

Pacient crònic complex

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INDEX

- Conceptes
- Epidemiologia
- Impacte en salut
- Evidències clíniques en multimorbiditat / pacient crònic complex: ¿On som?
- Conclusions

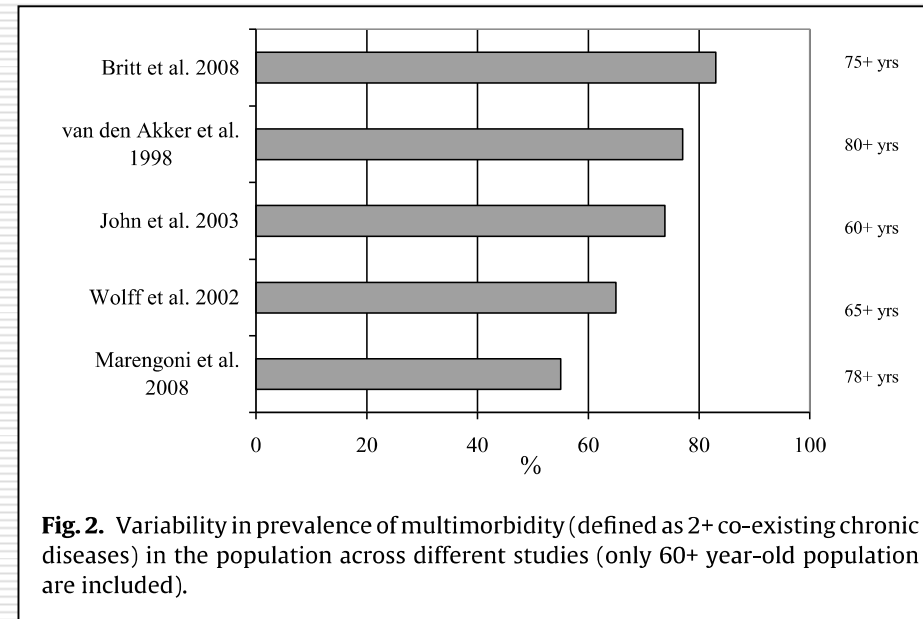
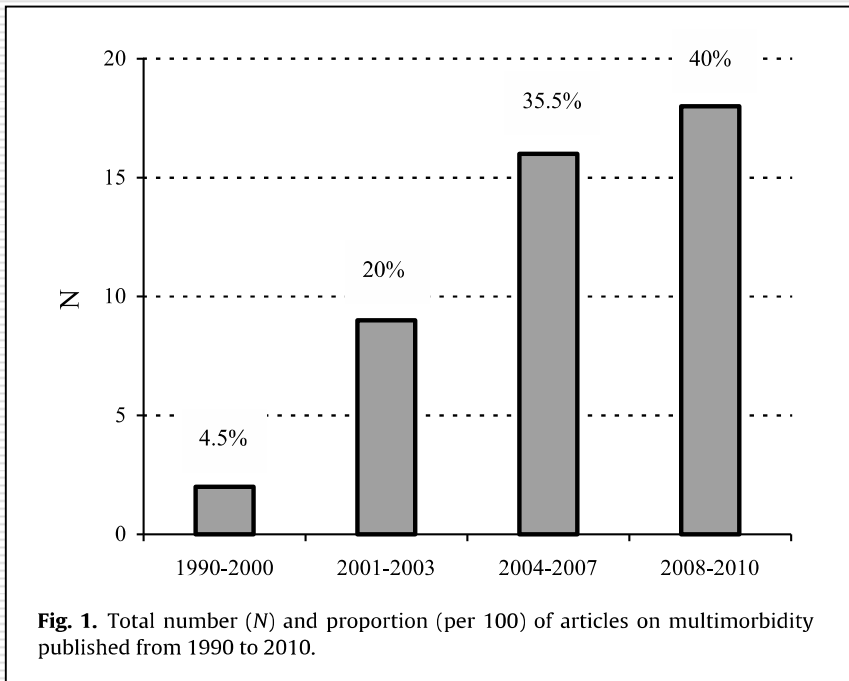
INDEX

- **Conceptes**
- Epidemiologia
- Impacte en terminis de salut
- Evidències clíniques en multimorbiditat / pacient crònic complex: ¿On som?
- Conclusions

Review

Aging with multimorbidity: A systematic review of the literature

Alessandra Marengoni^{a,b,*}, Sara Angleman^a, René Melis^{a,c}, Francesca Mangialasche^{a,d}, Anita Karp^{a,e}, Annika Garmen^{a,e}, Bettina Meinow^{a,e}, Laura Fratiglioni^{a,e}

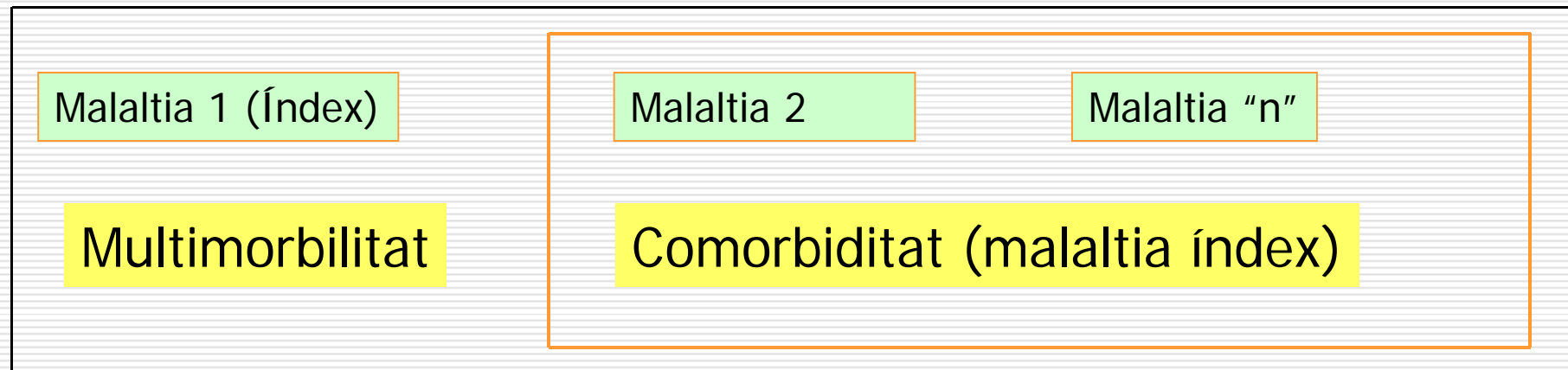


Prevalença varia entre el 55 – 98%

Conceptes

- ★ Pluripatologia
 - ★ Comorbiditat
 - ★ Multimorbiditat
 - ★ Pacient crònic complex
-

Conceptes



Comorbiditat: Presencia de malalties addicionals en relació a una malaltia índex

Multimorbiditat: presència de múltiples malalties

A multi-institutional, hospital-based assessment of clinical, functional, sociofamilial and health-care characteristics of polypathological patients (PP)

M. Bernabeu-Wittel ^{a,1,*}, B. Barón-Franco ^{b,1}, J. Murcia-Zaragoza ^{c,1}, A. Fuertes-Martín ^{d,1},
C. Ramos-Cantos ^{e,1}, A. Fernández-Moyano ^{f,1}, F.J. Galindo ^{a,1}, M. Ollero-Baturone ^{a,1}

Table 1

Functional definition of polypathological patient: the patient who suffers chronic diseases included in two or more of the following clinical categories.

Category A

- A.1 Chronic heart failure with past/present stage II dyspnea of NYHA^a.
- A.2 Coronary heart disease

Category B

- B.1 Vasculitides and/or systemic autoimmune diseases
- B.2 Chronic renal disease (creatininaemia > 1.4/1.3 mg/dL in men/women or proteinuria^b, during ≥ 3 months)

Category C

- Chronic lung disease with past/present stage 2 dyspnea of MRC^c, or FEV1 <65%, or basal SatO₂ ≤ 90%

Category D

- D.1 Chronic inflammatory bowel disease
- D.2 Chronic liver disease with evidence of portal hypertension^d

Category E

- E.1 Stroke
- E.2 Neurological disease with permanent motor deficit, leading to severe impairment of basic activities of daily living (Barthel index < 60).
- E.3 Neurological disease with permanent moderate-severe cognitive impairment (Pfeiffer's test with ≥ 5 errors).

Category F

- F.1 Symptomatic peripheral artery disease
- F.2 Diabetes mellitus with proliferate retinopathy or symptomatic neuropathy

Category G

- G.1 Chronic anemia (Hb < 10 g/dL during ≥ 3 months) due to digestive-tract losses or acquired hemopathy not tributary of treatment with curative intention.
- G.2 Solid-organ or hematological active neoplasia not tributary of treatment with curative intention.

Category H:

- Chronic osteoarticular disease, leading to severe impairment of basic activities of daily living (Barthel index < 60)

^a Slight limitation of physical activity. Comfortable at rest, but ordinary physical activity results in fatigue, palpitation, or dyspnea.

^b Albumin/Creatinine index > 300 mg/g, microalbuminuria > 3 mg/dL in urine, albumin > 300 mg/day in 24-h urine, or albuminuria/min > 200 µg/min.

^c Short of breath when hurrying or walking up a slight hill.

^d Presence of clinical, analytical, echographic, or endoscopic data of portal hypertension.

Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study



Karen Barnett, Stewart W Mercer, Michael Norbury, Graham Watt, Sally Wyke, Bruce Guthrie

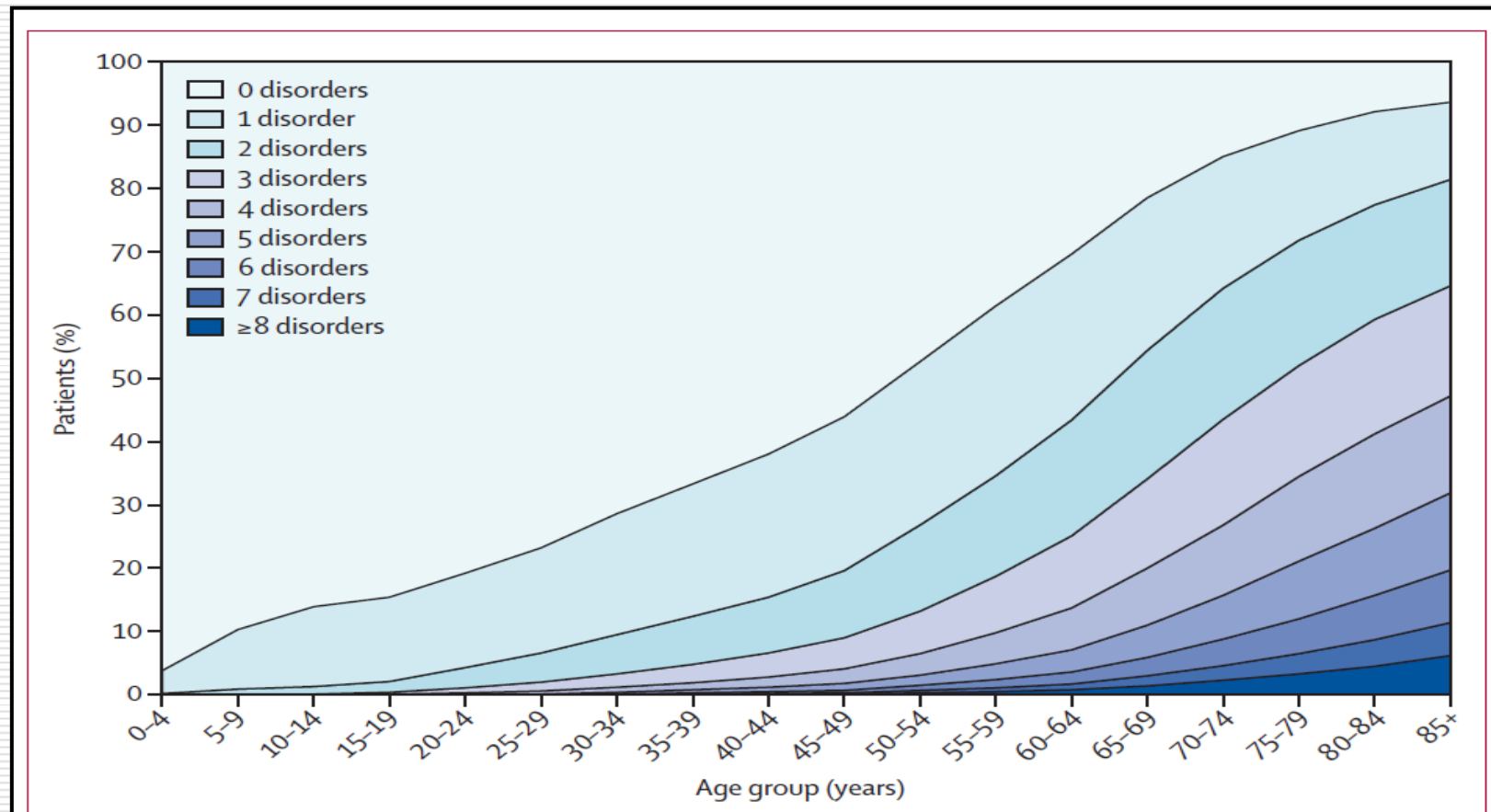


Figure 1: Number of chronic disorders by age-group

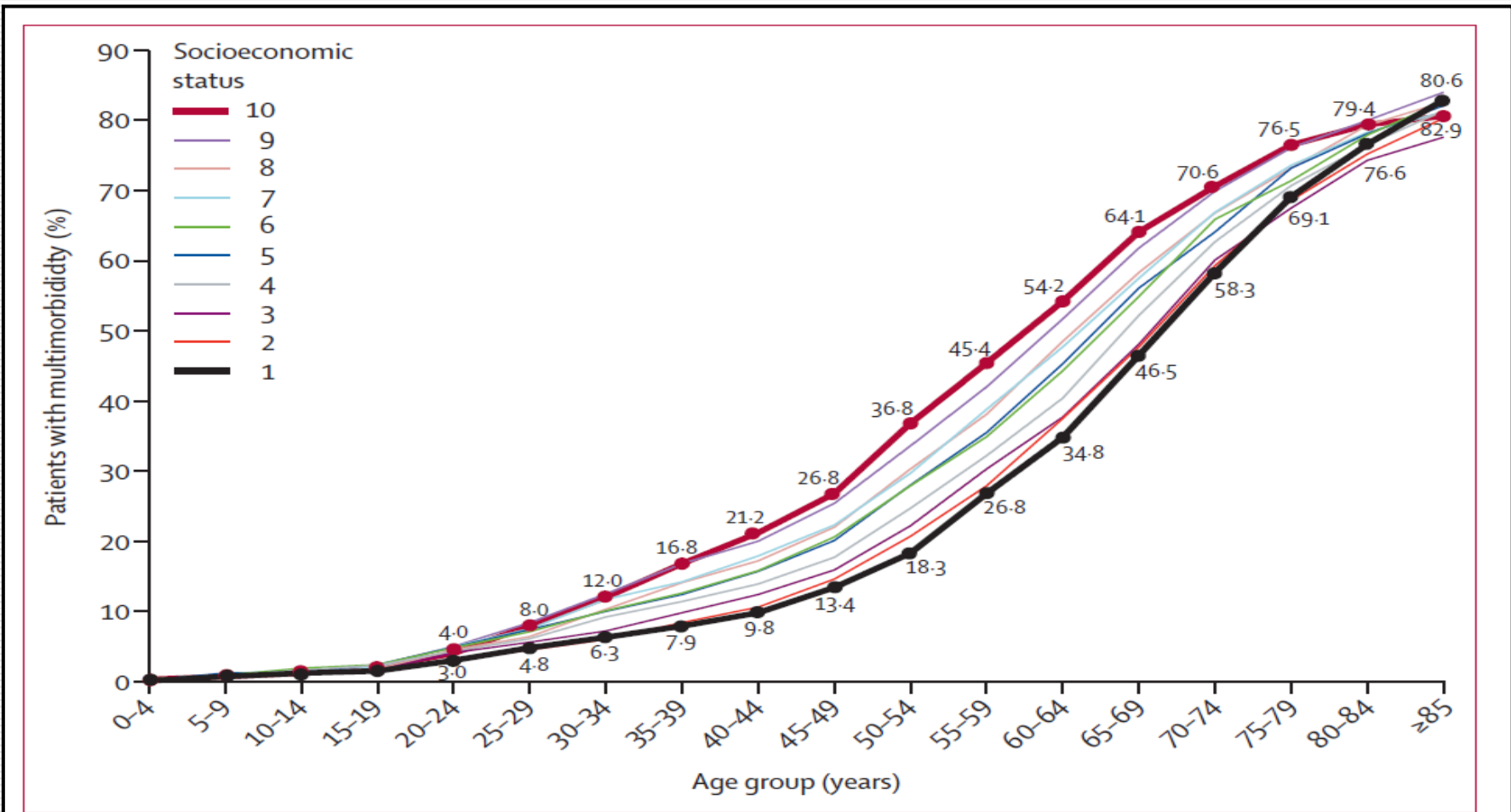


Figure 2: Prevalence of multimorbidity by age and socioeconomic status
 On socioeconomic status scale, 1=most affluent and 10=most deprived.

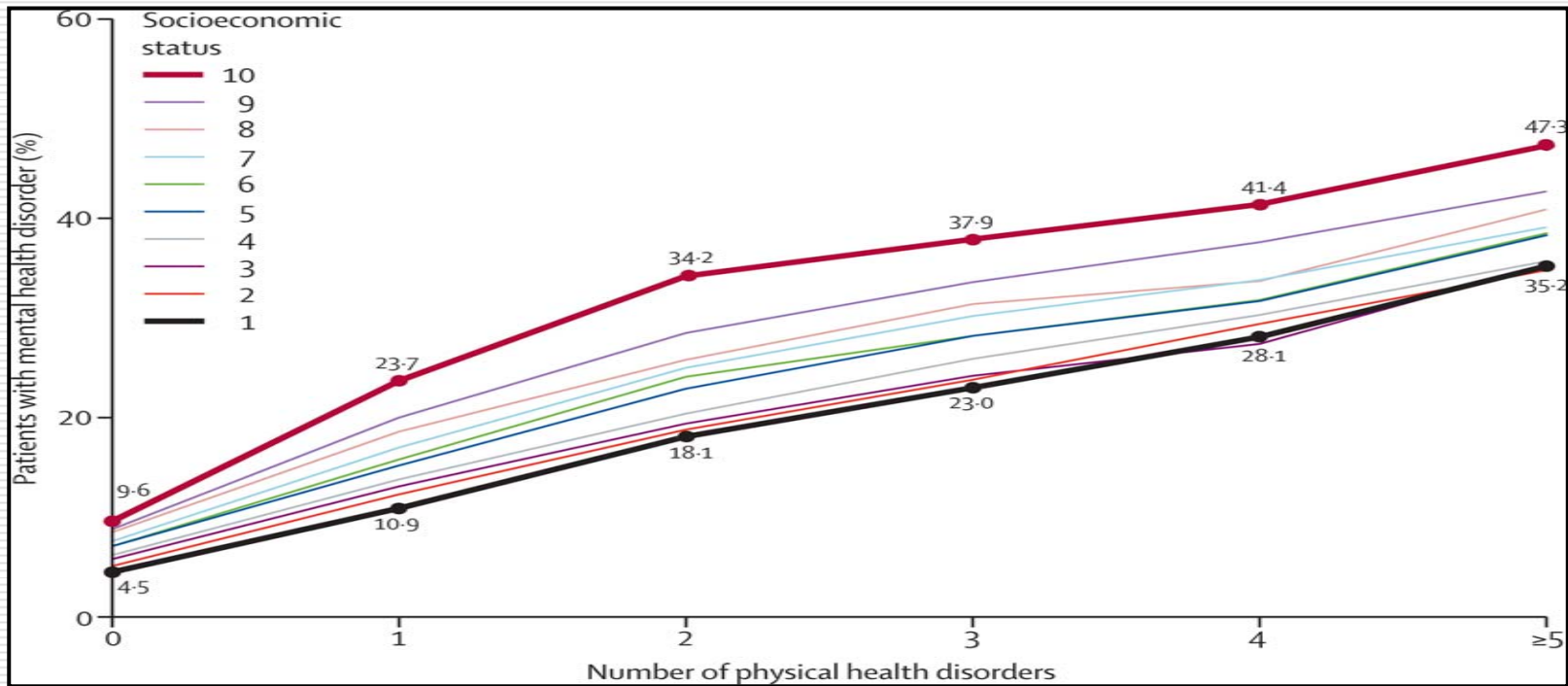


Figure 3 Physical and mental health comorbidity and the association with socioeconomic status On socioeconomic status scale, 1=most affluent and 10=most deprived.

Pacient crònic complex

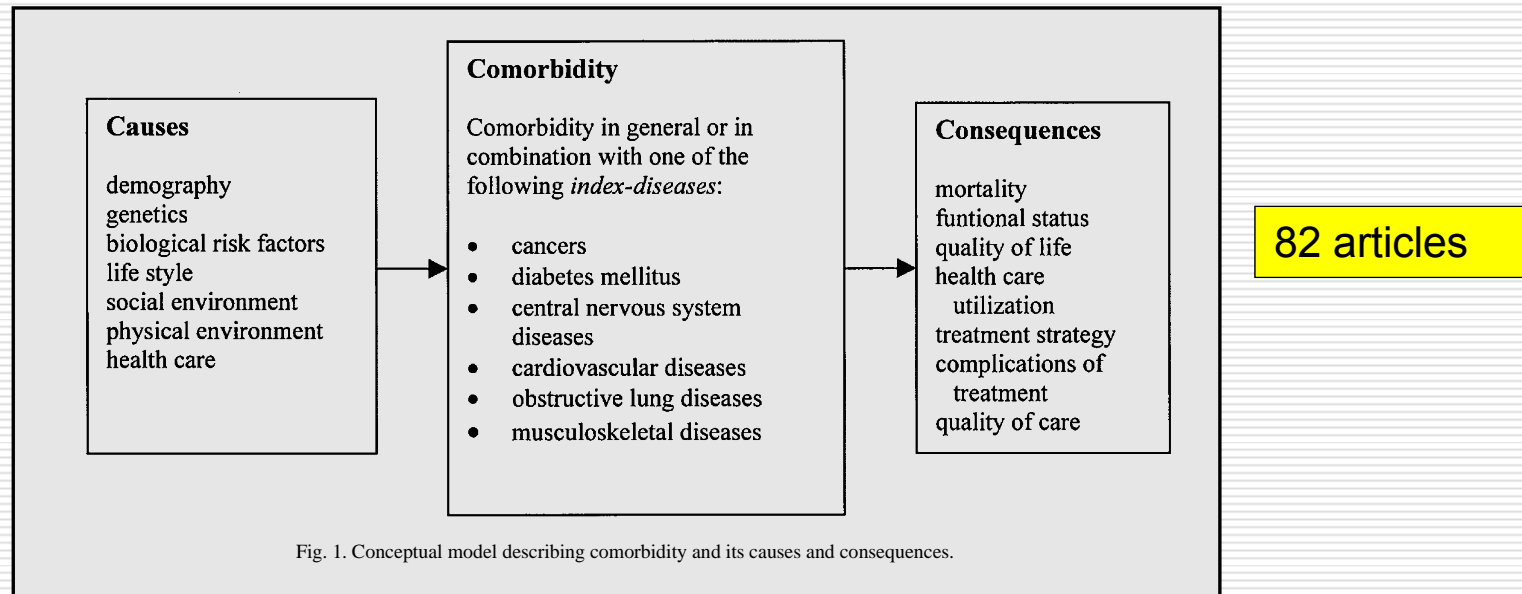
- ✿ Alta utilització d'hospitalitzacions urgents i visites a urgències.
- ✿ Polifarmàcia
- ✿ Necessitat d'atenció per part de diferents àmbits assistencials, organitzacions i professionals, cosa que requereix un nivell de coordinació important.
- ✿ Necessitat d'un model d'atenció integrada.

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- Conceptes
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 - Evidències clíniques en multimorbiditat / pacient crònic complex: ¿On som?
 - Conclusions
-

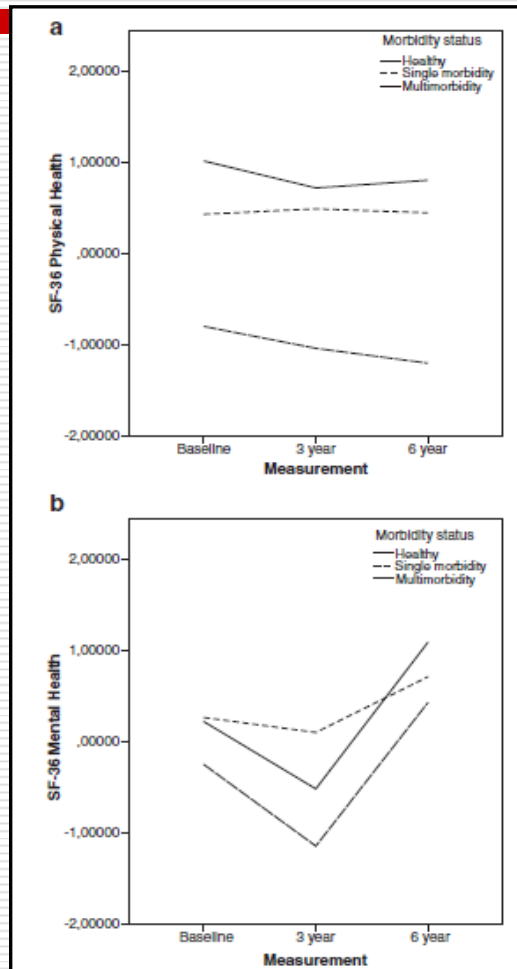
Causes and consequences of comorbidity: A review

Ronald Gijsen^{a,*}, Nancy Hoeymans^a, François G. Schellevis^b, Dirk Ruwaard^a,
William A. Satariano^c, Geertrudis A.M. van den Bos^{a,d}



The effect of multimorbidity on health related functioning: Temporary or persistent? Results from a longitudinal cohort study

Sil Aarts^{a,b,*}, Marjan van den Akker^{a,c}, Hans Bosma^d, Frans Tan^e, Frans Verhey^b,
Job Metsemakers^a, Martin van Boxtel^b



INDEX

- Conceptes
 - Epidemiologia
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 - Evidències clíniques en multimorbiditat / pacient crònic complex: ¿On som?
 - Conclusions
-

Measures of Multimorbidity and Morbidity Burden for Use in Primary Care and Community Settings A Systematic Review and Guide

Table 1. Characteristics and Application of the Most Commonly Studied Multimorbidity Measures in Outpatient Settings

Measure	Original Derivation/ Validation Populations	Information Needed	Original Purpose of Score
Disease count	Not applicable (varies for different studies)	Clinician-rated disease counts derived from medical records or clinician diagnosis Self-reported disease counts based on questionnaires or interviews	Not applicable (varies for different studies)
Chronic Disease Score (CDS)/ RxRisk Model ¹⁵⁻¹⁷	Original CDS ⁵ : adult HMO enrollees from a single US HMO Revised CDS ⁶ derived and validated in 254,694 adult members of a US HMO. RxRisk ¹⁷ derived and validated in large samples of US HMO enrollees	Automated pharmacy data during a 1-year period	To develop a stable measure of chronic disease status using routine pharmacy data rather than chart review
Charlson Index ¹⁸	Derived in 559 US medical inpatients Validated in 685 women receiving treatment for breast cancer	Various versions are available; 17 to 22 disease categories, including age In different forms, can be administered by a health professional on paper or electronically or self-completed as a questionnaire Free	To predict 1-year mortality among patients admitted to hospital Later adapted to predict costs ⁹
Adjusted Clinical Groups (ACG) System ²⁵	Derived and validated in US using large HMO databases Validation sample also included 30,000 Medicaid recipients	Age, sex, and diagnosis codes from medical records or insurance claims coded using the ICD or Read code systems Data entered into ACG System software available at cost under license	Originally devised to predict morbidity burden and use of health care resources System developed to provide a number of tools with different purposes
Cumulative Index Illness Rating Scale (CIRS) ^{26,27}	Hospitalized men in the United States ²⁶ and subsequently older adults in ambulatory settings ²⁷	A rating scale consisting of 14 body systems categories that can be filled in by trained assessors directly during clinical consultation or from medical records. Free access	To assess the medical burden of chronic illness
(Duke Severity Illness Checklist (DUSOI) index ²⁸⁻³⁰	Developed in 249 adult patients attending a family practice in the United States	Severity of illness checklist for measuring a person's illness severity Can be filled in during clinical consultation or from medical records Available from author	To quantify the burden of illness as measured by the physician

ADGs= Adjusted Diagnosis Groups; CADGS= collapsed Aggregated Diagnosis Groups; HMO= health maintenance organization, ICD= *International Classification of Diseases*, MACs= major Adjusted Categories.

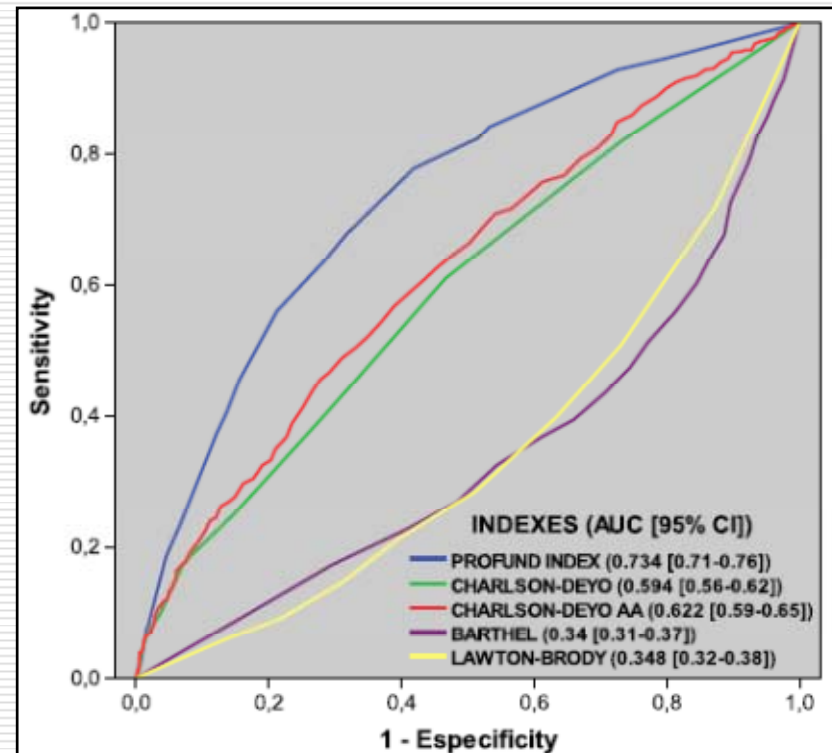
Development of a new predictive model for polypathological patients. The PROFUND index

M. Bernabeu-Wittel ^{a,*}, M. Ollero-Baturone ^{a,1}, L. Moreno-Gaviño ^{a,1}, B. Barón-Franco ^{b,1}, A. Fuertes ^{c,1},
J. Murcia-Zaragoza ^{d,1}, C. Ramos-Cantos ^{e,1}, A. Alemán ^{f,1}, A. Fernández-Moyano ^{g,1}

Table 4

Multivariate analysis of risk factors associated to 12-month mortality in the derivation cohort of polypathological patients of Spain.

Characteristics	Odds ratio (CI)/p	PROFUND index
Demographics		
≥ 85 years	1.71 (1.15-2.5)/0.008	3
Clinical features		
Active neoplasia	3.36 (1.9-5.8)/<0.0001	6
Dementia	1.89 (1.1-3.1)/0.019	3
III-IV functional class on NYHA and/or MRC	2.04 (1.4-2.9)/<0.0001	3
Delirium in last hospital admission	2.1 (1.5-4.9)/0.001	3
Analytical parameters (blood-plasma)		
Hemoglobin < 10 g/dl	1.8 (1.2-2.7)/0.005	3
Psychological-functional-socio-familial features		
Barthel index < 60	2.6 (1.38-3.4)/<0.0001	4
No caregiver or caregiver other than spouse	1.51 (1.02-2.2)/0.038	2
Healthcare features		
≥ 4 Hospital admissions in last 12 months	1.9 (1.07-3.29)/0.028	3
Total score items = 9		0-30 points



- 1632 patients
- 33 hospitals
- 1 any follow-up

- 12% < 2p
- 31.5% 3-6p
- 50% 7-10p
- 68% ≥ 11p

Guidelines for people not for diseases: the challenges of applying UK clinical guidelines to people with multimorbidity

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³Population Health Sciences, University of Dundee, Dundee, Tayside, UK

	Depression [14, 15]	Type 2 diabetes [16]	Previous MI [17]	COPD [18]	Osteoarthritis [19]
Does guideline address treatment in over 75s?	Minimal focused on antidepressant drug choice	Minimal focused on oral hypoglycaemic drug choice	Moderate but focused on cardiac rehabilitation	Moderate across multiple areas including smoking cessation, inhaler use, use of theophyllines, referral for surgery	Moderate across several areas including exercise (a core treatment for all ages), avoiding NSAIDs in older people, referral for surgery
Does guideline address comorbidity? (either in terms of comorbid disease or drug treatment recommended for comorbid conditions)	Extensive consideration of detection and management of depression in people with physical conditions with functional limitation	Moderate discussion of oral hypoglycaemic choice in relation to physical comorbidity, and considering the psychological impact of painful neuropathy	Extensive discussion of making cardiac rehabilitation accessible to people with physical and mental health comorbidities. Moderate discussion of considering statin therapy in the	Moderate discussion of theophylline use in relation to comorbidity and interacting antibiotics, and comorbidity contra-indications to pulmonary rehabilitation	Extensive discussion as part of holistic assessment (fitness for surgery, drug choice, falls, comorbidities compounding osteoarthritis) and role of exercise irrespective of comorbidity
Does guideline explicitly discuss patient choice and preferences?	Generic introduction with later extensive discussion of patient and carer involvement in the decision-making	Generic introduction emphasising self-care, with some later discussion about patient preference with regard to hypoglycaemic agents	Generic introduction only	Generic introduction only	Generic introduction, with some later discussion of clearly communicating risks and benefits of treatment to patients
Does guideline explicitly discuss potential challenges to patient adherence to recommended treatments?	Moderate discussion of involving patients in decision to use antidepressants, and checking/addressing adherence if no response	None	Moderate discussion focused on actively promoting attendance at cardiac rehabilitation and tailoring components to individual needs	Moderate discussion focused on regular assessment of inhaler technique, and actively promoting attendance at pulmonary rehabilitation and tailoring components to individual needs	Minimal discussion focused on clinicians taking individual circumstances into account to promote exercise

Necessitem GPC per pacients més que per malalties, per aplicar tractaments més segurs i ajustats als interessos dels individus

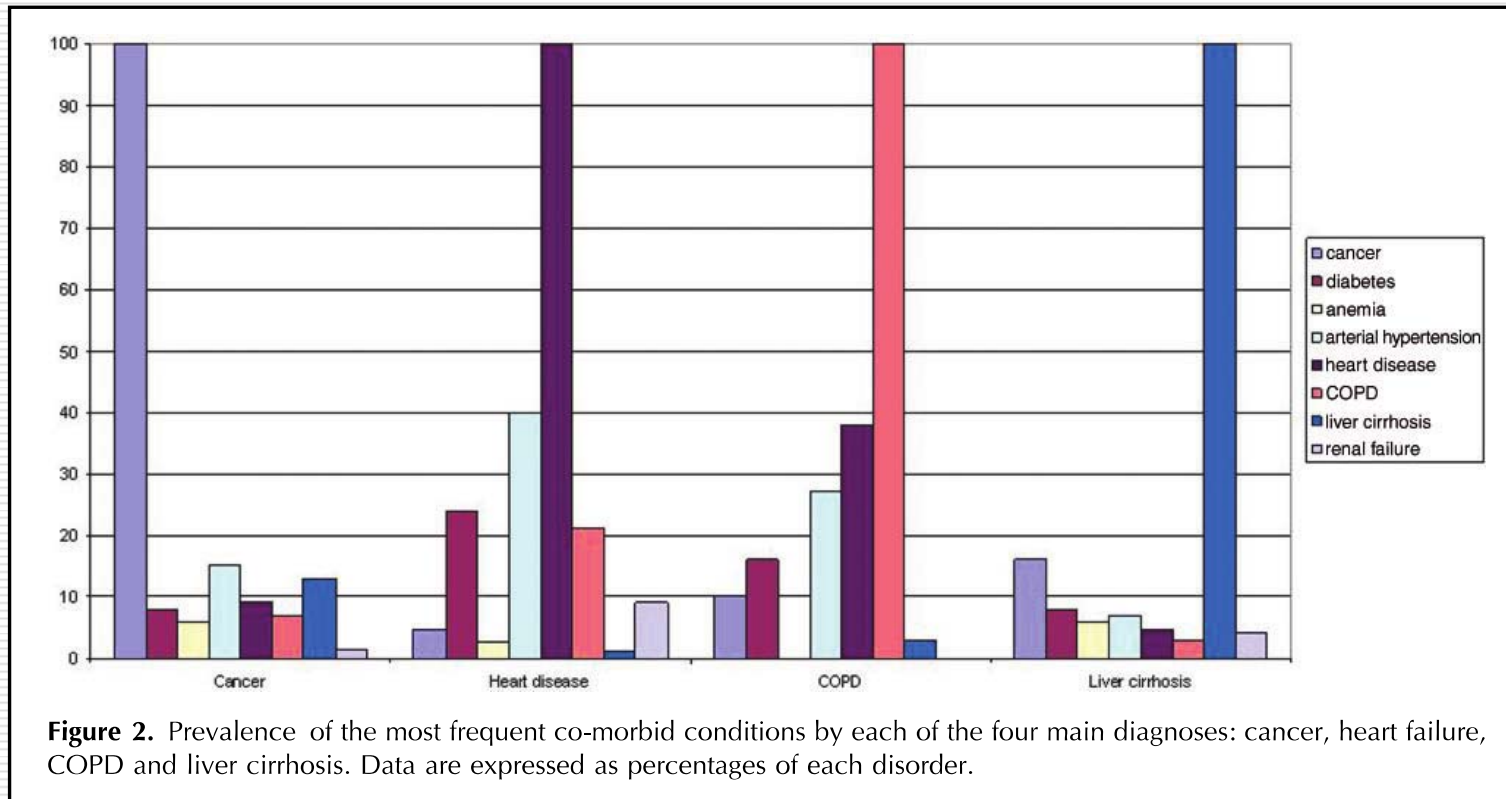
Principis claus en la atenció Sanitària de les persones d'edat avançada amb multimorbiditat.

- ✿ **Preferències del pacient**
 - Obtenir e incorporar les preferències del pacient en la presa de decisions mediques
- ✿ **Interpretació de les evidències**
 - Interpretar i aplicar els coneixements mèdics centrats en pacients d'edat avançada amb multimorbiditat reconeixent les limitacions en les evidències
- ✿ **Pronòstic**
 - Presa de decisions valorant beneficis, riscos, carrega medica, valorant la esperança de vida, la situació funcional i la qualitat de vida
- ✿ **Viabilitat clínica.**
 - Considerar la complexitat i viabilitat dels tractaments i les intervencions sanitàries
- ✿ **Optimització dels tractaments**
 - Escollir aquells tractaments amb majors beneficis i menys riscos, amb impacte en la qualitat de vida

Panel d'experts de la Societat Americana de Geriatria
JAGS 2012; 60: E1-E25

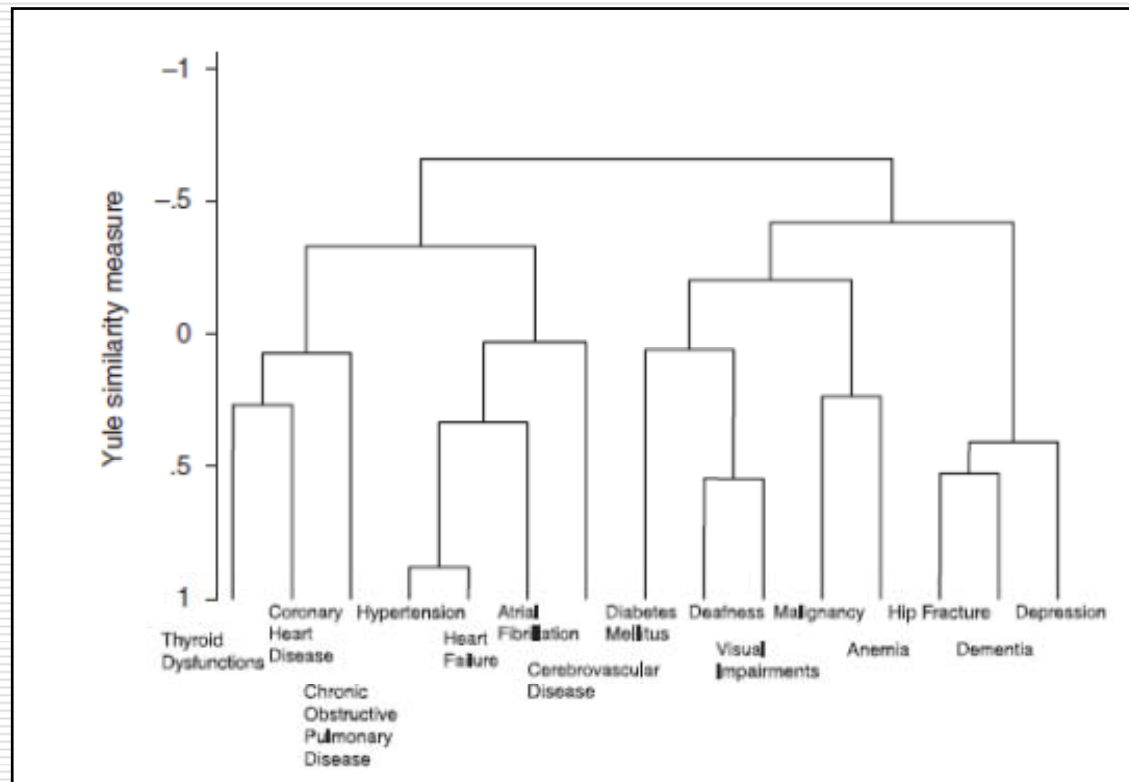
The burden of chronic disorders on hospital admissions prompts the need for new modalities of care: A cross-sectional analysis in a tertiary hospital

C. HERNANDEZ¹, M. JANSA¹, M. VIDAL¹, M. NUÑEZ¹, M.J. BERTRAN¹,
J. GARCIA-AYMERICH² and J. ROCA¹



Patterns of Chronic Multimorbidity in the Elderly Population

Alessandra Marengoni, MD, PhD,^{*†‡} Debora Rizzuto, MS,^{*†} Hui-Xin Wang, PhD,^{*†}
Bengt Winblad, MD, PhD,^{*†} and Laura Fratiglioni, MD, PhD^{*†}



Suecia: ≥77 a; 51.009 p

Patterns of comorbidity and multimorbidity in the oldest old: The Octabaix study

Francesc Formiga ^{a,c,*}, Assumpta Ferrer ^b, Hector Sanz ^d, Alessandra Marengoni ^e,
 Jesus Alburquerque ^f, Ramón Pujol ^{a,c}
 and on behalf of the Octabaix study members ¹

Baix Llobregat: ≥85 a; 328 p

Table 3

Relationship between the observed (O) and the expected (E) prevalence of co-occurring pairs of chronic conditions.

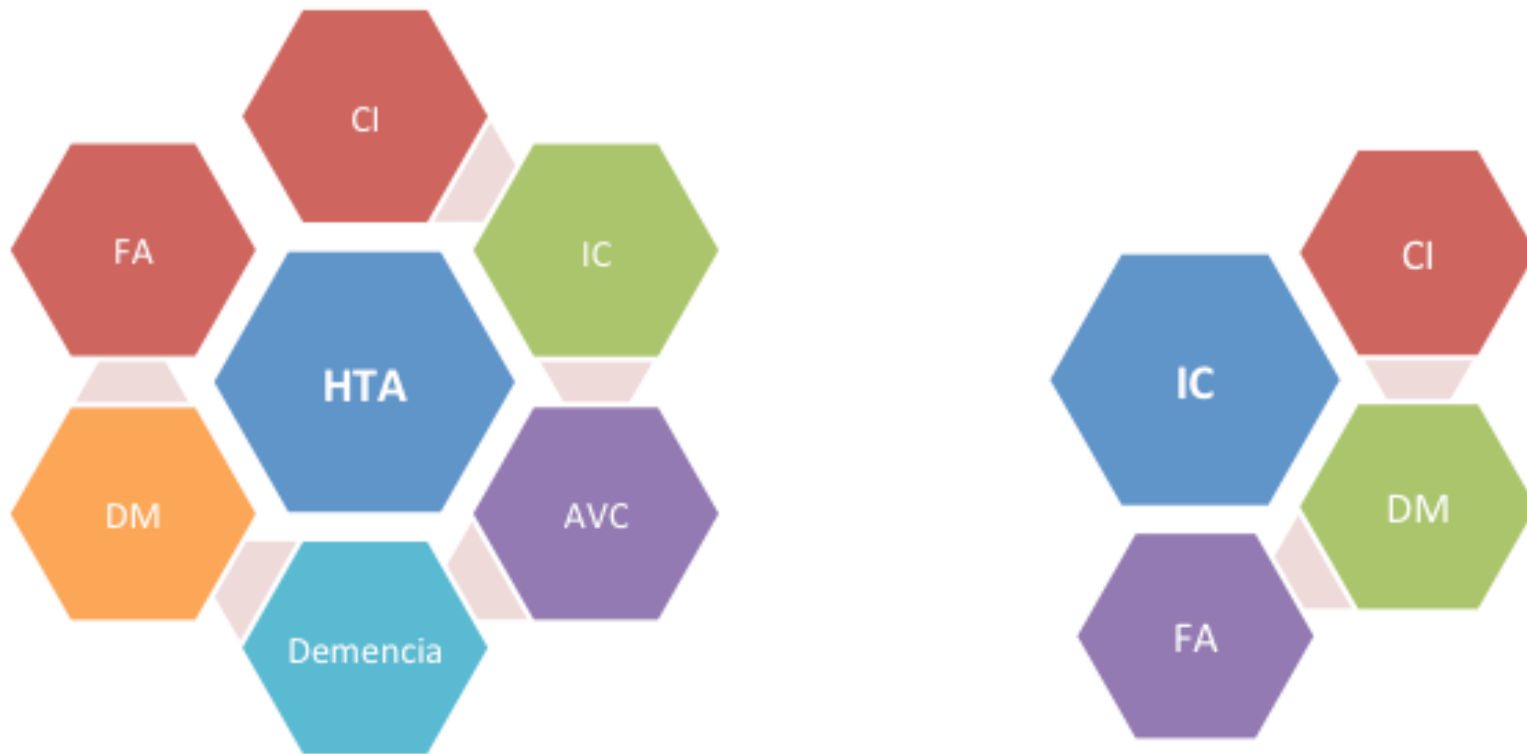
Pairs of chronic conditions		Observed (%)	Expected (%)	Multimorbidity coefficient	OR 95% CI ^a	OR 95% CI ^b
Stroke	Ischemic cardiomyopathy	3.1	0.9	3.35	6.90 (2.70–17.63)	5.92 (2.24–15.65)
Ischemic cardiomyopathy	Heart failure	2.4	0.8	3.12	5.37 (2.05–14.07)	5.96 (2.15–16.55)
Ischemic cardiomyopathy	Peripheral arterial disease	0.9	0.3	3.07	4.00 (1.04–15.40)	3.45 (0.84–14.10)
Chronic obstructive pulmonary disease	Malignancy	3.7	1.3	2.76	4.80 (2.16–10.66)	3.95 (1.68–9.27)
Atrial fibrillation	Heart failure	4.0	1.6	2.48	4.13 (1.93–8.85)	4.19 (1.93–9.06)
Dementia	Parkinson	0.9	0.4	2.44	3.07 (0.80–11.83)	2.59 (0.63–10.61)
Heart failure	Parkinson	1.2	0.5	2.40	3.24 (0.95–11.04)	3.32 (0.93–11.87)
Stroke	Parkinson	1.2	0.6	2.06	2.67 (0.79–9.03)	1.94 (0.55–6.82)
Anemia	Malignancy	4.3	2.2	1.95	2.90 (1.41–5.97)	4.00 (1.78–9.01)
Diabetes Mellitus	Ischemic cardiomyopathy	3.1	1.6	1.93	3.11 (1.25–7.75)	3.06 (1.20–7.79)

^a Crude model.

^b Adjusted by gender, education level and caregiver.

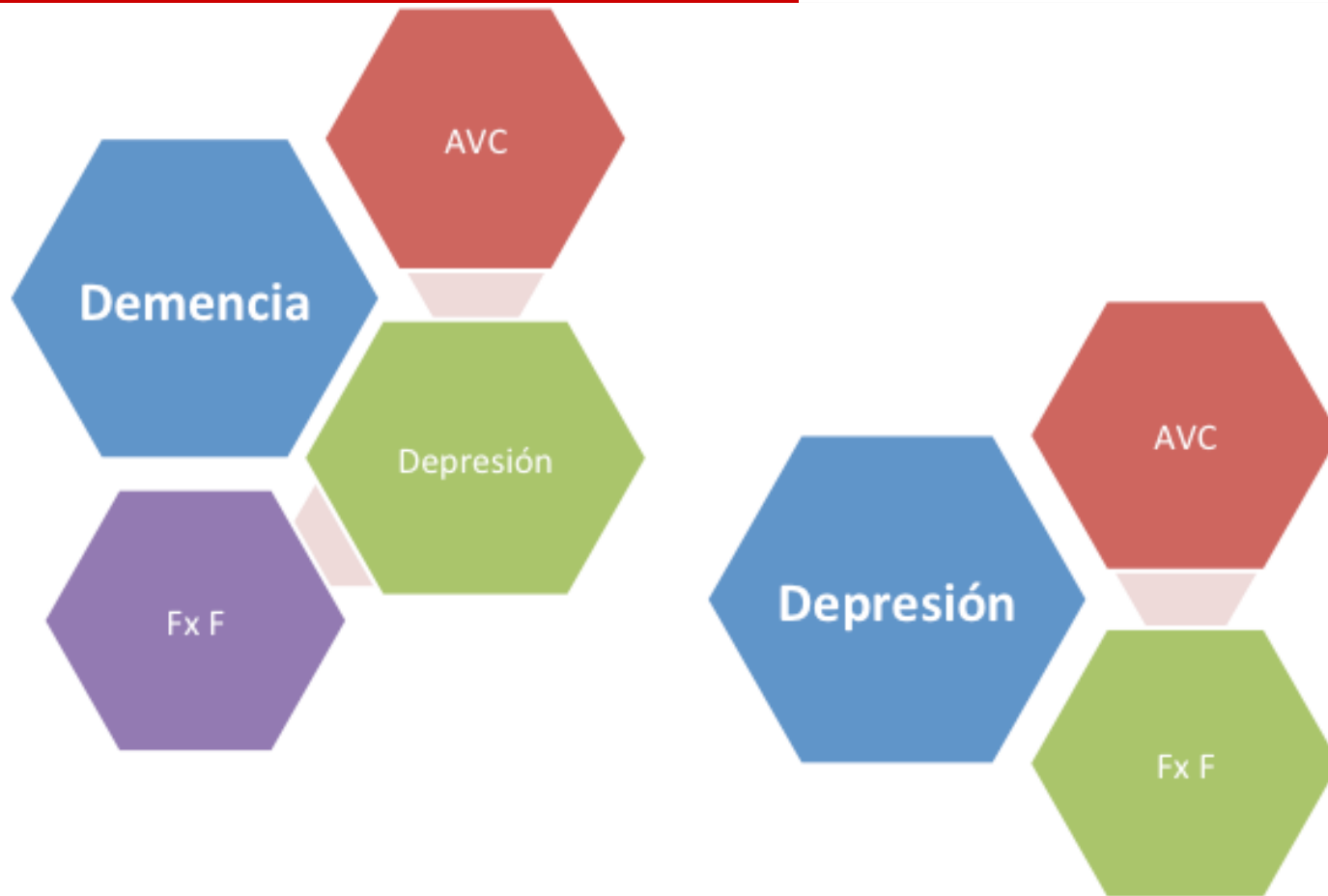
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The Co-Occurrence of Chronic Diseases and Geriatric Syndromes: The Health and Retirement Study

Pearl G. Lee, MD,^{*‡} Christine Cigolle, MD, MPH,^{†‡} and Caroline Blaum, MD, MS^{*‡}

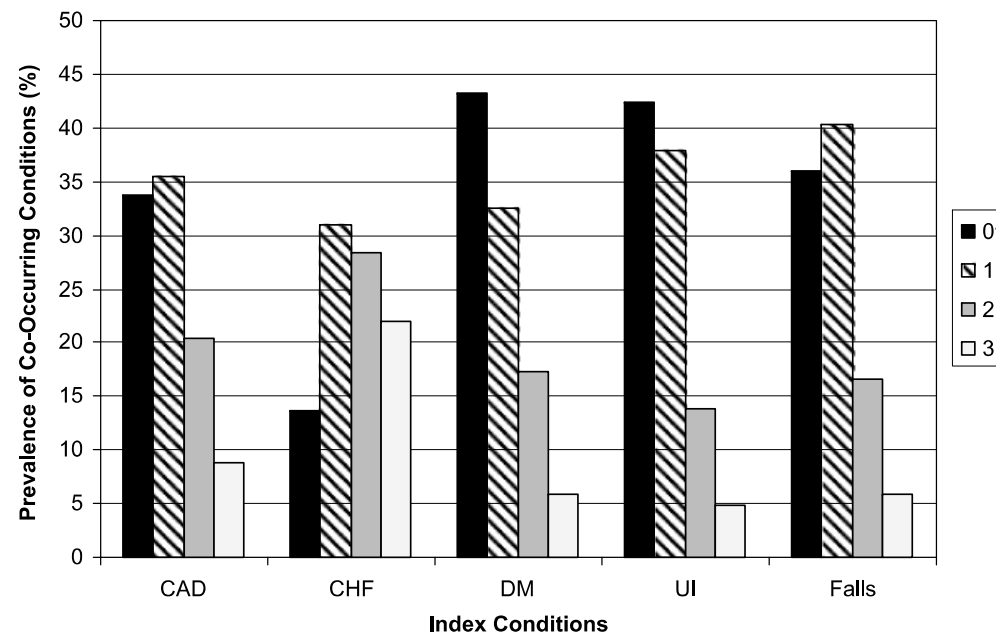
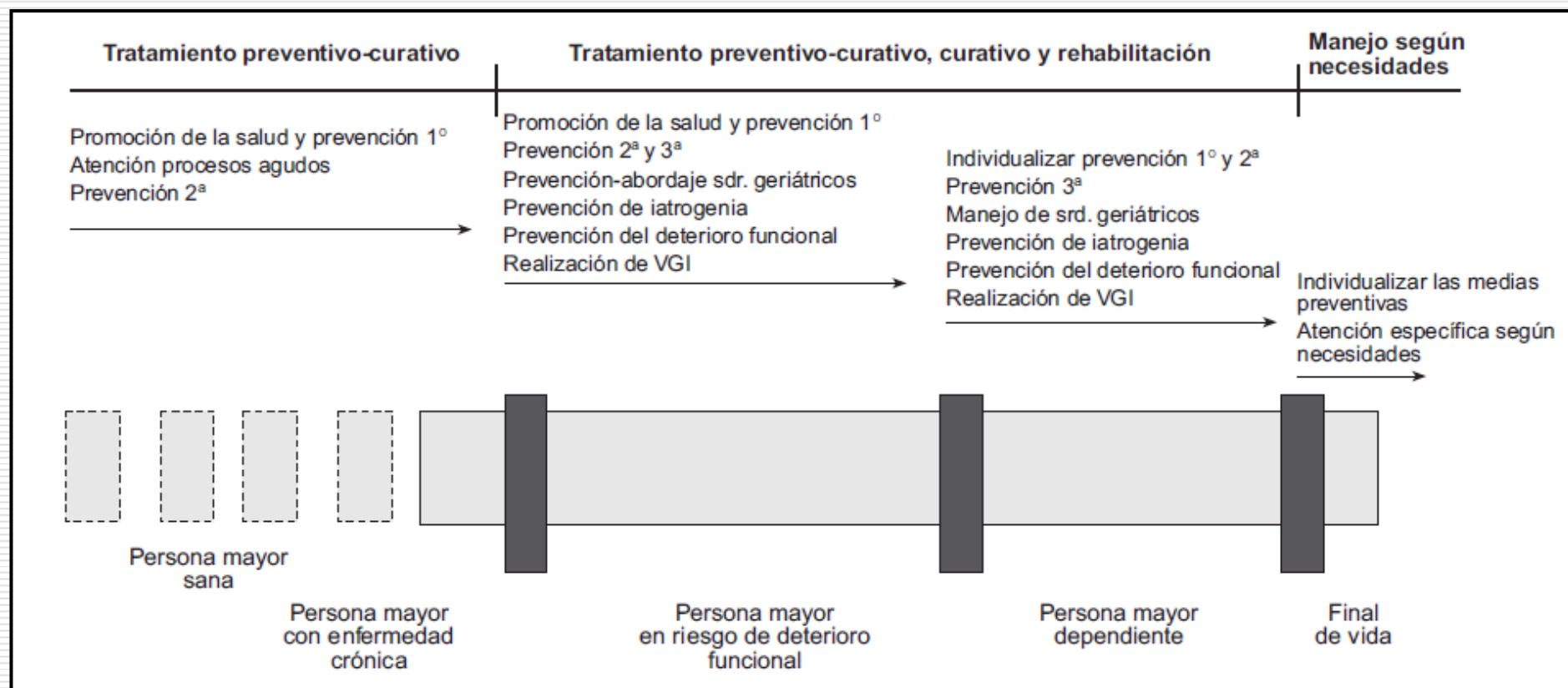


Figure 1. Prevalence of multiple co-occurring index conditions. [†]Weighted percentages derived using the Health and Retirement Study (HRS) respondent population weights to adjust for the complex sampling design of the HRS survey. The percentages of respondents with coronary artery disease (CAD), congestive heart failure (CHF), diabetes mellitus (DM), urinary incontinence (UI), or falls who also had no, one, two, or three of the four other index conditions. Y-axis scale is 0 to 50.

Precisar el grado de fragilidad, dependencia y situación de final de vida el paciente crónico complejo



CONCLUSIONS

La prevalença de processos crònics s'incrementa amb l'envelliment

Els pacients amb multimorbiditat tenen pitjors resultats en salut que aquells amb una única malaltia crònica

Es a dir, menys qualitat de vida i més deteriorament funcional, polifarmàcia i efectes adversos. Major taxa d'hospitalització i de reingressos, institucionalització i mortalitat

Necessitem GPC per pacients més que per malalties, per aplicar tractaments més segurs i ajustats als interessos dels individus

Els processos crònics s'associen en patrons o "clusters" més enllà del atzar. Identificar-los ens facilitaria guies de tractament, programats de educació i prevenció més eficaços

