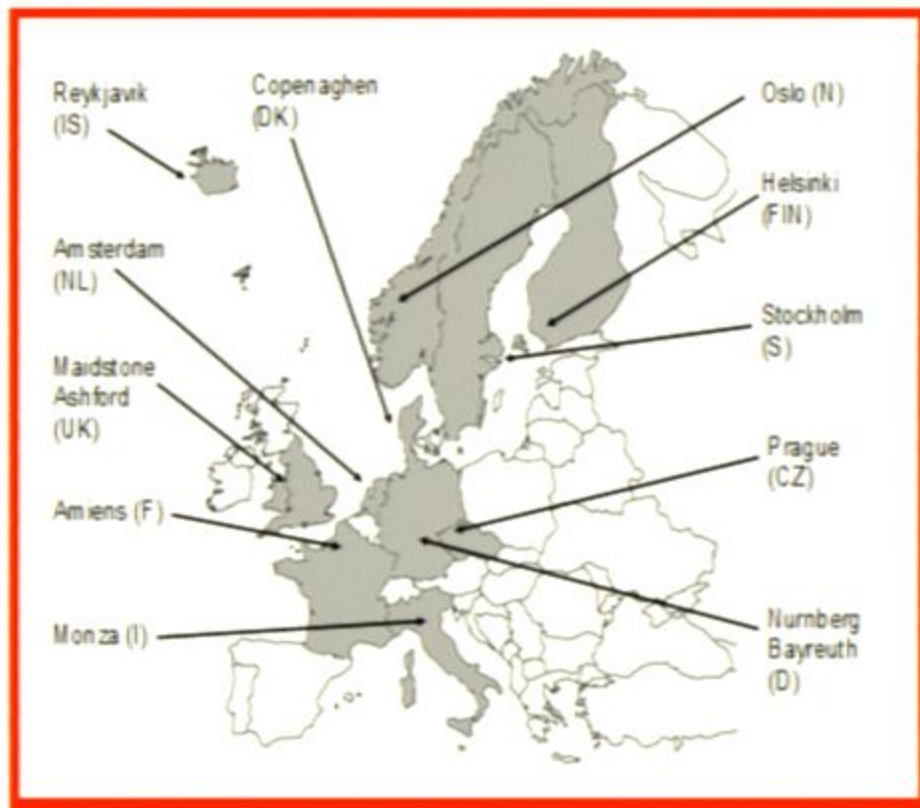
Developing an evidence-base for community care services in Europe The Aged Home Care project ADHOC

G I Carpenter	Canterbury	V Garms-Homolova	Berlin
E Topinkova	Praque	P Jonsson	Reykjavik
M Schroll	Copenhagen	D Frijters	Utrecht
H Finne-Soverei	Helsinki	L W Sørbye	Oslo
J-C Henrard	Paris	G Ljunggren	Stockholm

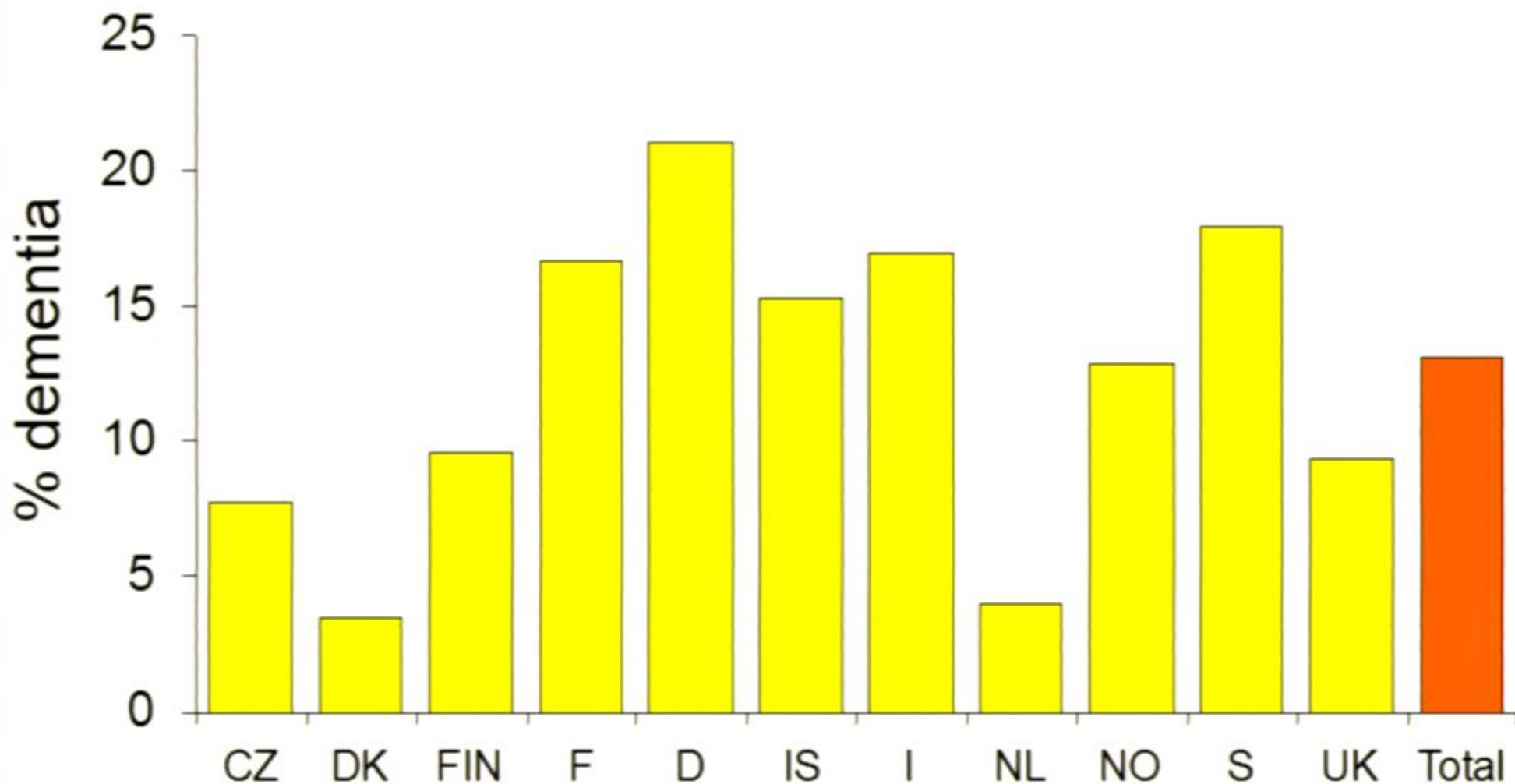
R Bernabei Rome (Principal Investigator)

11 Countries

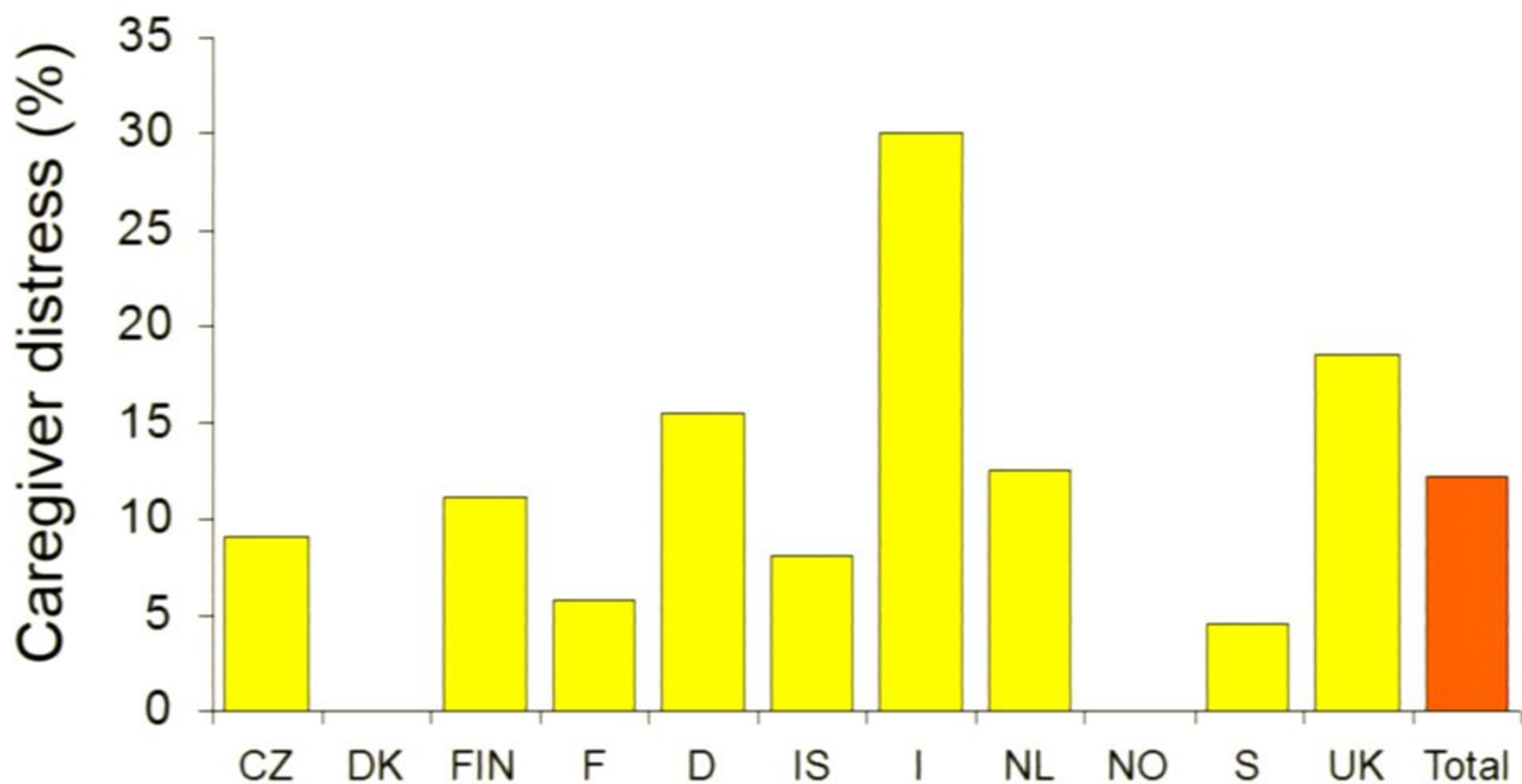
N 3,877 participants

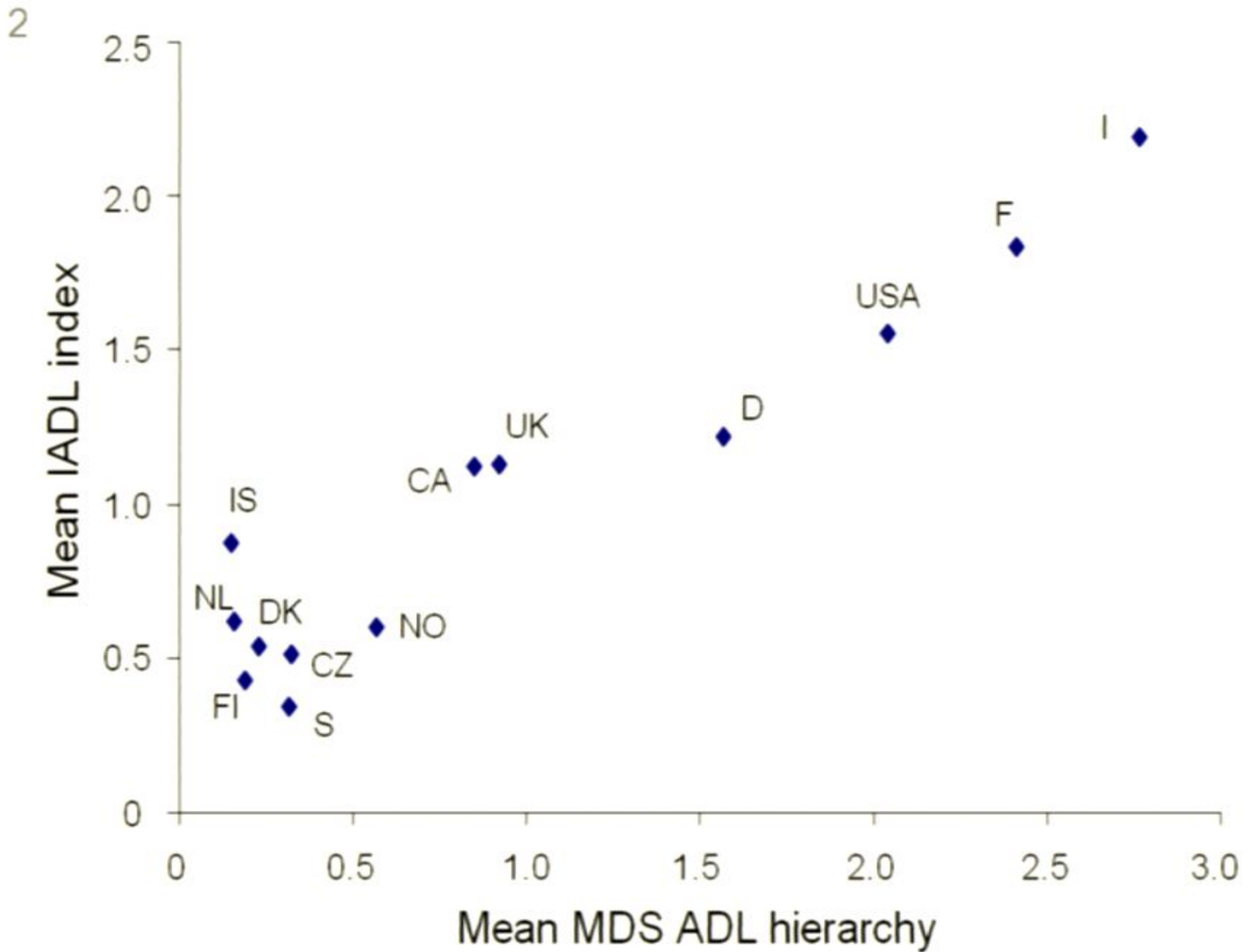


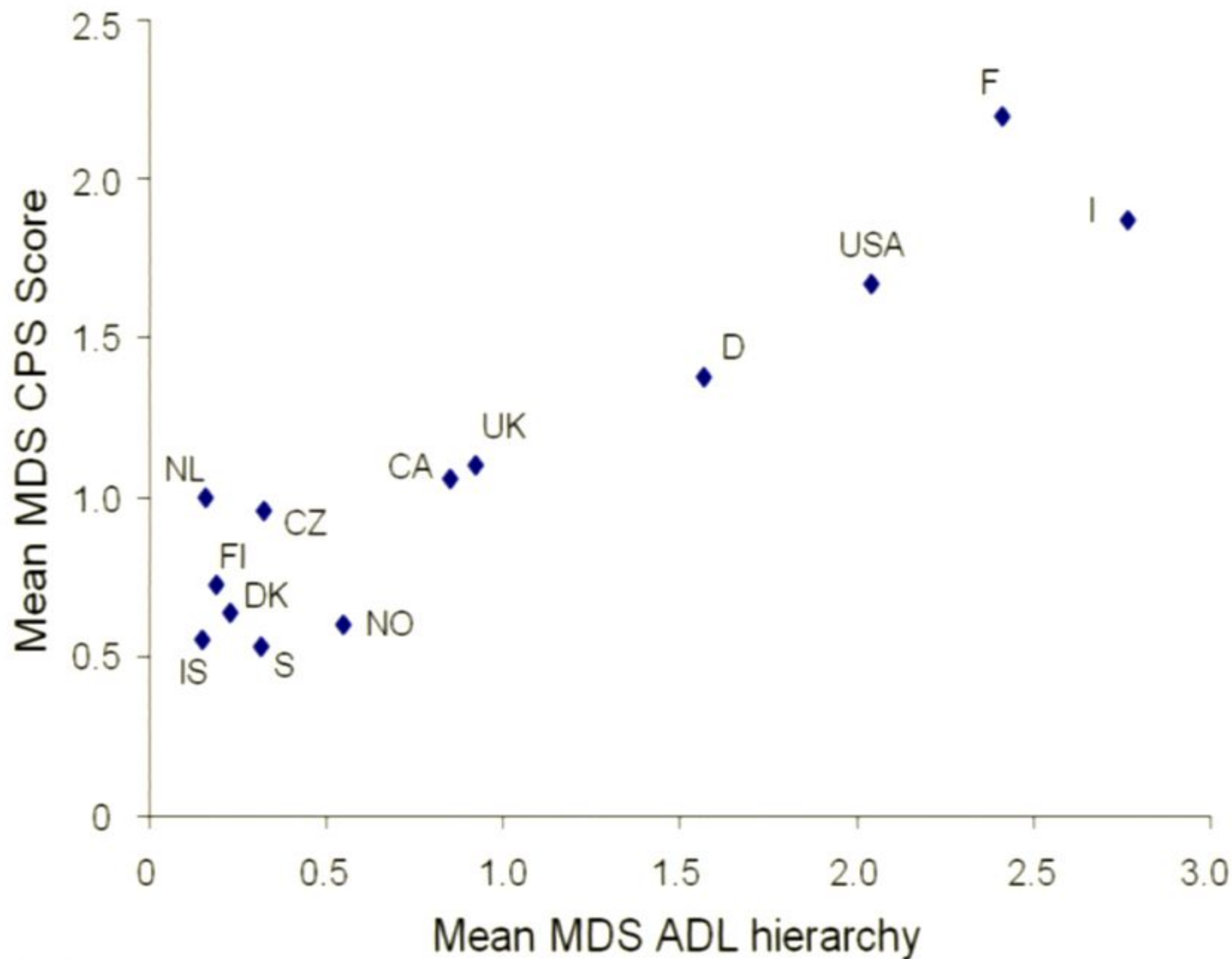
Patients with dementia in home care



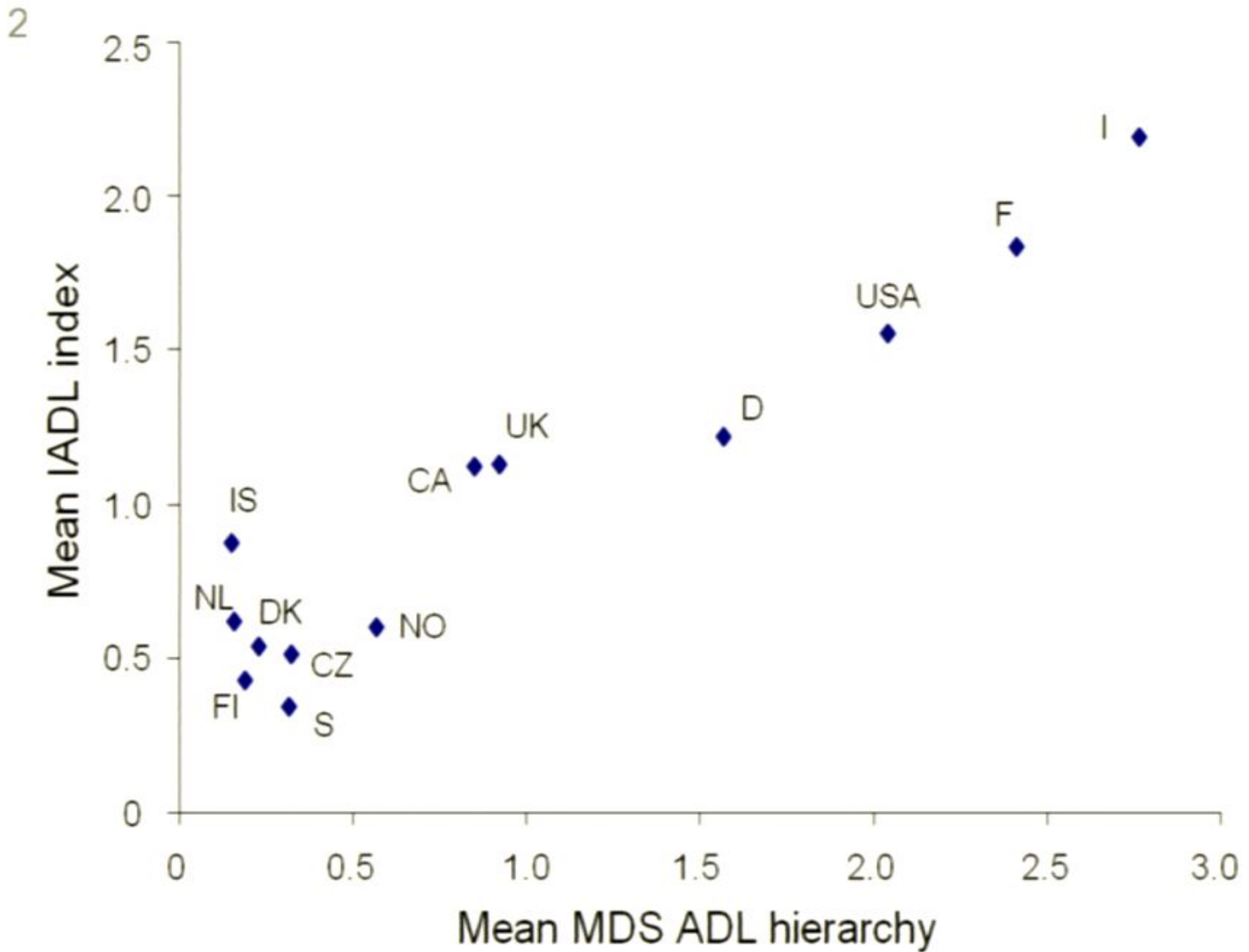
Caregiver distress in patients with dementia in Home Care

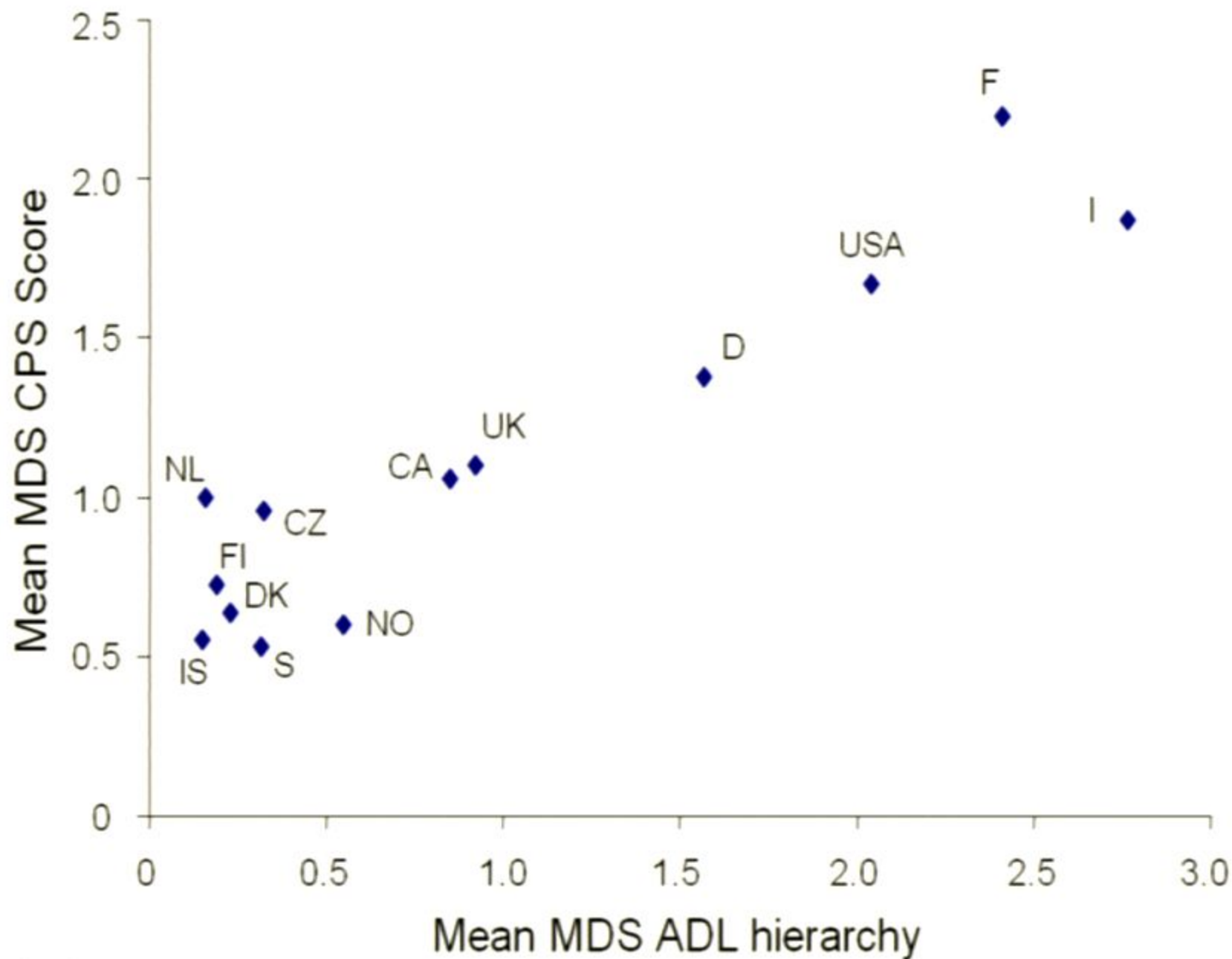






Bernabei R et al 'International Gerontology' in Hazzard's Principles of Geriatric Medicine and Gerontology, Sixth Edition, 2009.





Bernabei R et al 'International Gerontology' in Hazzard's Principles of Geriatric Medicine and Gerontology, Sixth Edition, 2009.



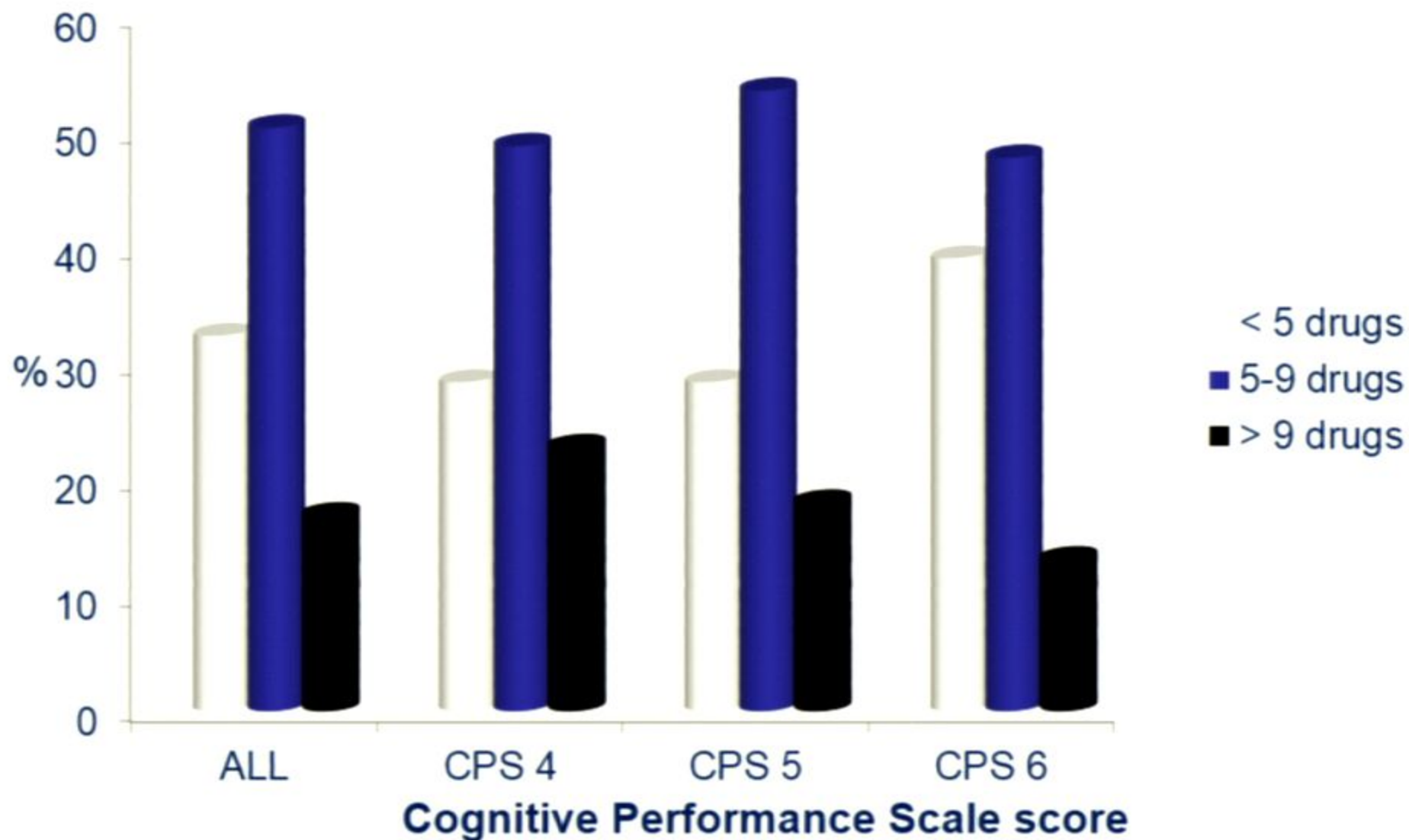
4.156 residents assessed with the InterRAI LTCF

57 facilities in Europe

7 EU countries + Israel

Funding FP7 of the EU

Polypharmacy and Excessive Polypharmacy in Dementia - SHELTER

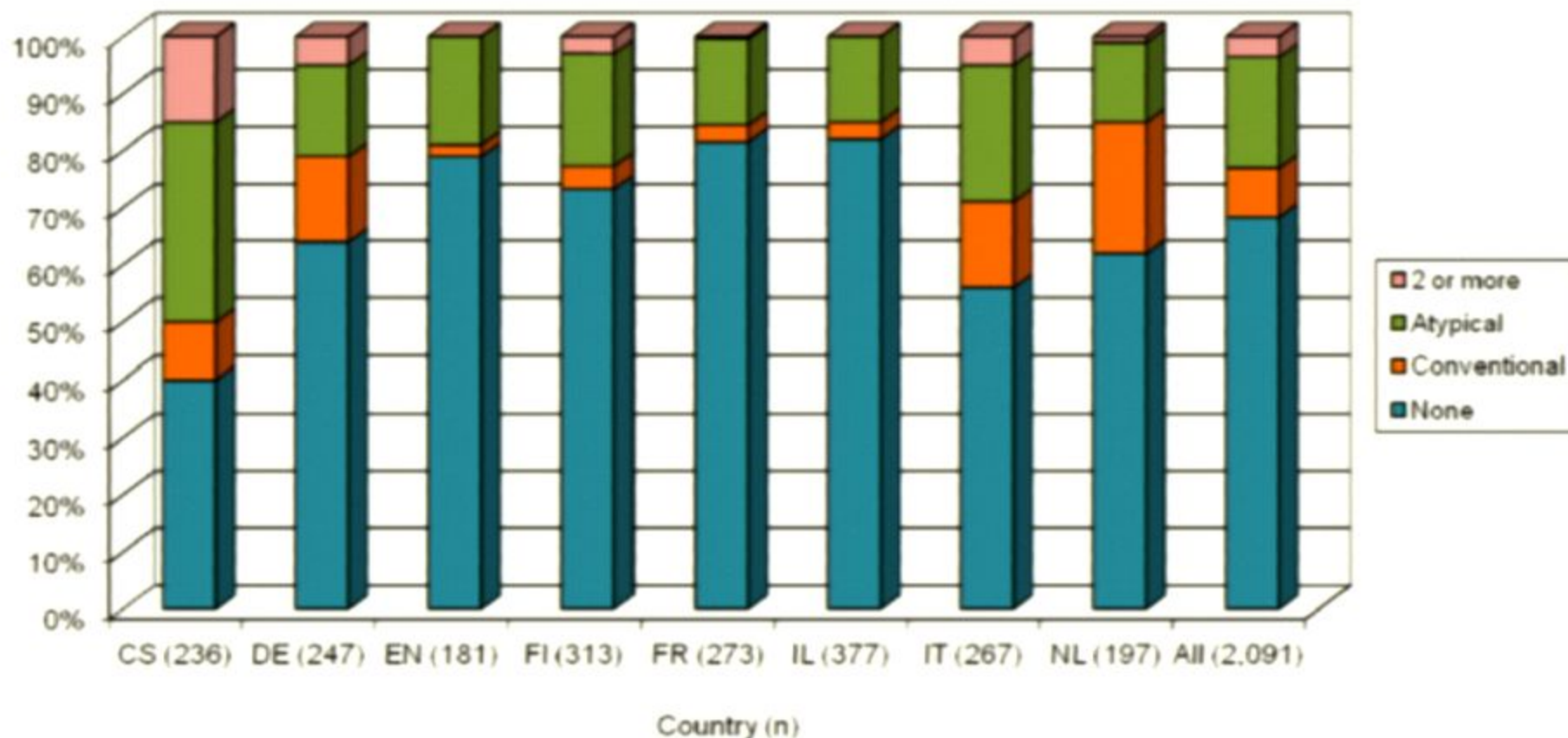


Use of Antipsychotic Drugs Among Residents With Dementia in European Long-Term Care Facilities: Results From the SHELTER Study



JAMA 15 (2014) 911–917

Andrea D. Foebel PhD^{a,b,*}, Rosa Liperoti MD, MPH^b, Graziano Onder MD, PhD^b, Harriet Finne-Soveri MD, PhD^c, Jean Claude Henrard PhD^{d,e}, Albert Lukas MD^f, Michael D. Denkinger MD^f, Giovanni Gambassi MD^b, Roberto Bernabei MD^b
on behalf of the SHELTER Study Investigators



Correlates of Likelihood of Receiving an Antipsychotic Drug Among Nursing Home Residents With Dementia (n = 2016)



JAMDA 15 (2014) 911–917

	Receipt of Any AP Drug Odds Ratio (95% CI)	P
Age, y		
75–84	0.82 (0.60–1.10)	.20
85+	0.86 (0.61–1.21)	.39
Female gender	0.92 (0.72–1.17)	.49
BMI, kg/m ²		
18.5–25	1.41 (1.06–1.90)	.02
25–30	1.24 (0.88–1.73)	.21
>30	1.55 (0.98–2.47)	.06
ADL impairment		
Moderate	1.59 (1.06–2.41)	.03
Severe	1.39 (0.81–2.38)	.23
Cognitive impairment		
Moderate	1.34 (0.95–1.88)	.10
Severe	1.57 (1.13–2.18)	.007
Behavior index		
Moderate	2.31 (1.80–2.95)	<.0001
Severe	2.84 (1.66–4.86)	.0001
Psychotic symptoms	1.82 (1.32–2.50)	.0002
Delirium	0.83 (0.66–1.05)	.12
No. of drugs ^a		
5–9	1.18 (0.89–1.58)	.25
10+	1.57 (1.07–2.30)	.02
Drug use		
CV Drugs	1.05 (0.83–1.34)	.67
AChE or memantine	0.98 (0.77–1.25)	.88
Antidepressants	0.89 (0.67–1.19)	.44
Anxiolytics/Hypnotics	1.58 (1.26–1.98)	<.0001
Anti-Parkinson	0.93 (0.56–1.54)	.77
Any analgesic	0.84 (0.66–1.06)	.14

Correlates of Likelihood of Receiving an Antipsychotic Drug Among Nursing Home Residents With Dementia (n = 2016)

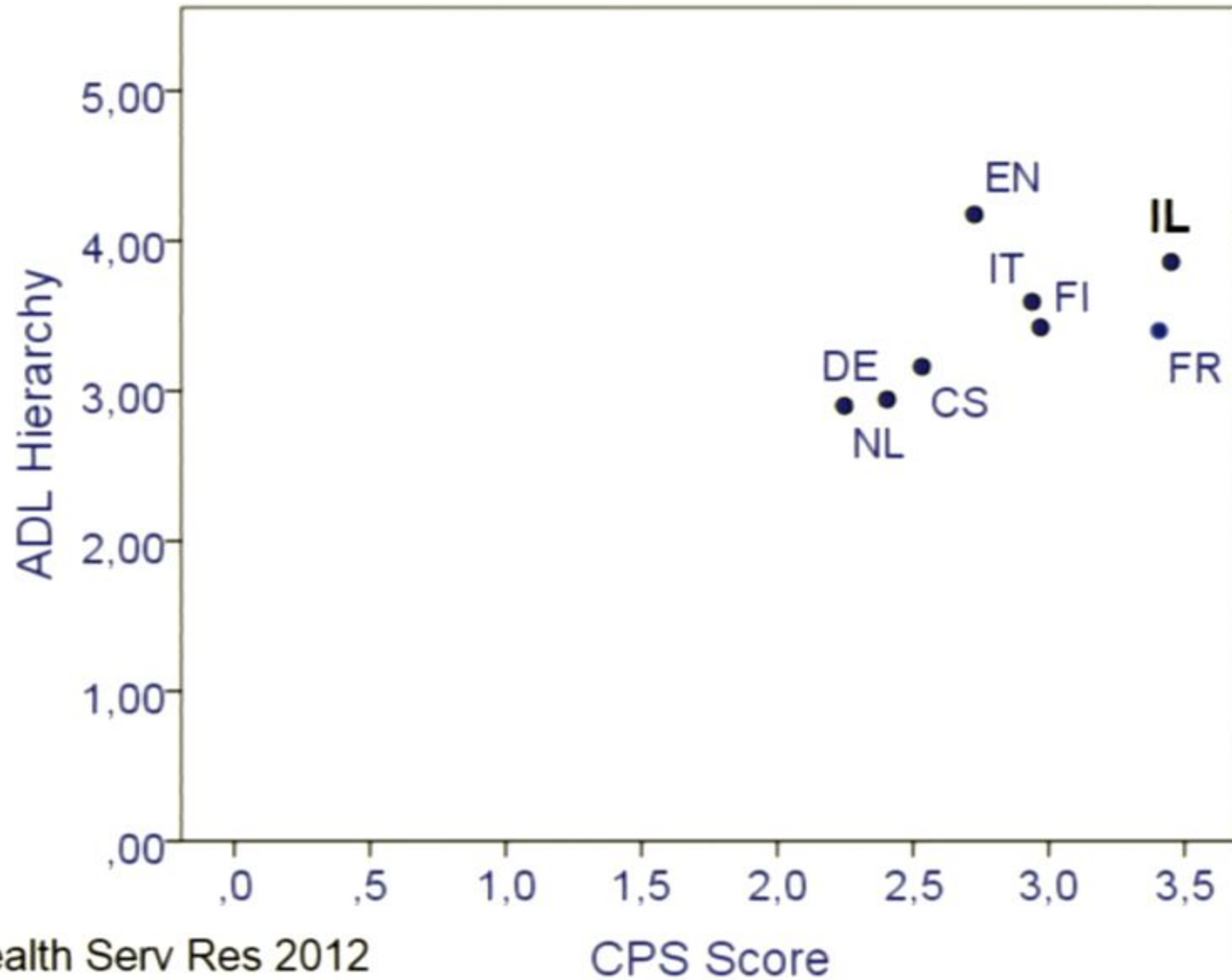


JAMDA 15 (2014) 911–917

	Receipt of Any AP Drug Odds Ratio (95% CI)	P
Clinical conditions		
Parkinson disease	1.19 (0.69–2.03)	.53
Diabetes	0.98 (0.72–1.32)	.88
CHF	0.78 (0.60–1.02)	.07
Depression	1.06 (0.88–1.27)	.56
<u>Mood disorder</u>	1.59 (1.21–2.10)	.0009
Incontinence		
Bladder	1.03 (0.71–1.48)	.89
Bowel	0.85 (0.66–1.09)	.19
Pain	0.92 (0.73–1.16)	.46
Recent fall(s)	1.21 (0.83–1.76)	.31
Physical restraint use		
<u>Bedbound</u>	1.38 (0.92–2.07)	.11
Facility characteristics		
Geriatrician services	1.61 (1.04–2.50)	.03
<u>Pharmacist services</u>	1.14 (0.68–1.92)	.61
Dementia care services	0.77 (0.53–1.13)	.18
<u>Psychiatric care services</u>	2.14 (1.28–3.56)	.004

Characteristics by country

- SHELTER
- NH residents



Characteristics by country

● SHELTER
NH residents

● ADHOC
HC patients

