ACADEMIA LATINOAMERICANA DE MEDICINA DEL ADULTO MAYOR
ALMA

Organización Panamericana de la Salud

Organización Mundial de la Salud
Américas

Organización Mundial de la Salud
Centro Colaborador OMS-OPS

XVI CURSO ALMA PARA DOCENTES UNIVERSITARIOS DE GERIATRÍA

"LA PERSONA MAYOR CON CONDICIONES CRÓNICAS MÚLTIPLES"

LA HABANA, CUBA.

Del 26 al 29 Octubre de 2017

Programa académico

La persona mayor con varias enfermedades crónicas
Definición, magnitud e impacto

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Getafe, Madrid

26 de Octubre de 2017

SaludMadrid

Hospital Universitario de Getafe
Comunidad de Madrid

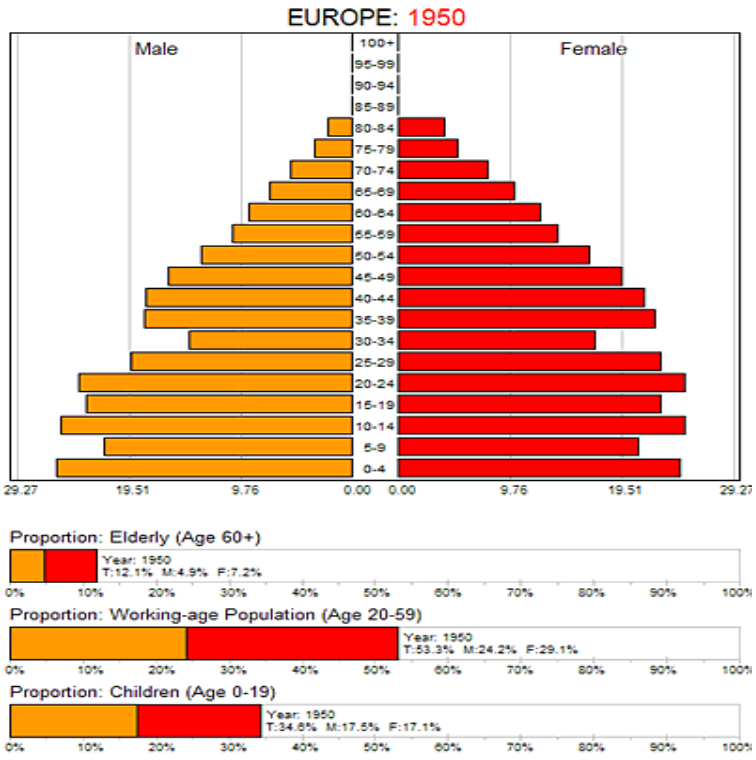
A) ¿Es muy frecuente la coexistencia de enfermedades crónicas en las personas mayores?

B) Relación enfermedad y pronóstico: ¿es la enfermedad crónica el principal factor de riesgo?

C) Otras opciones

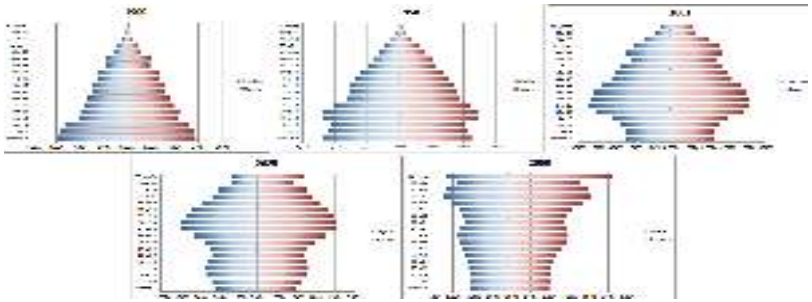
Demographic change – challenges to society & economy

Ageing society

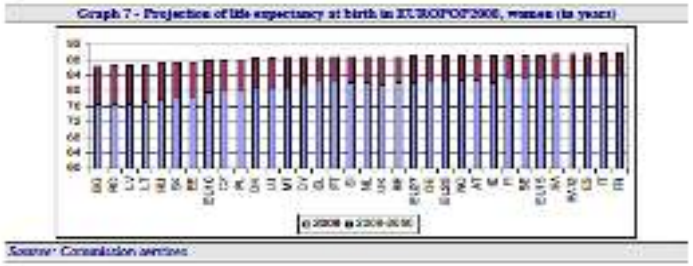


- Health workforce shortage
- Chronic conditions
- Financial unsustainability
- HLY vs LE
- Health inequalities

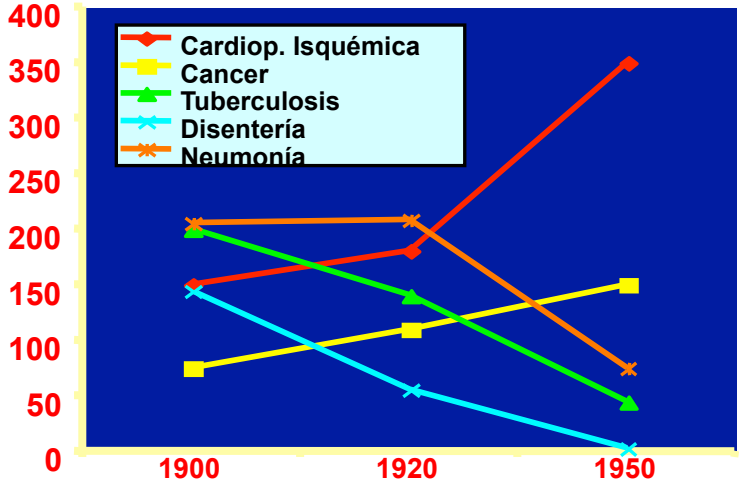
DEMOGRAPHIC TRANSITION

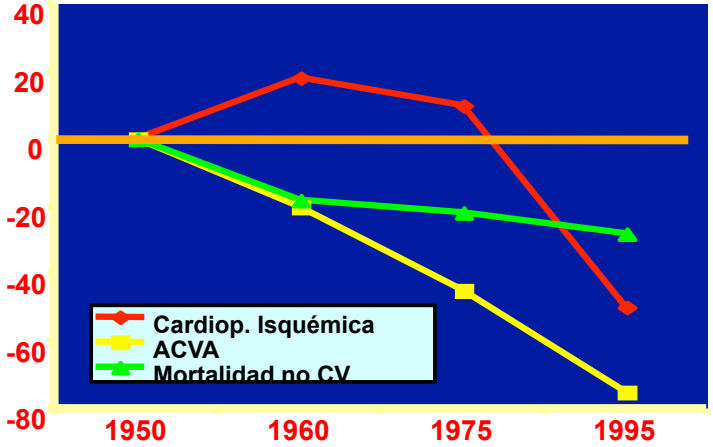






EPIDEMIOLOGIC TRANSITION





Diabetes in Older People – high levels of co-morbidity comparable to other key chronic conditions

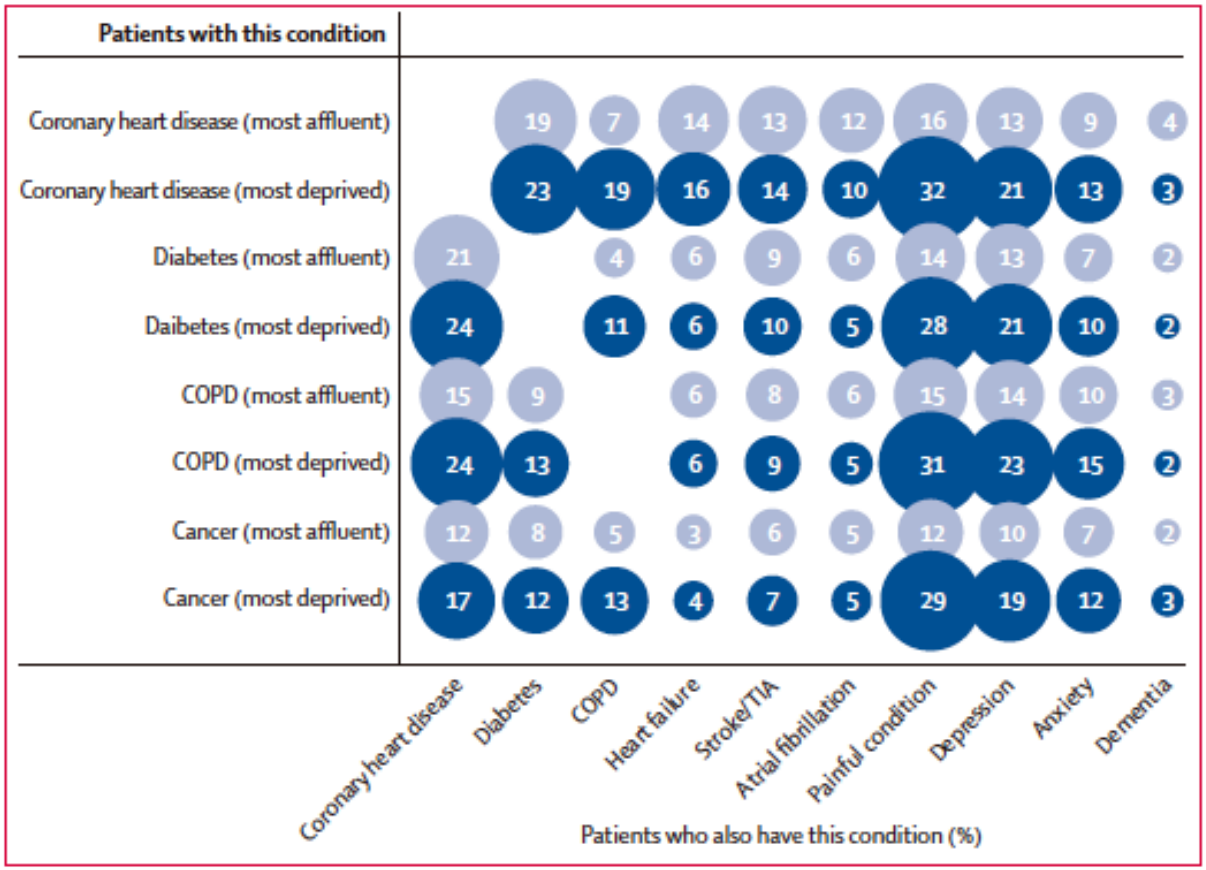
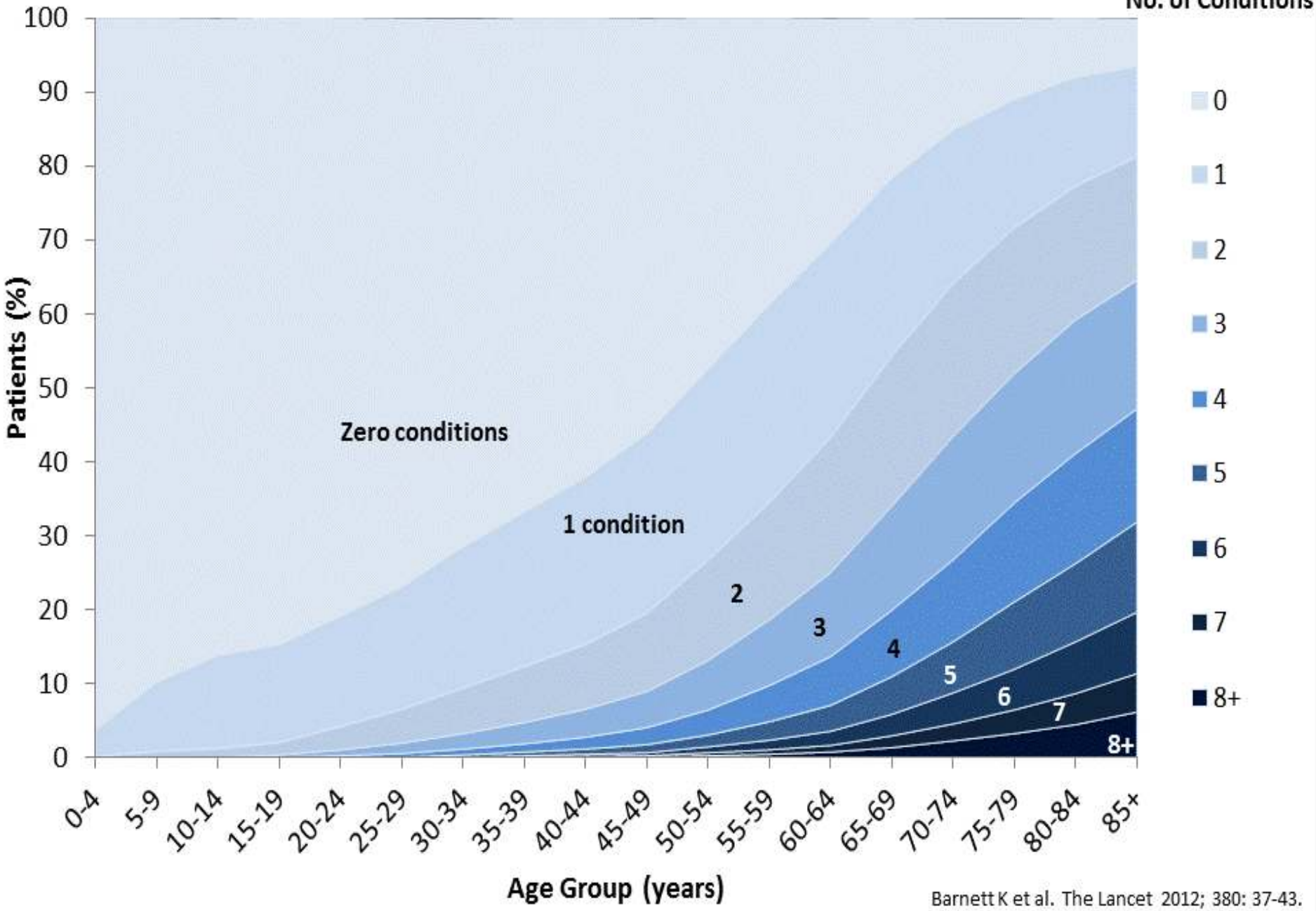
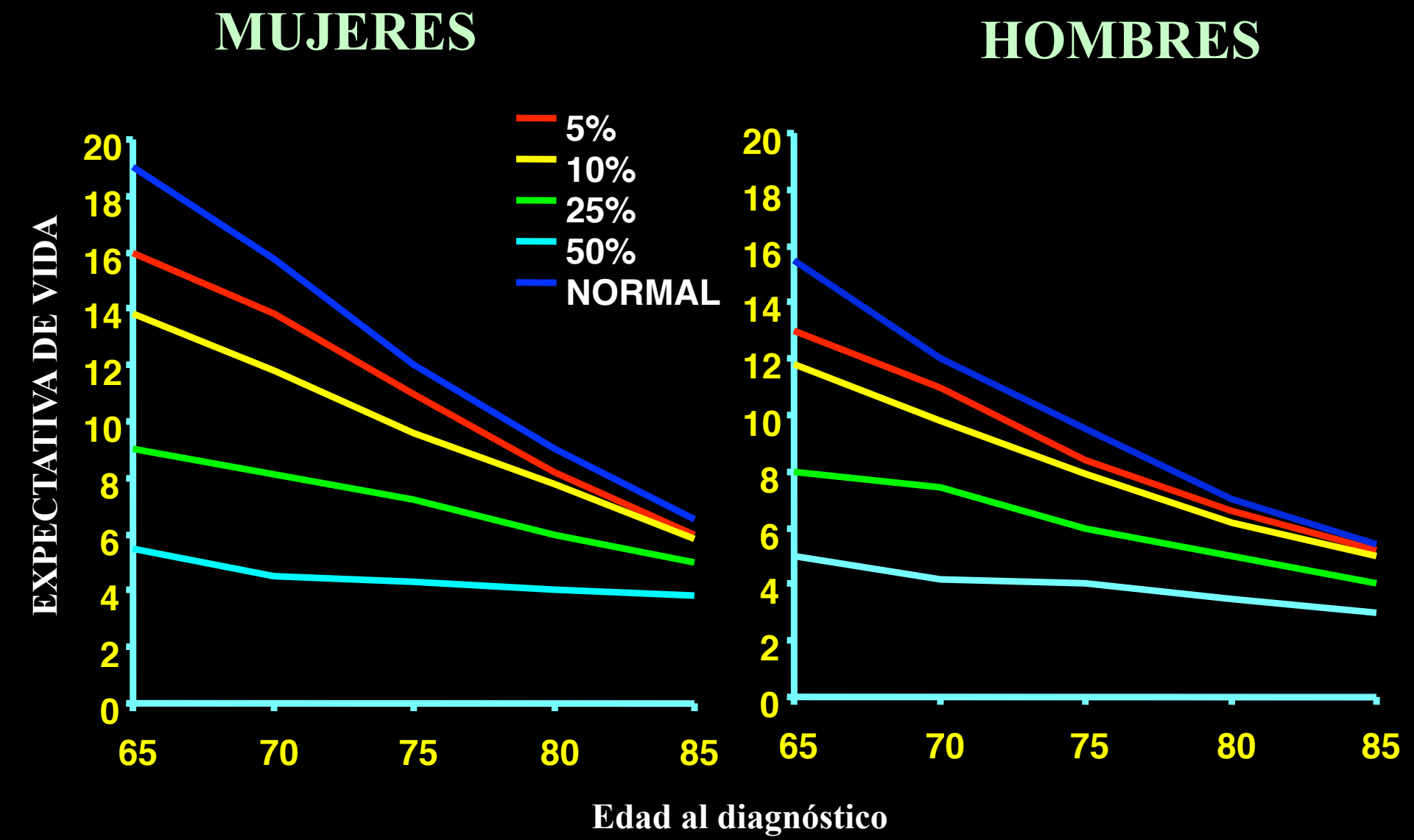




Figure 4: Selected comorbidities in people with four common, important disorders in the most affluent and most deprived deciles

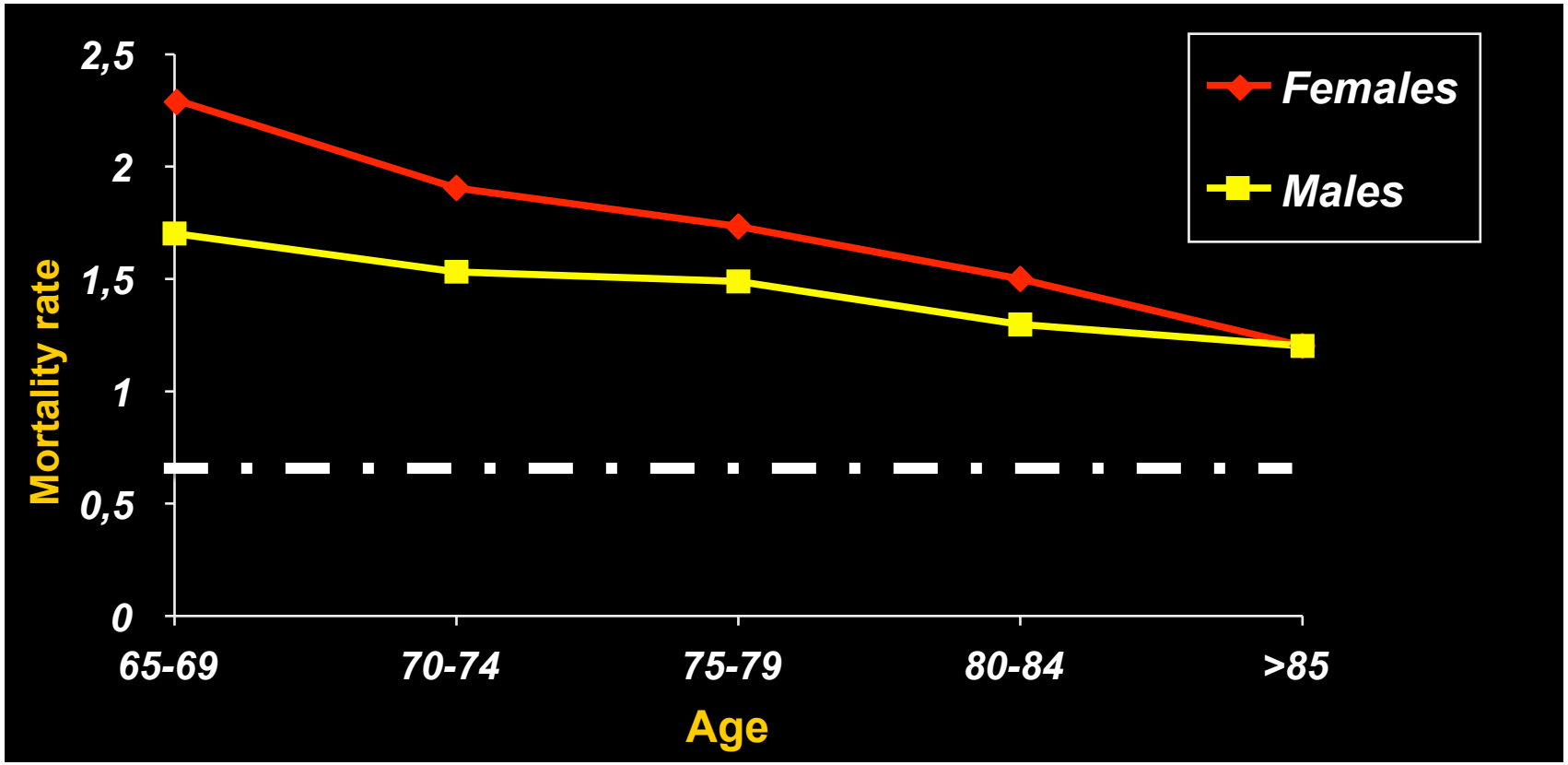


Barnett K et al. The Lancet 2012; 380: 37-43.



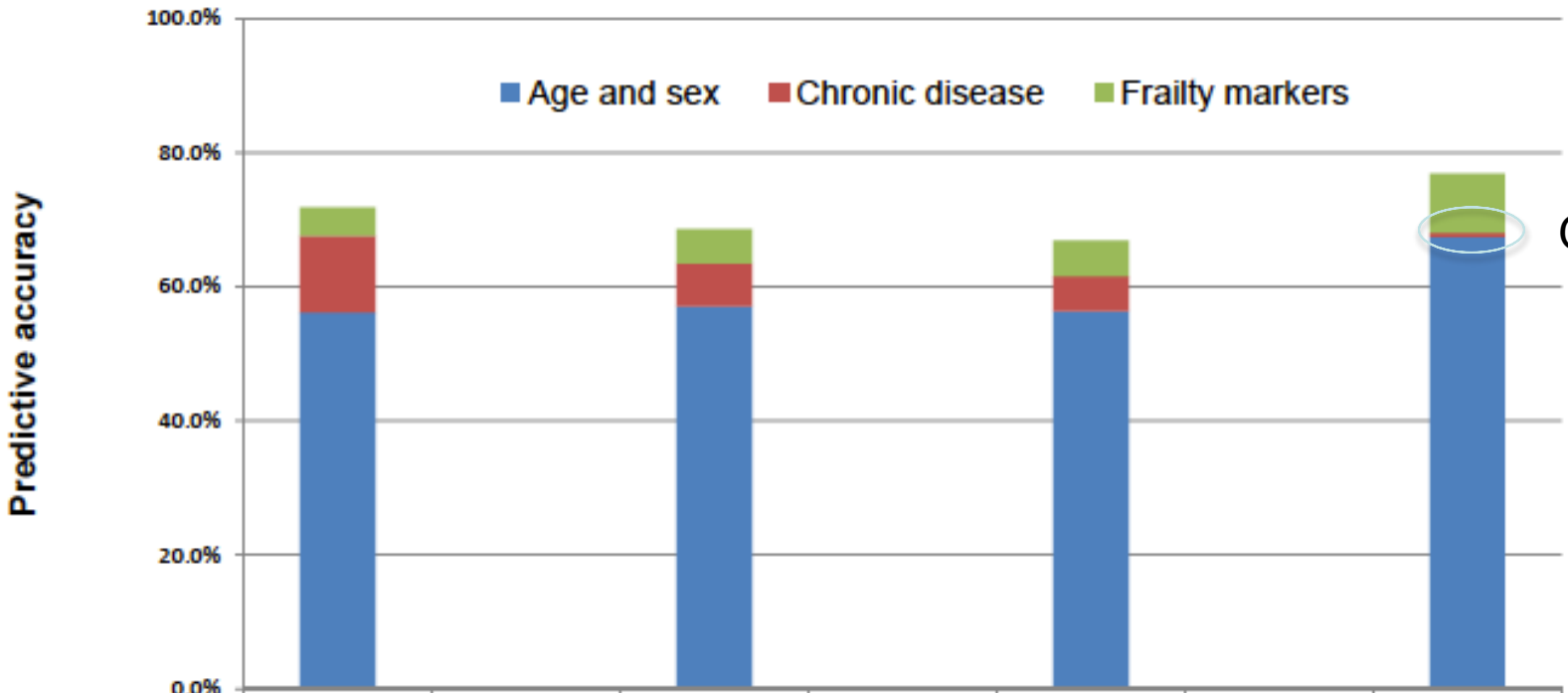
Welch HG et al., Ann Intern Med 1996; 124: 577-584.

DM and Mortality



Bertoni AG. Diabetes Care 2002;25:471-475

Contribution of frailty markers by age group
EPESE - Boston



ONG

	65-69		70-74		75-79		80 and over
Frailty markers	4.3%		5.1%		5.3%		8.8%
Chronic disease	11.4%		6.4%		5.2%		0.7%
Age and sex	56.2%		57.1%		56.4%		67.4%

- Frailty contribution increases from 4.3% to 8.8%
- Chronic disease contribution decreases from 11.4% to 0.7%

Hypertension paradox

5-Year Mortality by Level of SBP or DBP at Entry, in 2 Population-Based Studies of those aged 85 and Older

Systolic BP	Percent Alive at 5 Years		Diastolic BP	Percent Alive at 5 Years	
	Leiden	Tampere		Leiden	Tampere
90–120	15	5	50–69	12	(*)
>120–140	25	14	60–69	26	8
>140–160	39	29	70–79	31	19
>160–180	36	40	80–89	34	31
>180–200	31	39	90–99	35	39
>200	41	44	100–109	(**)	35
			>110	41	46

Notes: * In the Tempere study ($n = 561$), the lowest category of diastolic blood pressure was <70 (4).

** In the Leiden study ($n = 833$), the highest category of diastolic blood pressure was >100 (5).

Goodwin, J of Gerontol 2003

Rethinking the Association of High Blood Pressure with Mortality in Elderly Adults: The Impact of Frailty

Arch Intern Med. 2012 August 13; 172(15): 1162–1168.

Michelle C. Odden, PhD[1,2], Carmen A. Peralta, MD, MAS[2,3], Mary N. Haan, DrPH[4], and Kenneth E. Covinsky, MD, MPH[2,3]

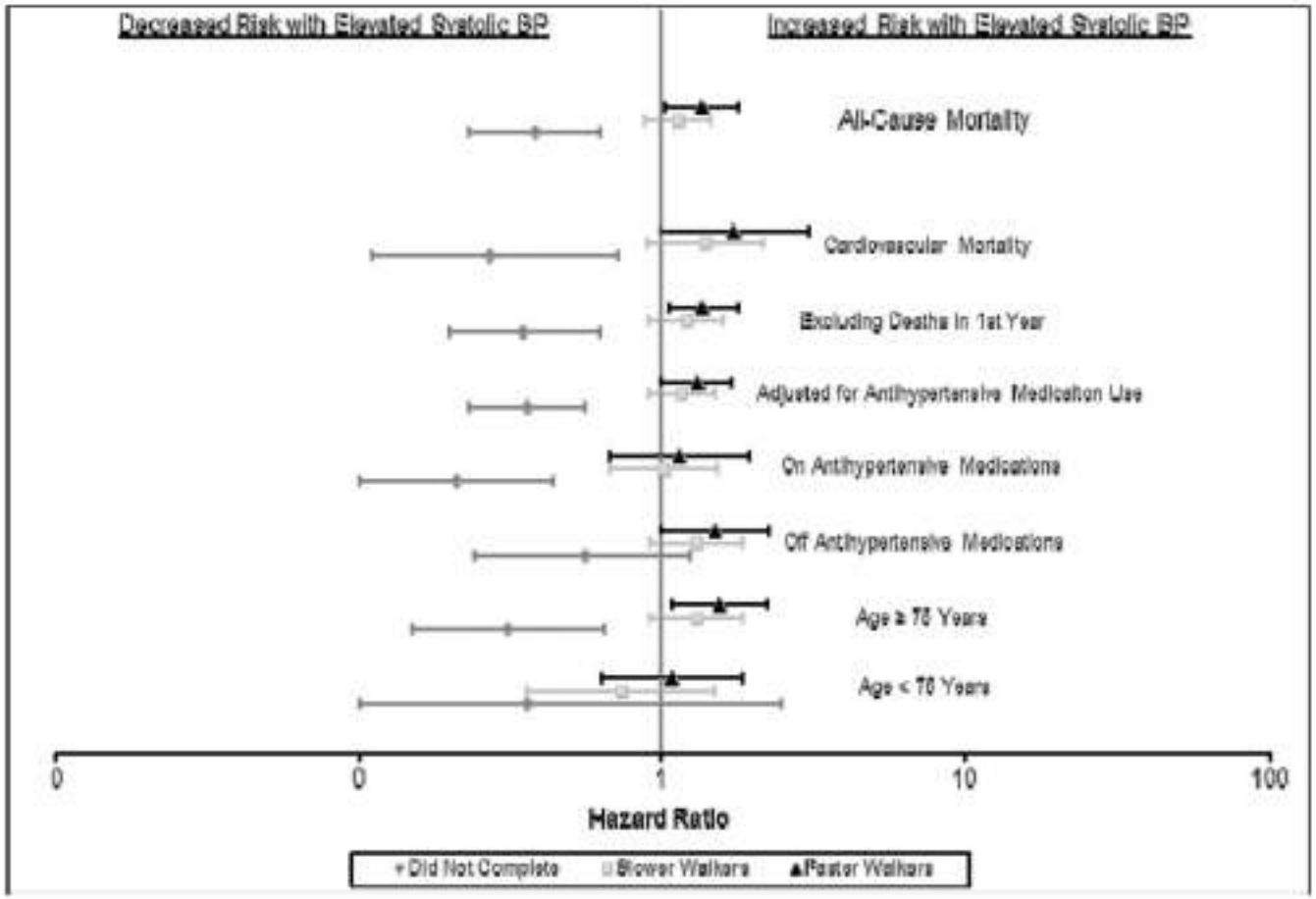
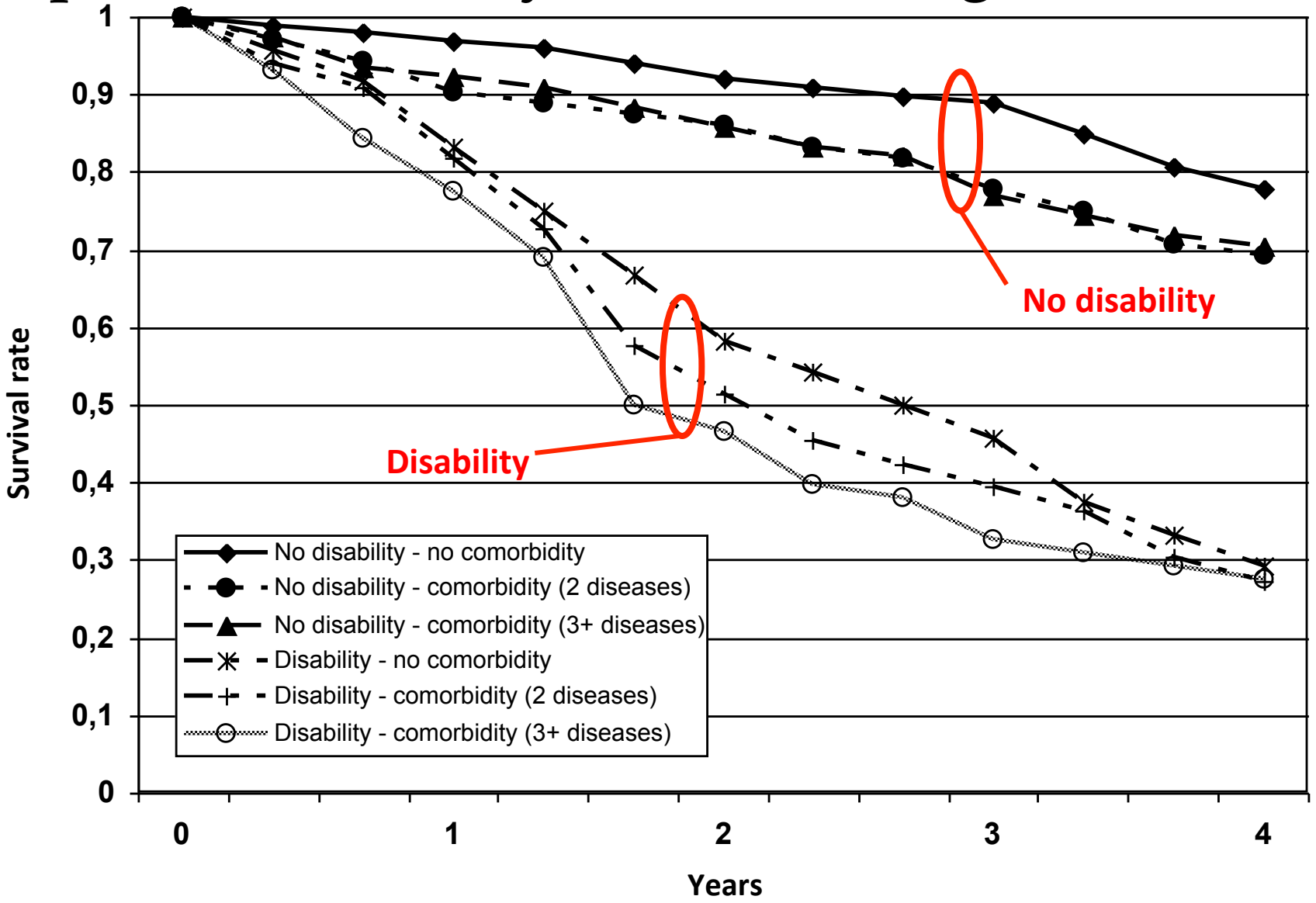


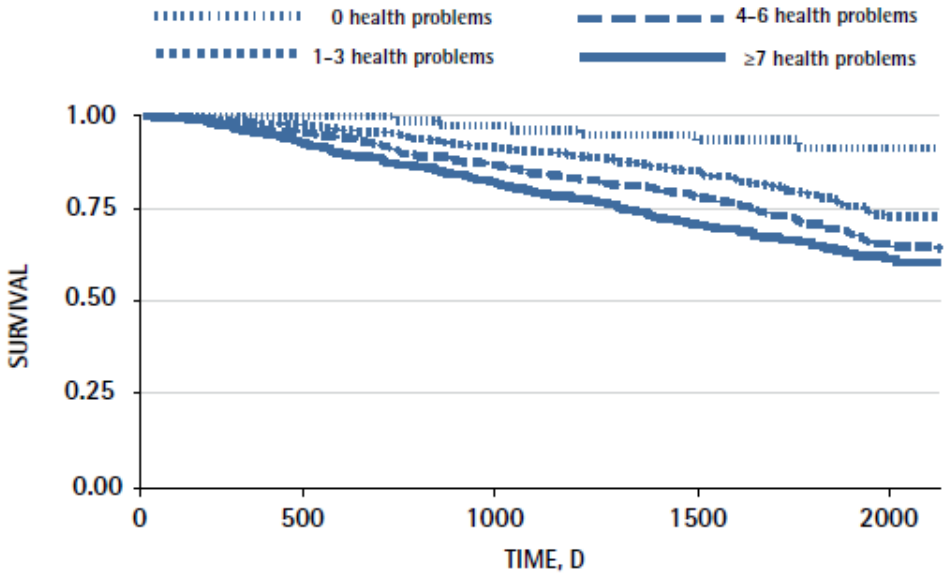
Figure 2.
Sensitivity analyses of the association of elevated systolic BP (>140 mmHg) and mortality, stratified by walking speed, in NHANES participants aged 65 and older (1999–2002) followed until December 31st, 2006.

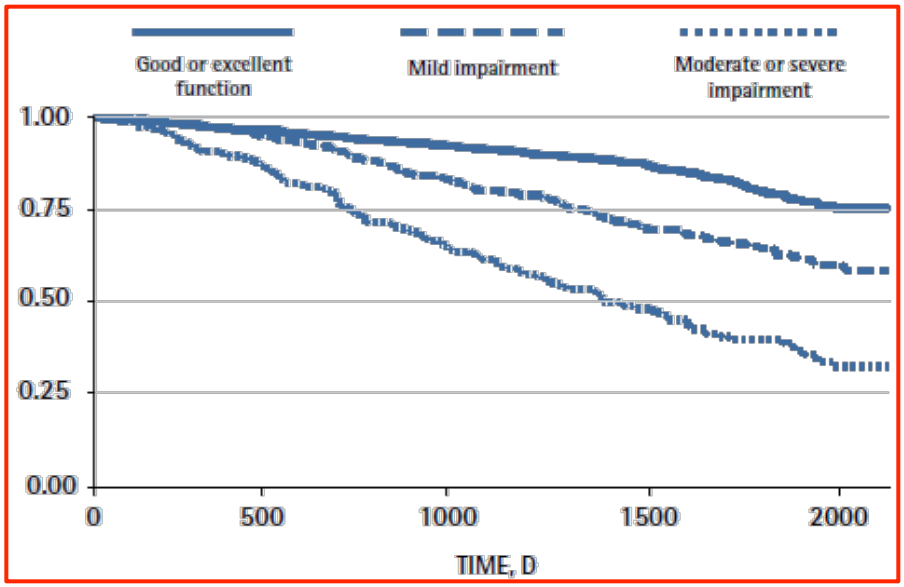
Disability, more than multimorbidity, predicts mortality in advanced age



Landi et al., J Clin Epidemiol 2010

Multimorbidity, disability, and mortality in community-dwelling older adults





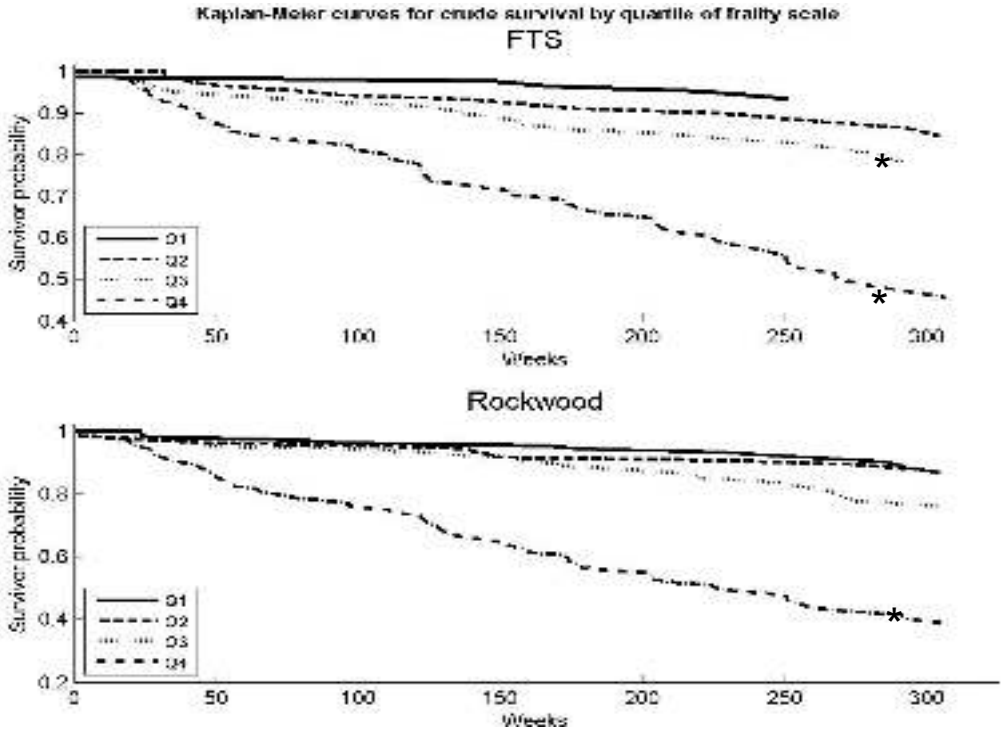
St John et al., Can Fam Physician 2014

La fragilidad, pero no la enfermedad, explica el exceso de riesgo de muerte y discapacidad en poblacion anciana con DM (Estudio Toledo de Envj. Saludable

	Model 1. Death with Charlson						
	FTS				Rockwood FS		
Variable	HR	LL	UL		HR	LL	UL
Age	**1,068**	**1,022**	**1,116**		**1,075**	**1,037**	**1,114**
Sex (female)	**0,510**	**0,328**	**0,795**		**0,540**	**0,366**	**0,797**
Charlson Index	1,009	0,894	1,138		0,987	0,882	1,104
Disability	1,292	0,748	2,231		1,095	0,653	1,839
Frailty I.*	**1,042**	**1,025**	**1,059**		**1,063**	**1,041**	**1,085**
Frailty I.**	**1,229**	**1,134**	**1,333**		**1,356**	**1,222**	**1,503**
Frailty I.***	**1,511**	**1,286**	**1,776**		**1,838**	**1,494**	**2,260**

	Model 3: Incident disability with Charlson						
	FTS				Rockwood FS		
Variable	OR	LL	UL		OR	LL	UL
Age	1,051	0,980	1,127		**1,092**	**1,026**	**1,161**
Sex (female)	1,475	0,759	2,868		**2,077**	**1,152**	**3,744**
Charlson Index	1,129	0,951	1,341		1,042	0,879	1,235
Frailty I.*	**1,031**	**1,005**	**1,058**		**1,053**	**1,012**	**1,095**
Frailty I.**	**1,165**	**1,025**	**1,325**		**1,292**	**1,060**	**1,576**
Frailty I.***	**1,358**	**1,050**	**1,757**		**1,670**	**1,123**	**2,482**

ESTUDIO TOLEDO
ENVEJECIMIENTO SALUDABLE
TOLEDO STUDY FOR HEALTHY AGING



Castro M et al., JAMDA 2016

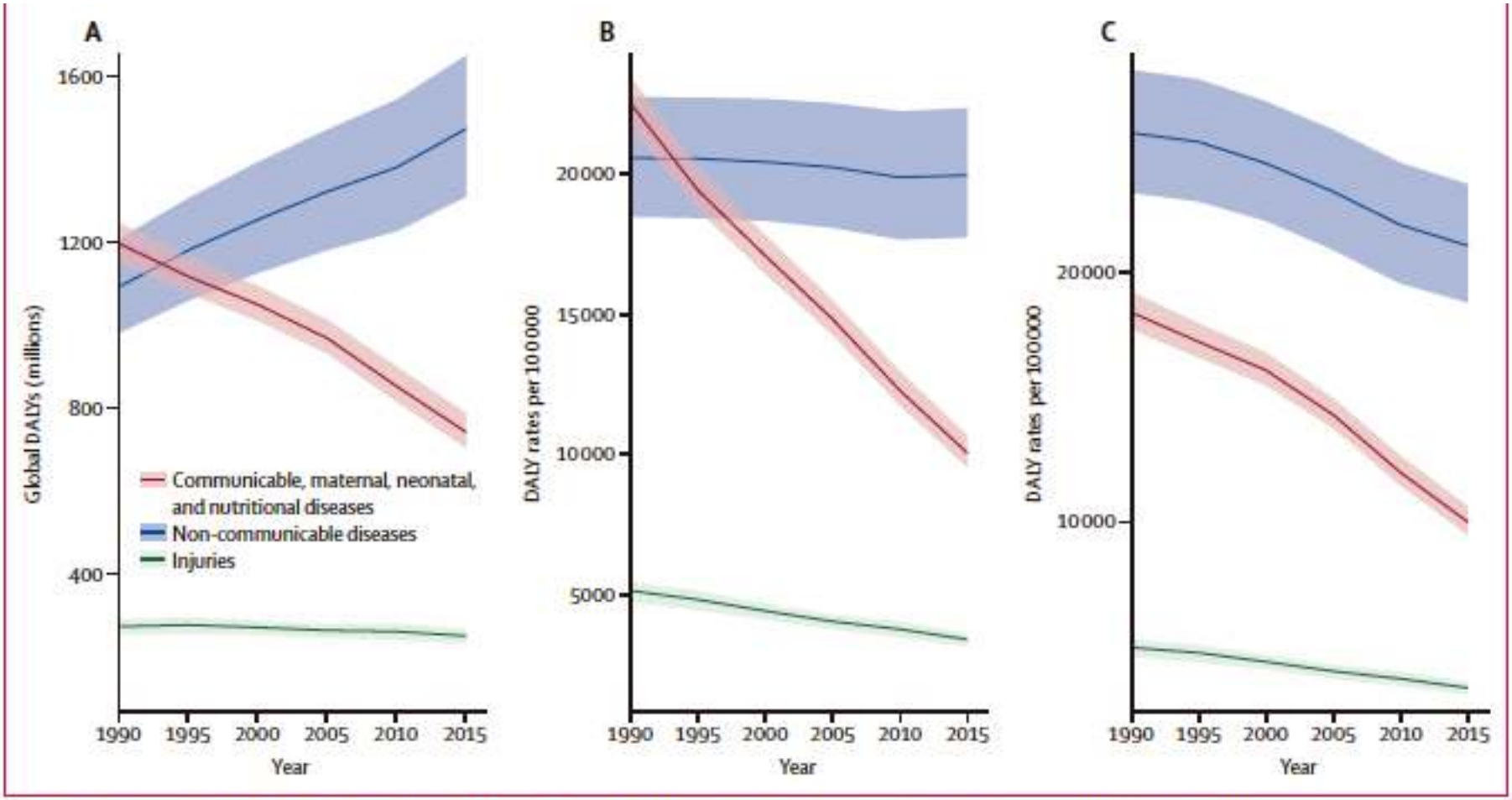
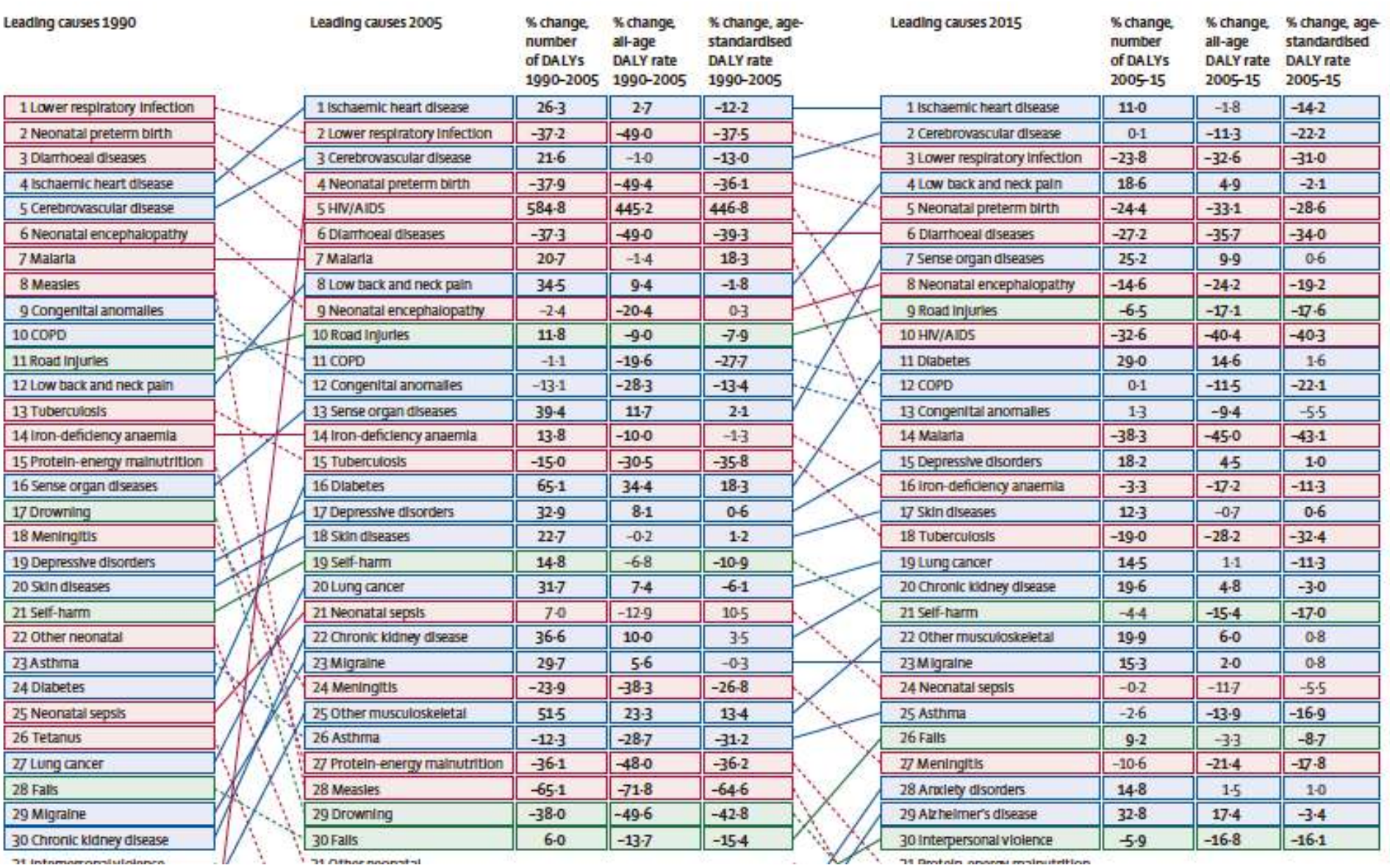


Figure 1: **Trends from 1990 to 2015, by GBD Level 1 cause, in global DALYs (A), crude DALY rates (B), and age-standardised DALY rates (C)**
The difference in trends between (A) and (B) is caused by population growth and the difference between (B) and (C) is caused by changes in the percentage distribution of the population by age. Shaded areas show 95% uncertainty intervals. DALYs=disability-adjusted life-years.

GBD 2015; Lancet, 2017


Leading causes 1990
Leading causes 2005
% change, number of DALYs 1990–2005
% change, all-age DALY rate 1990–2005
% change, age-standardised DALY rate 1990–2005
Leading causes 2015
% change, number of DALYs 2005–15
% change, all-age DALY rate 2005–15
% change, age-standardised DALY rate 2005–15
1 Lower respiratory infection
2 Neonatal preterm birth
3 Diarrhoeal diseases
4 Ischaemic heart disease
5 Cerebrovascular disease
6 Neonatal encephalopathy
7 Malaria
8 Measles
9 Congenital anomalies
10 COPD
11 Road injuries
12 Low back and neck pain
13 Tuberculosis
14 Iron-deficiency anaemia
15 Protein-energy malnutrition
16 Sense organ diseases
17 Drowning
18 Meningitis
19 Depressive disorders
20 Skin diseases
21 Self-harm
22 Other neonatal
23 Asthma
24 Diabetes
25 Neonatal sepsis
26 Tetanus
27 Lung cancer
28 Falls
29 Migraine
30 Chronic kidney disease
1 Ischaemic heart disease 26·3 2·7 −12·2
2 Lower respiratory infection −37·2 −49·0 −37·5
3 Cerebrovascular disease 21·6 −1·0 −13·0
4 Neonatal preterm birth −37·9 −49·4 −36·1
5 HIV/AIDS 584·8 445·2 446·8
6 Diarrhoeal diseases −37·3 −49·0 −39·3
7 Malaria 20·7 −1·4 18·3
8 Low back and neck pain 34·5 9·4 −1·8
9 Neonatal encephalopathy −2·4 −20·4 0·3
10 Road injuries 11·8 −9·0 −7·9
11 COPD −1·1 −19·6 −27·7
12 Congenital anomalies −13·1 −28·3 −13·4
13 Sense organ diseases 39·4 11·7 2·1
14 Iron-deficiency anaemia 13·8 −10·0 −1·3
15 Tuberculosis −15·0 −30·5 −35·8
16 Diabetes 65·1 34·4 18·3
17 Depressive disorders 32·9 8·1 0·6
18 Skin diseases 22·7 −0·2 1·2
19 Self-harm 14·8 −6·8 −10·9
20 Lung cancer 31·7 7·4 −6·1
21 Neonatal sepsis 7·0 −12·9 10·5
22 Chronic kidney disease 36·6 10·0 3·5
23 Migraine 29·7 5·6 −0·3
24 Meningitis −23·9 −38·3 −26·8
25 Other musculoskeletal 51·5 23·3 13·4
26 Asthma −12·3 −28·7 −31·2
27 Protein-energy malnutrition −36·1 −48·0 −36·2
28 Measles −65·1 −71·8 −64·6
29 Drowning −38·0 −49·6 −42·8
30 Falls 6·0 −13·7 −15·4
1 Ischaemic heart disease 11·0 −1·8 −14·2
2 Cerebrovascular disease 0·1 −11·3 −22·2
3 Lower respiratory infection −23·8 −32·6 −31·0
4 Low back and neck pain 18·6 4·9 −2·1
5 Neonatal preterm birth −24·4 −33·1 −28·6
6 Diarrhoeal diseases −27·2 −35·7 −34·0
7 Sense organ diseases 25·2 9·9 0·6
8 Neonatal encephalopathy −14·6 −24·2 −19·2
9 Road injuries −6·5 −17·1 −17·6
10 HIV/AIDS −32·6 −40·4 −40·3
11 Diabetes 29·0 14·6 1·6
12 COPD 0·1 −11·5 −22·1
13 Congenital anomalies 1·3 −9·4 −5·5
14 Malaria −38·3 −45·0 −43·1
15 Depressive disorders 18·2 4·5 1·0
16 Iron-deficiency anaemia −3·3 −17·2 −11·3
17 Skin diseases 12·3 −0·7 0·6
18 Tuberculosis −19·0 −28·2 −32·4
19 Lung cancer 14·5 1·1 −11·3
20 Chronic kidney disease 19·6 4·8 −3·0
21 Self-harm −4·4 −15·4 −17·0
22 Other musculoskeletal 19·9 6·0 0·8
23 Migraine 15·3 2·0 0·8
24 Neonatal sepsis −0·2 −11·7 −5·5
25 Asthma −2·6 −13·9 −16·9
26 Falls 9·2 −3·3 −8·7
27 Meningitis −10·6 −21·4 −17·8
28 Anxiety disorders 14·8 1·5 1·0
29 Alzheimer's disease 32·8 17·4 −3·4
30 Interpersonal violence −5·9 −16·8 −16·1

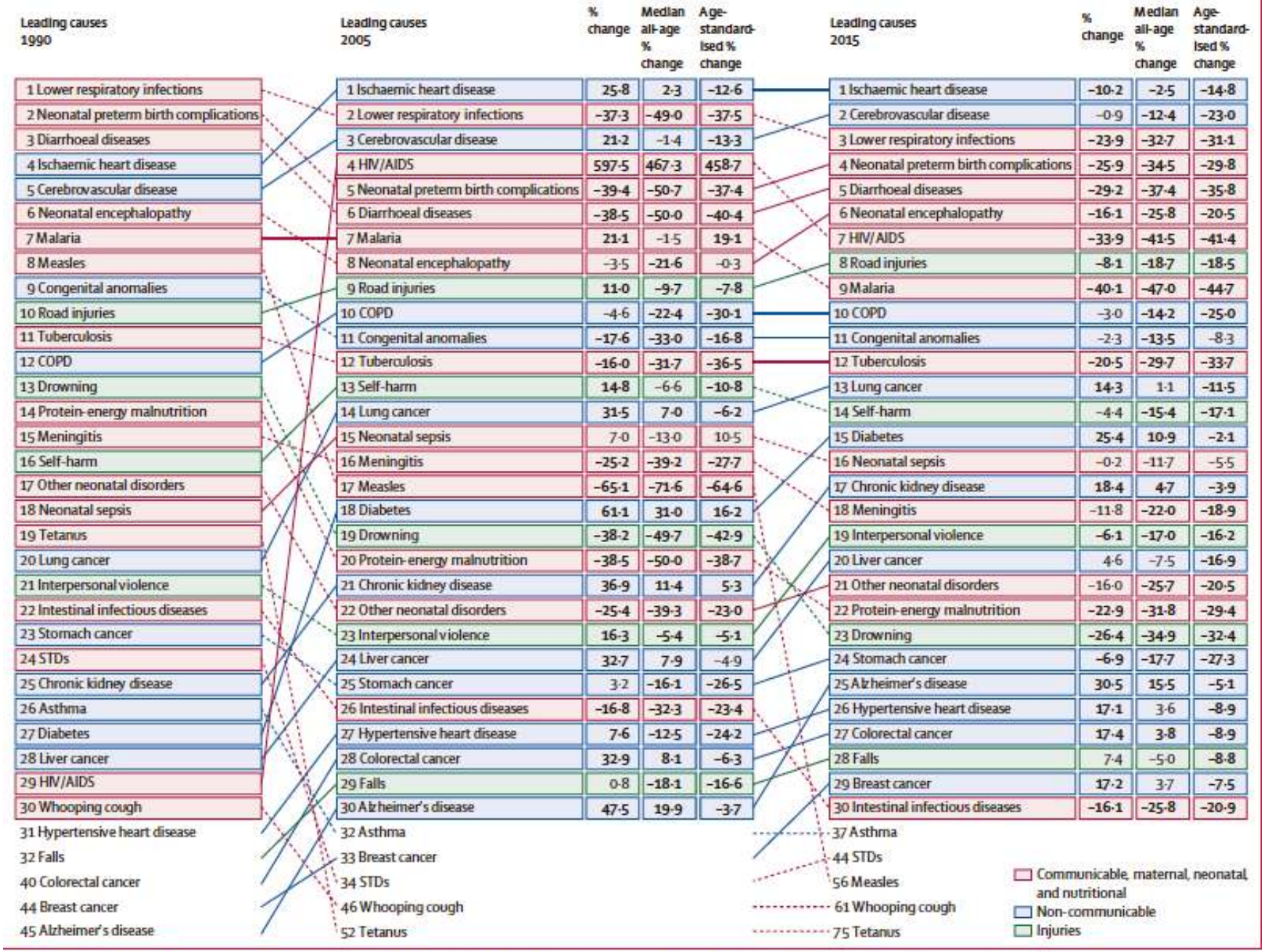
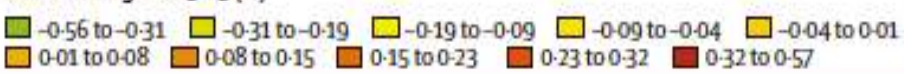


Figure 14: Leading 30 Level 3 causes of global YLLs for both sexes combined for 1990, 2005, and 2015, with percent change in number of YLLs, and all-age and age-standardised rates

Causes are connected by lines between time periods. For the time periods 1990 to 2005 and 2005 to 2015, three measures of change are shown: percent change in the number of YLLs, percent change in the all-age YLL rate, and percent change in the age-standardised YLL rate. Statistically significant changes are shown in bold. YLLs=years of life lost. COPD=chronic obstructive pulmonary disease. STDs=sexually transmitted diseases excluding HIV. An interactive version of this figure is available online at http://vizhub.healthdata.org/gbd-compare.

	1	2	3	4	5	6	7	8	9	10
Early neonatal (0–6 days)	NN Preterm	NN Enceph	NN Sepsis	Congenital	Other NN	LRI	NN Haemol	STD	Diarrhoea	Meningitis
Late neonatal (7–27 days)	NN Sepsis	NN Preterm	NN Enceph	Congenital	LRI	Other NN	Diarrhoea	Meningitis	Malaria	NN Haemol
Post-neonatal (28–364 days)	LRI	Diarrhoea	Congenital	Malaria	PEM	Meningitis	HIV	Haemog	Iron	NN Preterm
1–4 years	Malaria	Diarrhoea	LRI	PEM	Iron	Congenital	Meningitis	Drowning	Skin	Haemog
5–9 years	Iron	Skin	LRI	Diarrhoea	Intest inf	Malaria	HIV	Asthma	Road injuries	Congenital
10–14 years	Iron	Skin	HIV	Conduct	Asthma	Road injuries	Anxiety	Intest inf	Migraine	Haemog
15–19 years	Road injuries	Skin	Depression	Iron	Back & neck	Self-harm	Migraine	Anxiety	Violence	HIV
20–24 years	Road injuries	Depression	Self-harm	Back & neck	Skin	Violence	HIV	Migraine	Iron	Other MSK
25–29 years	Road injuries	HIV	Back & neck	Depression	Self-harm	Migraine	Skin	Violence	TB	Drugs
30–34 years	HIV	Back & neck	Road injuries	Depression	Self-harm	Migraine	IHD	TB	Skin	Violence
35–39 years	HIV	Back & neck	Road injuries	Depression	IHD	Migraine	TB	Self-harm	Stroke	Other MSK
40–44 years	Back & neck	HIV	IHD	Road injuries	Depression	Stroke	Diabetes	Sense	TB	Migraine
45–49 years	IHD	Back & neck	Stroke	Diabetes	HIV	Depression	Road injuries	Sense	TB	Other MSK
50–54 years	IHD	Stroke	Back & neck	Diabetes	Sense	Depression	Lung C	COPD	Road injuries	TB
55–59 years	IHD	Stroke	Back & neck	Diabetes	Sense	COPD	Lung C	Depression	TB	CKD
60–64 years	IHD	Stroke	Diabetes	Back & neck	COPD	Sense	Lung C	CKD	LRI	Depression
65–69 years	IHD	Stroke	COPD	Diabetes	Sense	Back & neck	Lung C	CKD	LRI	Stomach C
70–74 years	IHD	Stroke	COPD	Sense	Diabetes	Back & neck	Lung C	LRI	Alzheimer's	CKD
75–79 years	IHD	Stroke	COPD	Sense	Diabetes	Alzheimer's	Back & neck	LRI	Lung C	CKD
≥80 years	IHD	Stroke	Alzheimer's	COPD	Sense	LRI	Diabetes	CKD	Back & neck	HTN HD



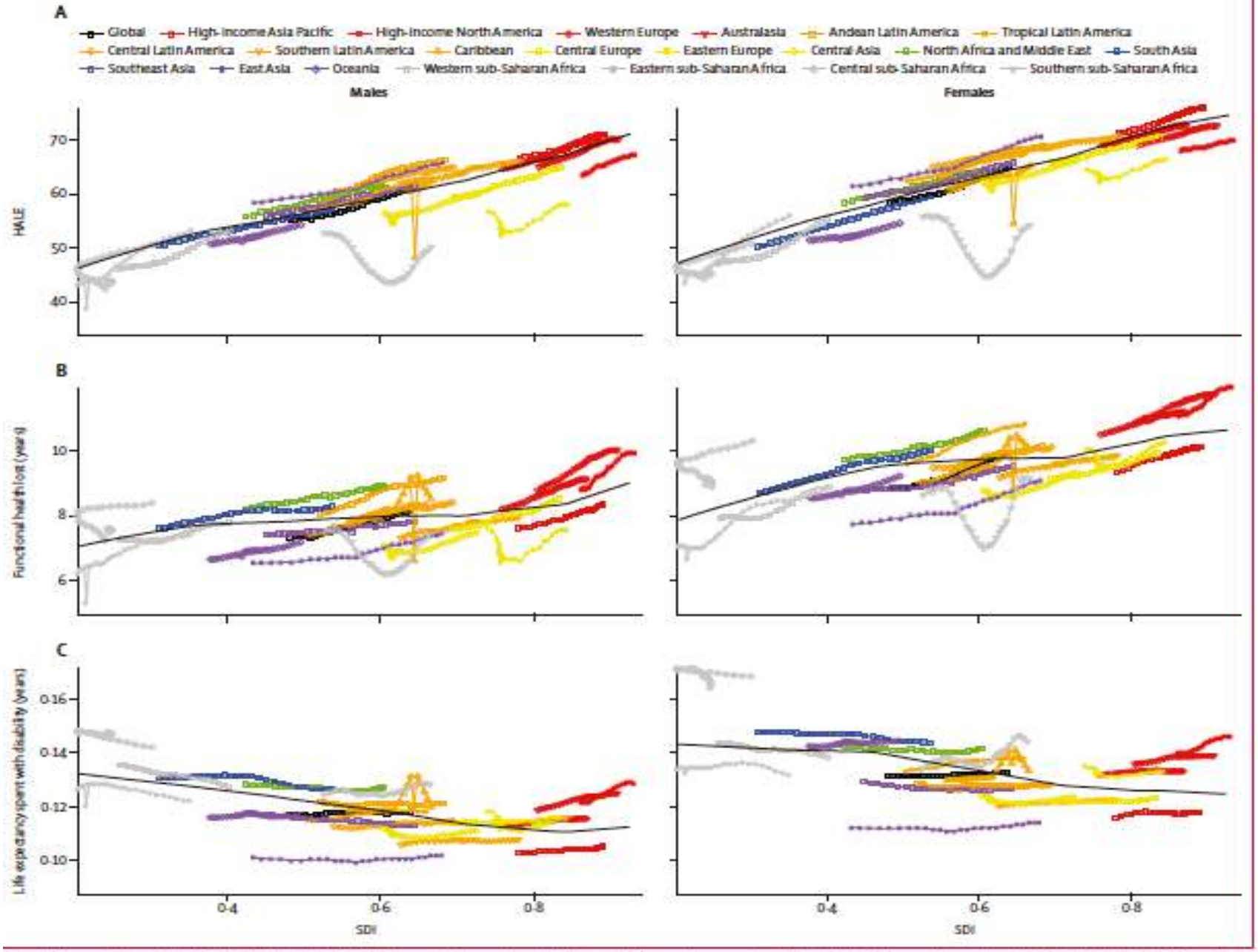


Figure 4: Co-evolution of HALE (A), functional health lost (life expectancy minus HALE; B), and life expectancy spent with disability (life expectancy minus HALE, divided by HALE; C) with SDI globally and for GBD regions, 1990 to 2015

Coloured lines show global and region values for each metric. Each point in a line represents 1 year starting at 1990 and ending at 2015. In all regions, SDI has increased year on year so progress in SDI is associated with later years for a given region. The black lines indicate trajectories for each geography expected on the basis of SDI alone. GBD=Global Burden of Disease. SDI=Socio-demographic Index. HALE=healthy life expectancy. DALYs=disability-adjusted life-years.

A) En edades avanzadas, la enfermedad crónica agrupada (comorbilidad) es lo más frecuente

B) La enfermedad, sola o en clusters, es un mal marcador pronóstico en ancianos

C) Otras opciones

World Health Organization

Multimorbidity

As people age, they are more likely to experience multimorbidity – that is, the presence of multiple chronic conditions at the same time. This can lead to interactions among conditions; between one condition and the treatment recommenda-

ications prescribed for different conditions. As a result, the impact of multimorbidity on functioning, quality of life and risk of mortality may be significantly greater than the sum of the individual effects that might be expected from these

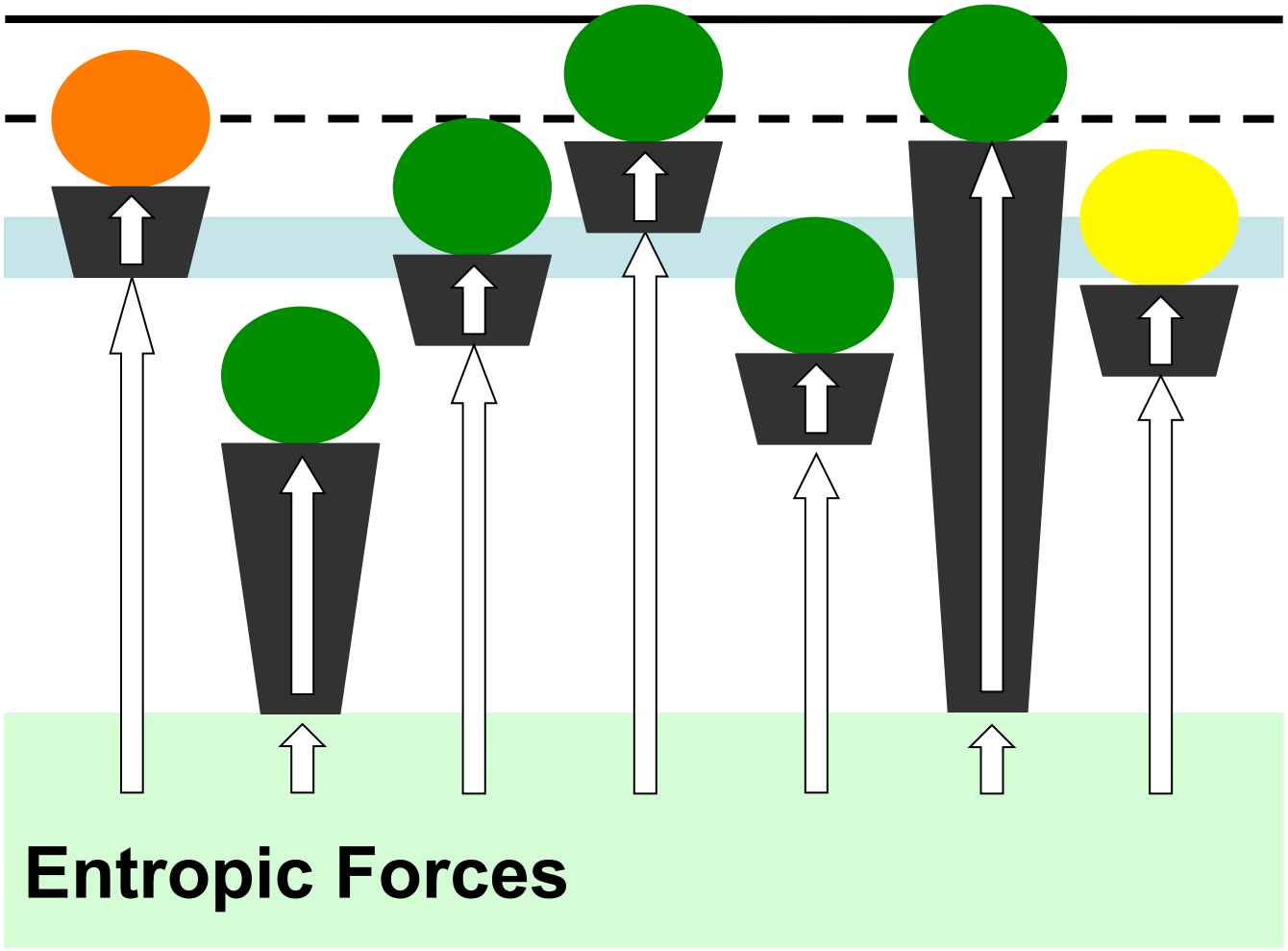
also associated with higher rates of health-care utilization and higher costs (*81*).



World Health Organization

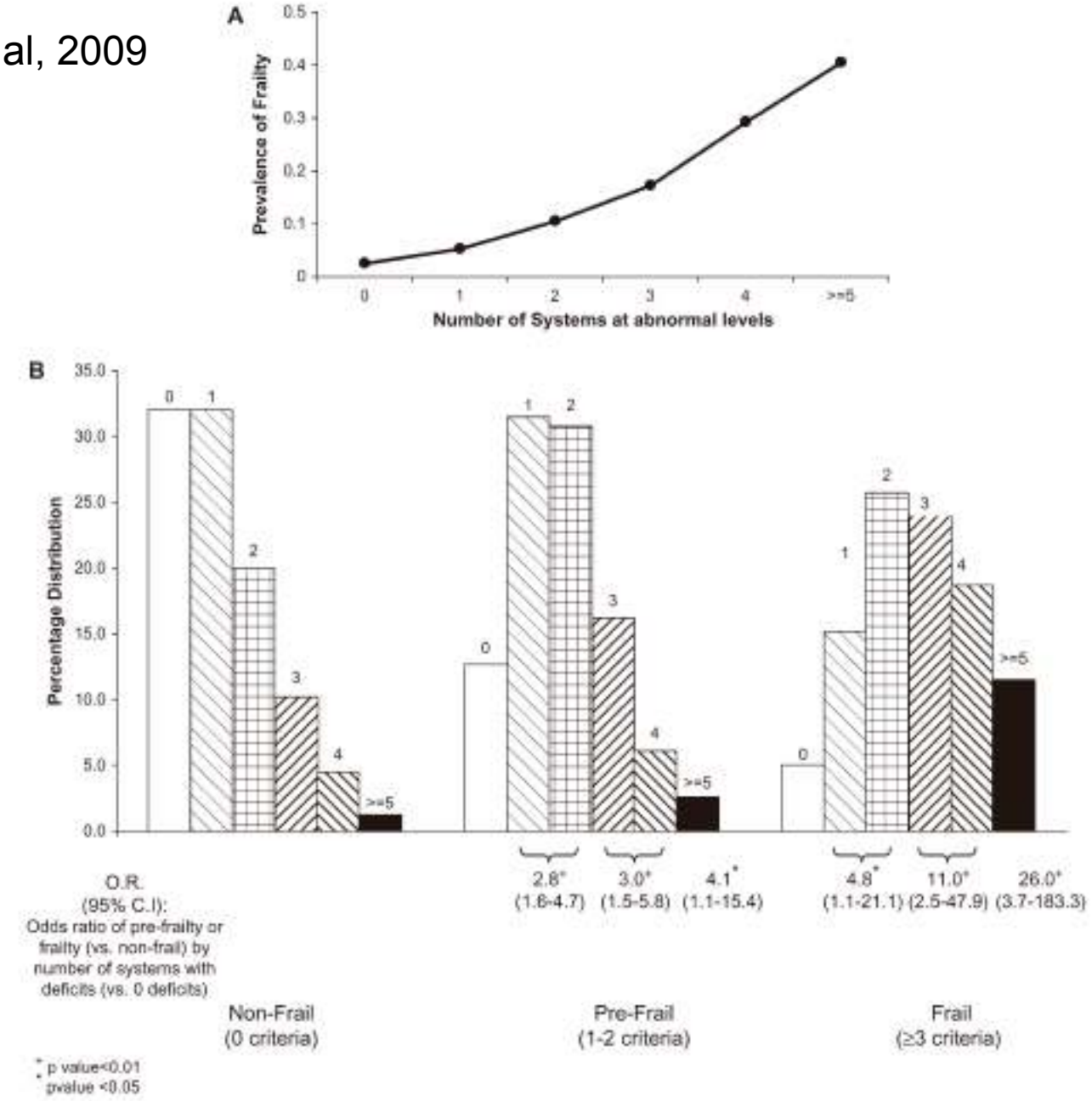
WORLD REPORT ON **AGEING AND HEALTH**

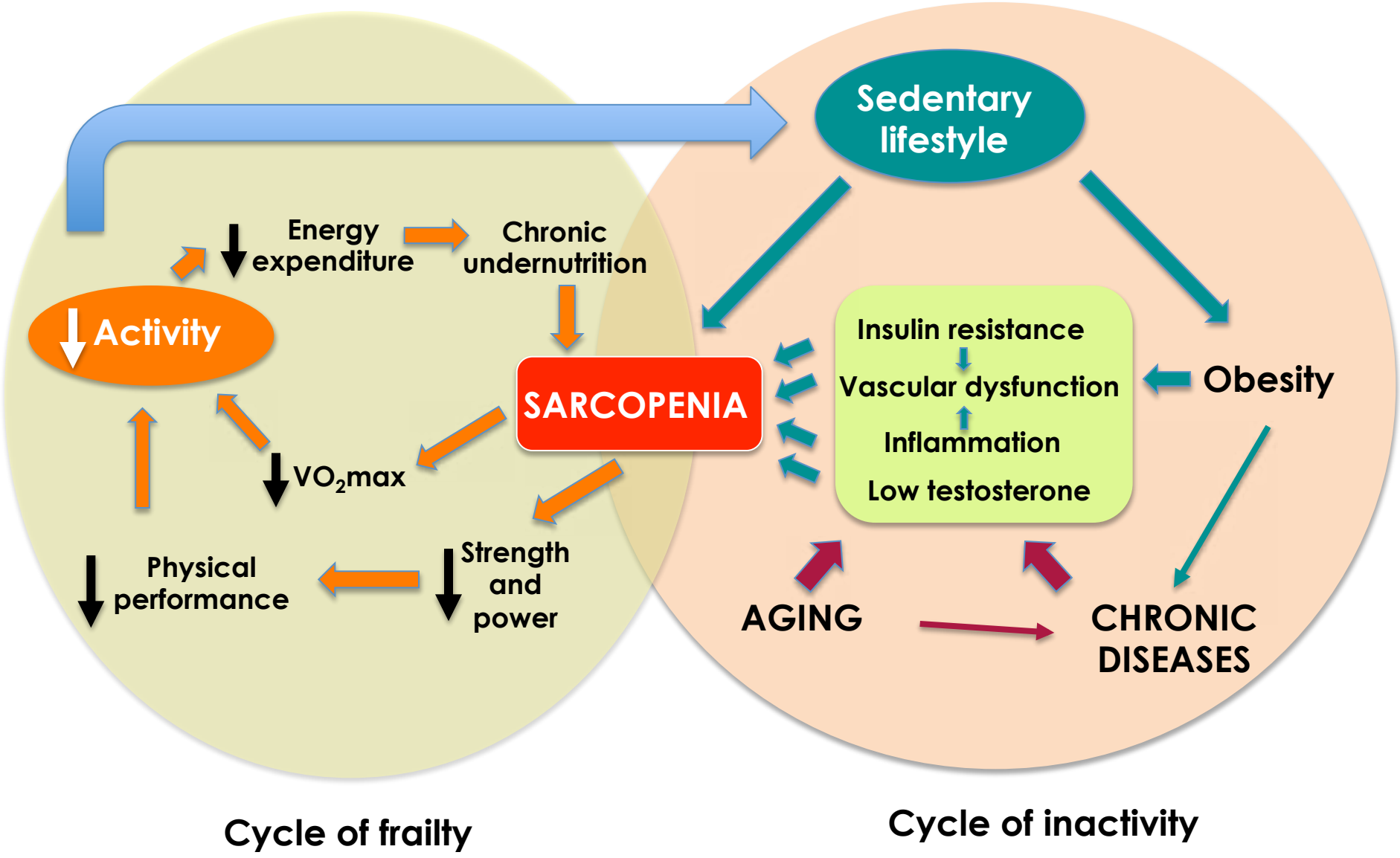
C. Age-related Frailty



Studenski S. *J Nutr Health Aging* 2009;13:729-32

Fried LP et al, 2009





Angulo J, El Assar M, Rodríguez-Mañas L. Mol Aspects Med, 2016

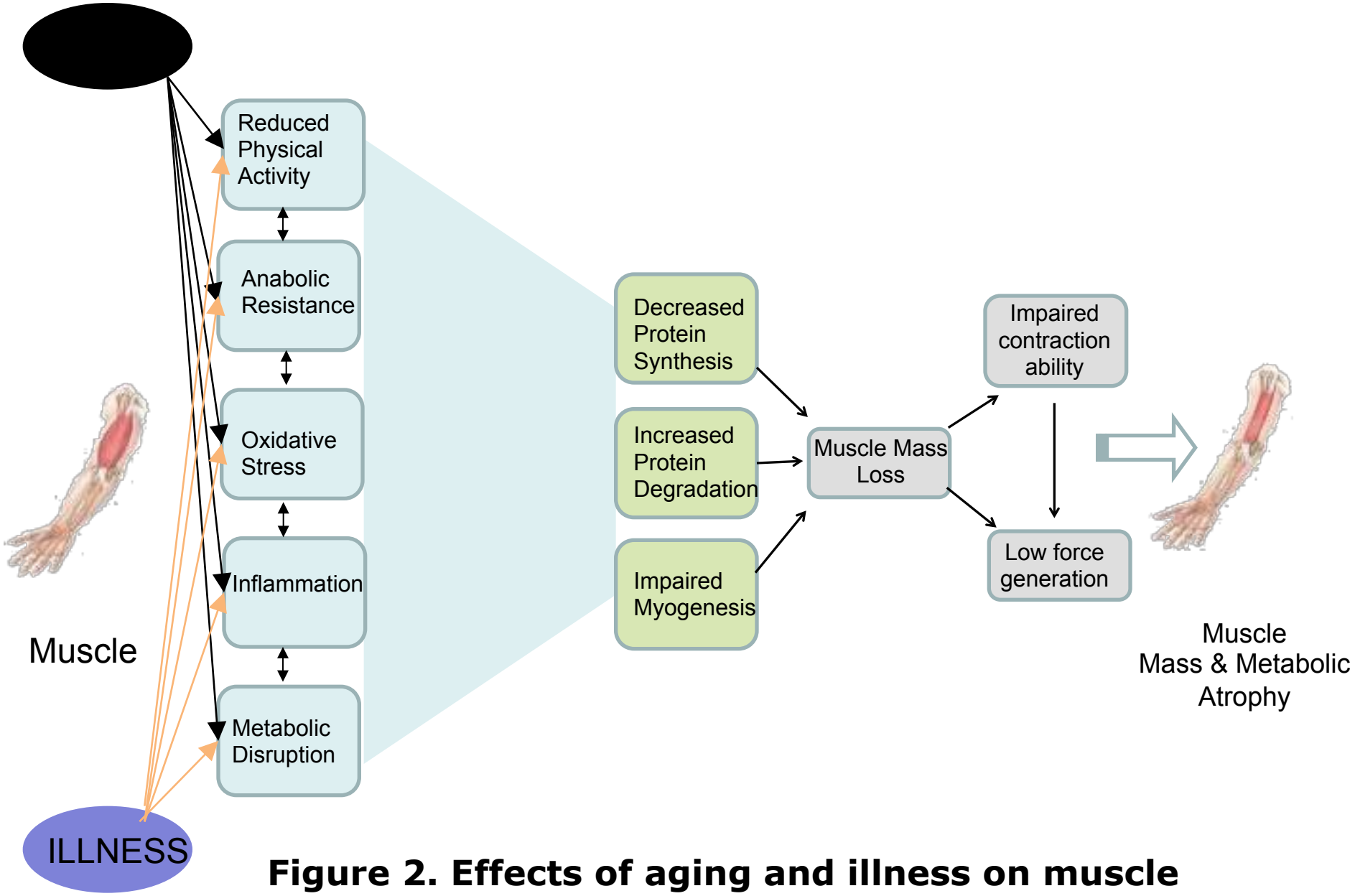
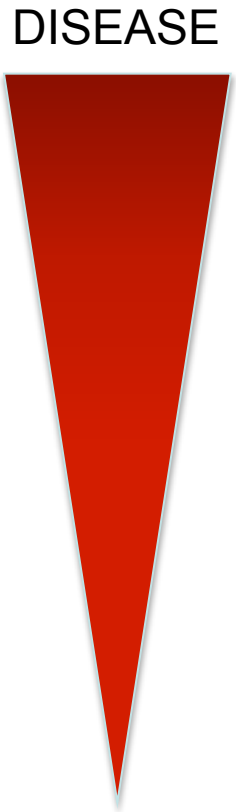


Figure 2. Effects of aging and illness on muscle mass

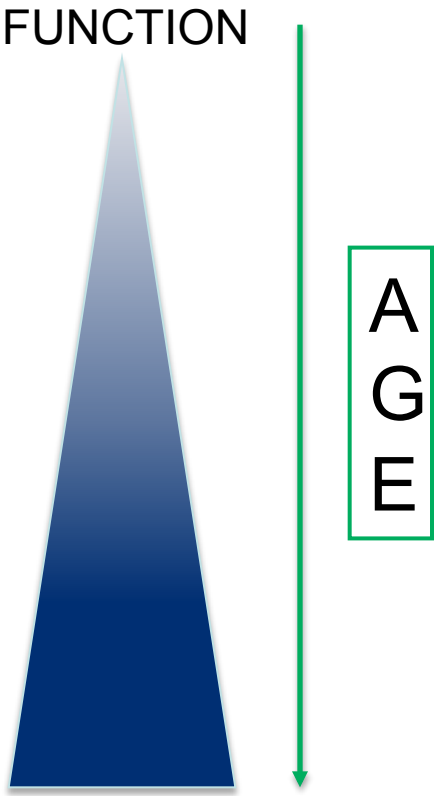
Argiles JM, Campos M, López-Pedrosa JM, Rueda R, Rodríguez-Mañas L, JAMDA 2016

From disease to function



1. **Clinical manifestation**
2. **Pathophysiology**
3. **Prognostic value**
4. **Efficiency marker**

Clinical management
TOTALLY DIFFERENT



Hospital Universitario de Getafe

Comunidad de Madrid

fundación para la Investigación Biomédica Hospital Universitario de Getafe

Tratamiento médico e incremento de la longevidad

1) No podemos incrementar la longevidad
2) La enfermedad no es un buen marcador pronostico
3) La calidad de vida es el principal objetivo en poblaciones ancianas
4) Tenemos excelentes marcadores pronósticos tanto de mortalidad como de calidad de vida, entre los que destaca el status funcional

ERGO



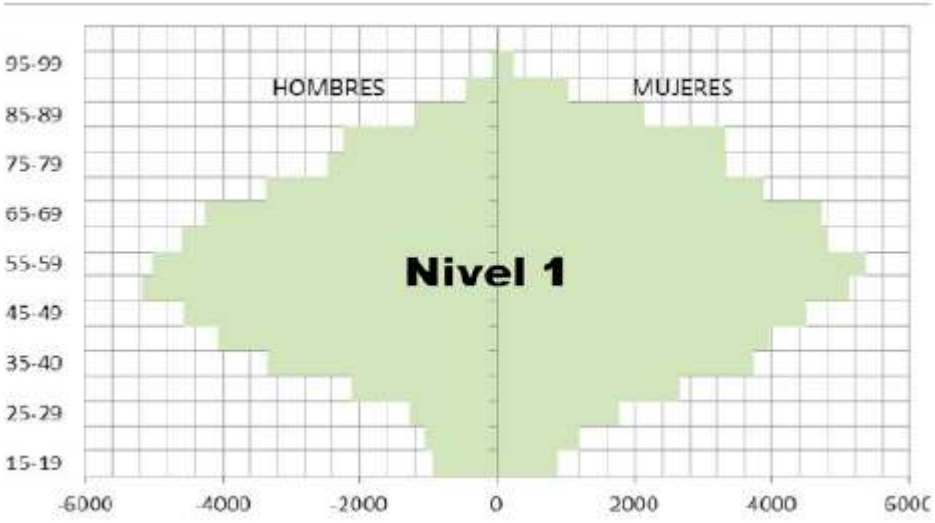
"When the facts change, I change my mind. What do you do, sir?"

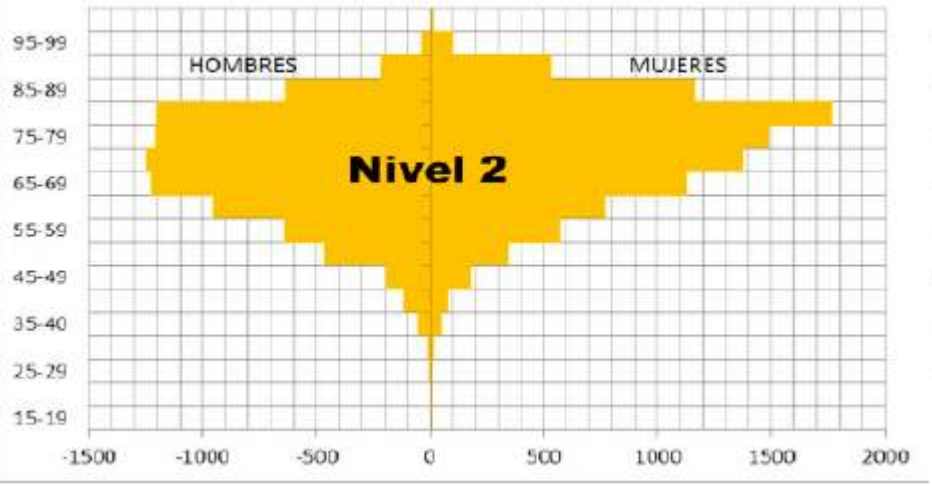
John Maynard Keynes

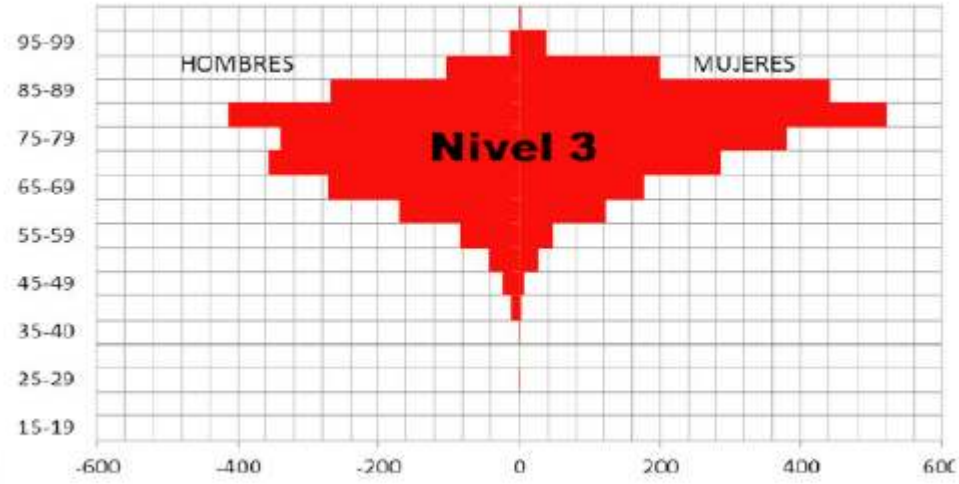


Estrategia de crónicos de La Rioja
Clasificación de pacientes por nivel de cronicidad









Unidad de Pacientes Pluripatológicos

Organización de profesionales sanitarios que ofrece atención multidisciplinaria mediante un amplio espectro de modalidades de asistencia a pacientes con pluripatología, y cumple unos requisitos funcionales, estructurales y organizativos que garantizan las condiciones adecuadas de calidad, seguridad y eficiencia para realizar esta actividad.

Paciente Pluripatológico es aquél que sufre enfermedades crónicas de dos o más de las siguientes categorías clínicas

- Categoría A:
  - Insuficiencia cardiaca que en situación de estabilidad clínica haya estado en grado II de la NYHA[23].
  - Cardiopatía isquémica.
- Categoría B:
  - Vasculitis y enfermedades autoinmunes
  - Enfermedad renal crónica definida p
    (>1,4 mg/dl en hombres o >1,3 mg/dl en
    mantenidas durante 3 meses.
- Categoría C:
  Enfermedad respiratoria crónica que en situación de estabilidad clínica haya estado con disnea grado 2 de la MRC[25], o FEV1<65%, o SaO2 ≤ 90%.
- Categoría D:
  - Enfermedad inflamatoria crónica intestinal.
  - Hepatopatía crónica con datos de in
    hipertensión portal[27].
- Categoría E:
  - Ataque cerebrovascular.
  - Enfermedad neurológica con déficit
    que una limitación para las actividad
    (Índice de Barthel inferior a 60)[28].
  - Enfermedad neurológica con deterioro cognitivo permanente, al menos moderado (Pfeiffer[29] con 5 ó más errores).
- Categoría F:
  - Arteriopatía periférica sintomática.
  - Diabetes mellitus con retinopatía proliferativa o neuropatía sintomática.
- Categoría G:
  - Anemia crónica por pérdidas dige
    subsidiaria de tratamiento curativo
    dos determinaciones separadas má
  - Neoplasia sólida o hematológica activa no subsidiaria de tratamiento con intención curativa.
- Categoría H:
  - Enfermedad osteoarticular crónica que provoque por sí misma una limitación para las actividades básicas de la vida diaria (Índice de Barthel inferior a 60) [30].

50 años
Creatinina 1,5
IAM

50 años
DM retinopatia
Ictus ACM agudo

50 años
Anemia crónica 10 gr
Crohn

Evidencia de la eficacia y eficiencia de las estrategias de crónicos



Poner de evidencia contrastable en resultados de las acciones en crónicos

eficacia de la aplicación se deben nados con
por ellos del modelo. Sin embargo, no existen
estudios que midan la efectividad del modelo en
su conjunto. Otro elemento relevante de

La aplicación de los diferentes modelos de atención debe acompañarse de evaluaciones a medio y largo plazo

En Castilla-La Mancha hemos definido un P en
Director que, sobre bienes puntos de control

En el caso del Modelo de Abordaje de la Cronicidad en Atención Primaria de Euskadi 2010-2012

Desarrollo e implementación de la Estrateg del País Vasco: lecciones aprendidas

Roberto Nuño-Solinís

Deusto Business School Health, Universidad de Deusto, Bilbao, España

Puntos clave

- En un contexto poco favorable en términos económicos y políticos, resulta clave elaborar planteamientos estratégicos con una narrativa de transformación ilusionante para los distintos grupos de interés.
- En la Estrategia Vasca de Cronicidad, ese relato fue el desarrollo de un modelo de atención integrada a los pacientes con condiciones crónicas.
- La utilización en la estrategia de marcos teóricos sólidos, comparativa internacional y evidencia robusta sobre la atención a pacientes crónicos fue relevante, pero no garantizó su éxito.
- La adopción de un enfoque de innovación de «abajo arriba» propició la emergencia de un gran número de proyectos de cambio, pero su escalabilidad fue frenada por barreras burocráticas.
- La visión de desarrollo de una atención más integrada fue contemplada de forma muy diversa por los distintos grupos de interés, siendo vista por algunos como una oportunidad y, por otros, como una amenaza.

Nuño-Solinís R; Gac Sanit 2016.

The End of the Disease Era

Mary E. Tinetti, MD, Terri Fried, MD

Envejecimiento poblacional
Interacción factores biológicos – no biológicos
Cambio de patrón enfermedad de aguda a crónica
Variabilidad interindividual
Prioridades de salud

→ Infratratamiento
Sobretratamiento
Mal Tratamiento

Tinetti ME. Am J Med 2004; 116: 179-85

TITLE: THE THIRD TRANSITION – the Clinical Evolution oriented to the Contemporary Older Patient



Authors and affiliation

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Alan J Sinclair, MD, PhD
Diabetes Frail Ltd, UK and University of Aston, UK

JAMDA, in press

TRANSICION DEMOGRÁFICA → **TRANSICION EPIDEMIOLOGICA** → **TRANSICION CLINICA**

THE THIRD TRANSITION

BREAKING THE CLINICAL INERTIA



CURAR	CUIDAR
ENFERMEDAD	FUNCION
SUPERVIVENCIA	CALIDAD DE VIDA
HACER	RELACION RIESGO/BENEFICIO (NO HACER)
LARGO PLAZO	MARCO TEMPORAL ACORTADO (“LAG TIME”)

OUR CHALLENGE

LONGEVITY
(AMOUNT OF LIFE)

Prevention
Risk manag.
Empowerment

CHRONIC DISEASE

HEALTH SYSTEMS + SOCIAL SYSTEMS

Integrated
Coordinated.
Continued

QUALITY OF LIFE
(FUNCTION)

TO MAINTAIN



OUR APPROACH

- ✓ **Management of chronic disease oriented to avoid frailty and preserve function**
- ✓ **Management of frailty, as the phenotypic expression of disease in older adults**
- ✓ **Management of frailty, as the main predictive factor of adverse outcomes**
- ✓ **Promoting integrated, coordinated and continued care**

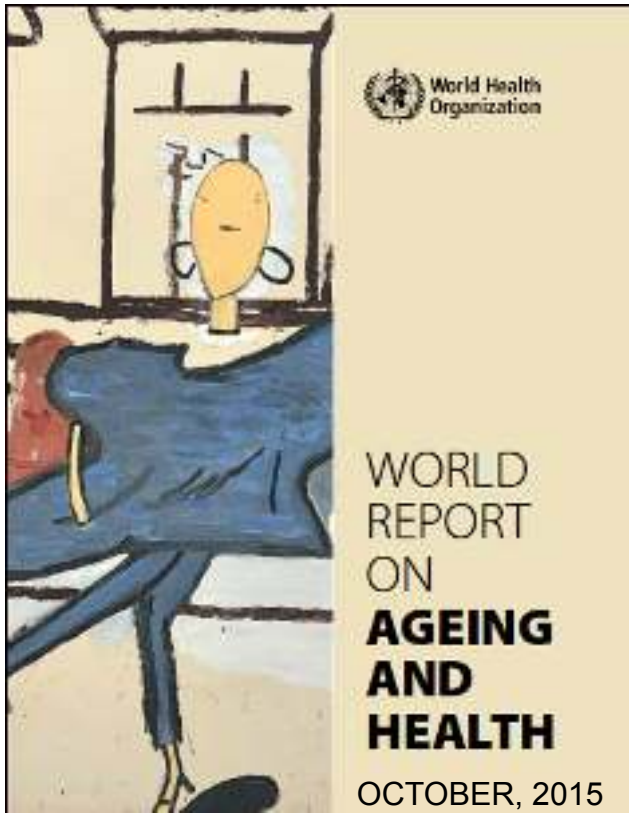
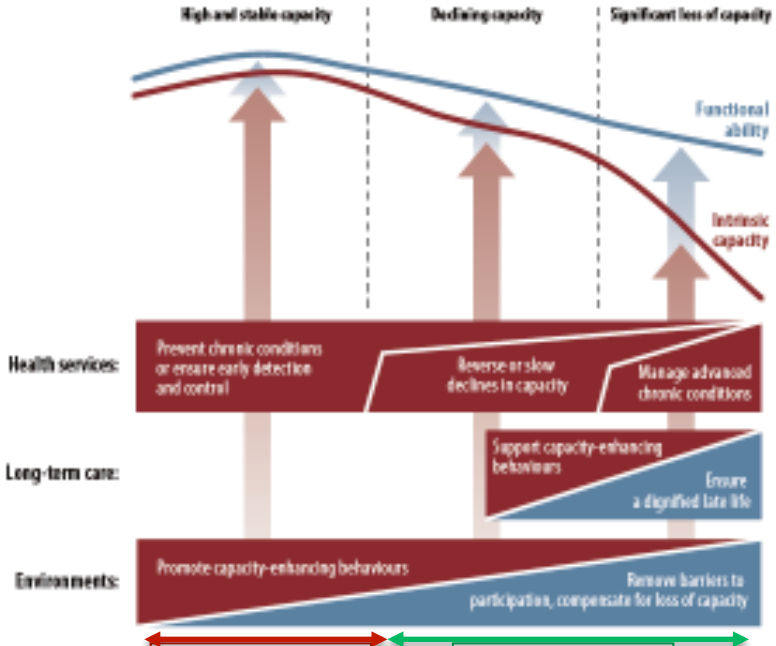


Fig. 2.4. **A public-health framework for *Healthy Ageing*: opportunities for public-health action across the life course**



M. Interna
M. Familia

Geriatría
M. Familia

Otros profesionales

Fig. 2.1. *Healthy Ageing*

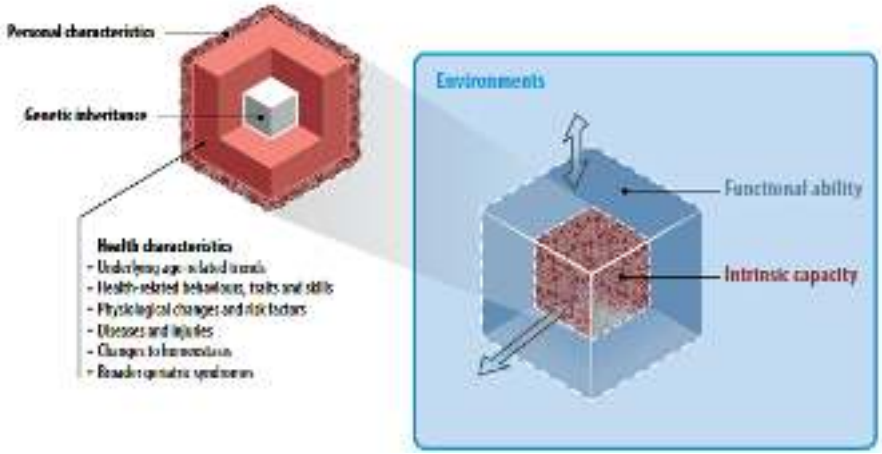


Table 4.3. **Conventional care versus older-person-centred and integrated care**

Conventional care	Older-person-centred and integrated care
Focuses on a health condition (or conditions)	Focuses on people and their goals
Goal is disease management or cure	Goal is maximizing intrinsic capacity
Older person is regarded as a passive recipient of care	Older person is an active participant in care planning and self-management
Care is fragmented across conditions, health workers, settings and life course	Care is integrated across conditions, health workers, settings and life course
Links with health care and long-term care are limited or non-existent	Links with health care and long-term care exist and are strong
Ageing is considered to be a pathological state	Ageing is considered to be a normal and valued part of the life course

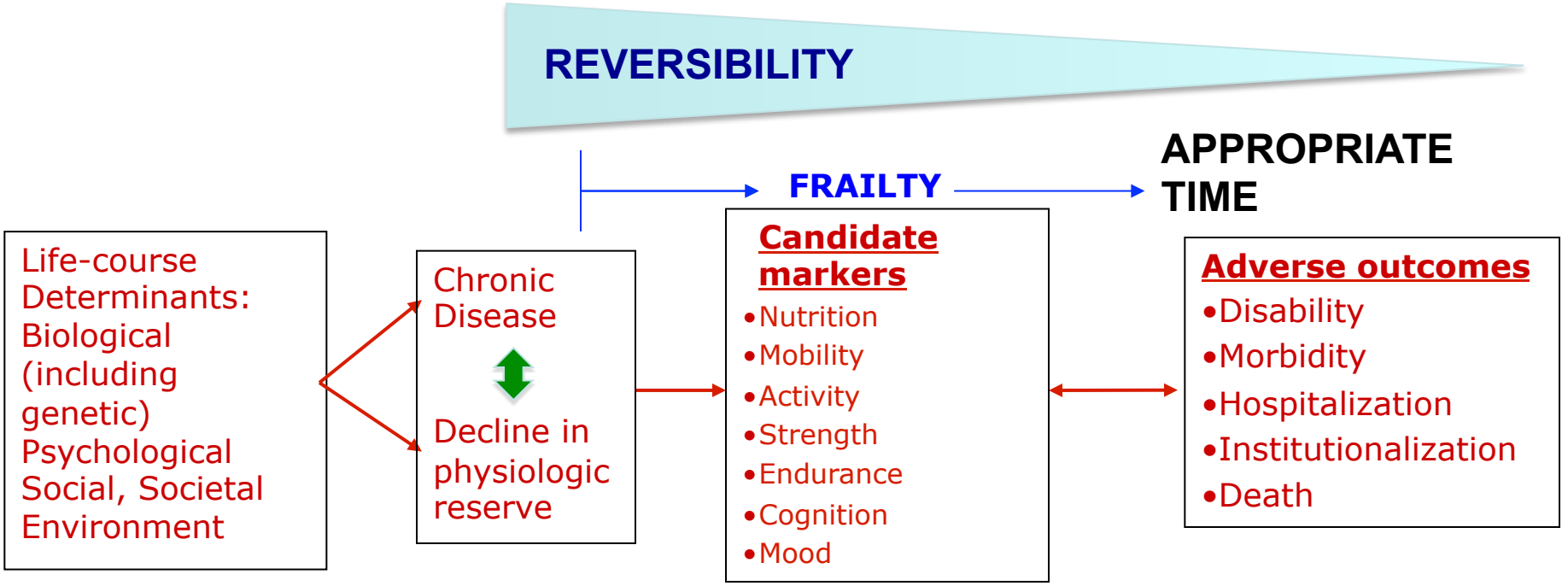
I have been vaccinated against polio and mumps. I have been vaccinated against chicken pox, whooping cough and measles. Then I fell down the stairs.

Charlie Brown - Charles M. Schulz



BE AWARE ABOUT THE TRUE FOCUS:

IT IS FUNCTION!!!



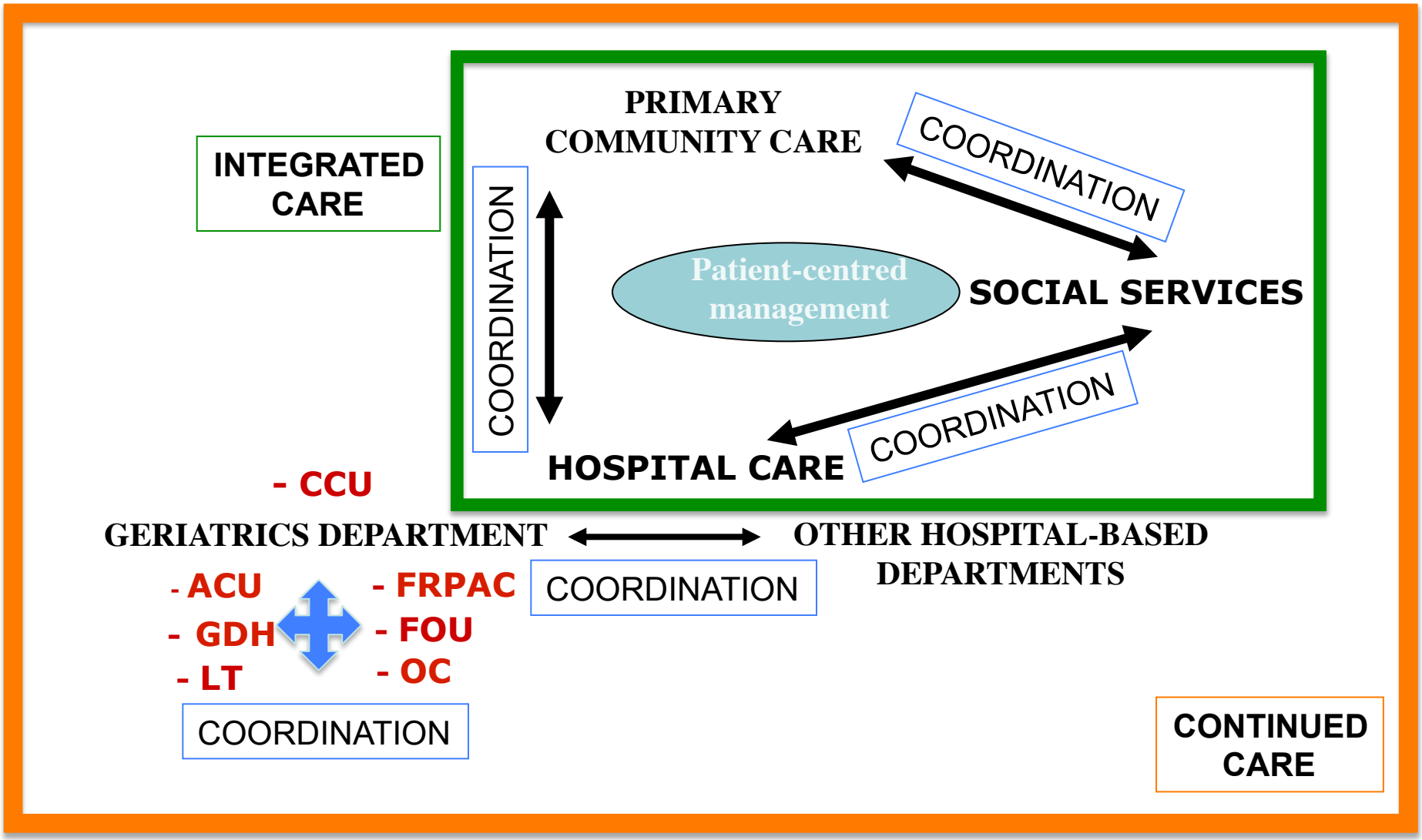
Frailty as a dynamic functional state

CARE FOCUSED ON

Preventing frailty	Preventing Disability Treating Frailty	Preventing Disabilty Treating Functional Decline	Preventing Dependency Treating Disability	Managing Dependency

Potential reversibility of functional decline

	Robust	Frail	Functional Limitation	Disability	Dependency
Definition					
Interventions to improve quality and outcomes - and prevent or delay further functional decline	What How Where ?	What How Where ?	What How Where ?	What How Where ?	What How Where ?



ACU: Acue Care Unit ; FRPAC: Functional Recovery Post-Acute Care; FOU: Falls and Orthogeriatric Unit; GDH: Geriatric Day Hospital; LT: Liaision Team; OC: Outpatien Clinic; CCU: Community Care Unit

Special Communication

2014 Evidence-Based Guideline for the Management of High Blood Pressure in Adults

Report From the Panel Members Appointed to the Eighth Joint National Committee (JNC 8)

IS IT POSSIBLE TO DESIGN
SUCH A FLOWCHART FOR FRAILTY

AT RISK

YES **NO**

SCREENING

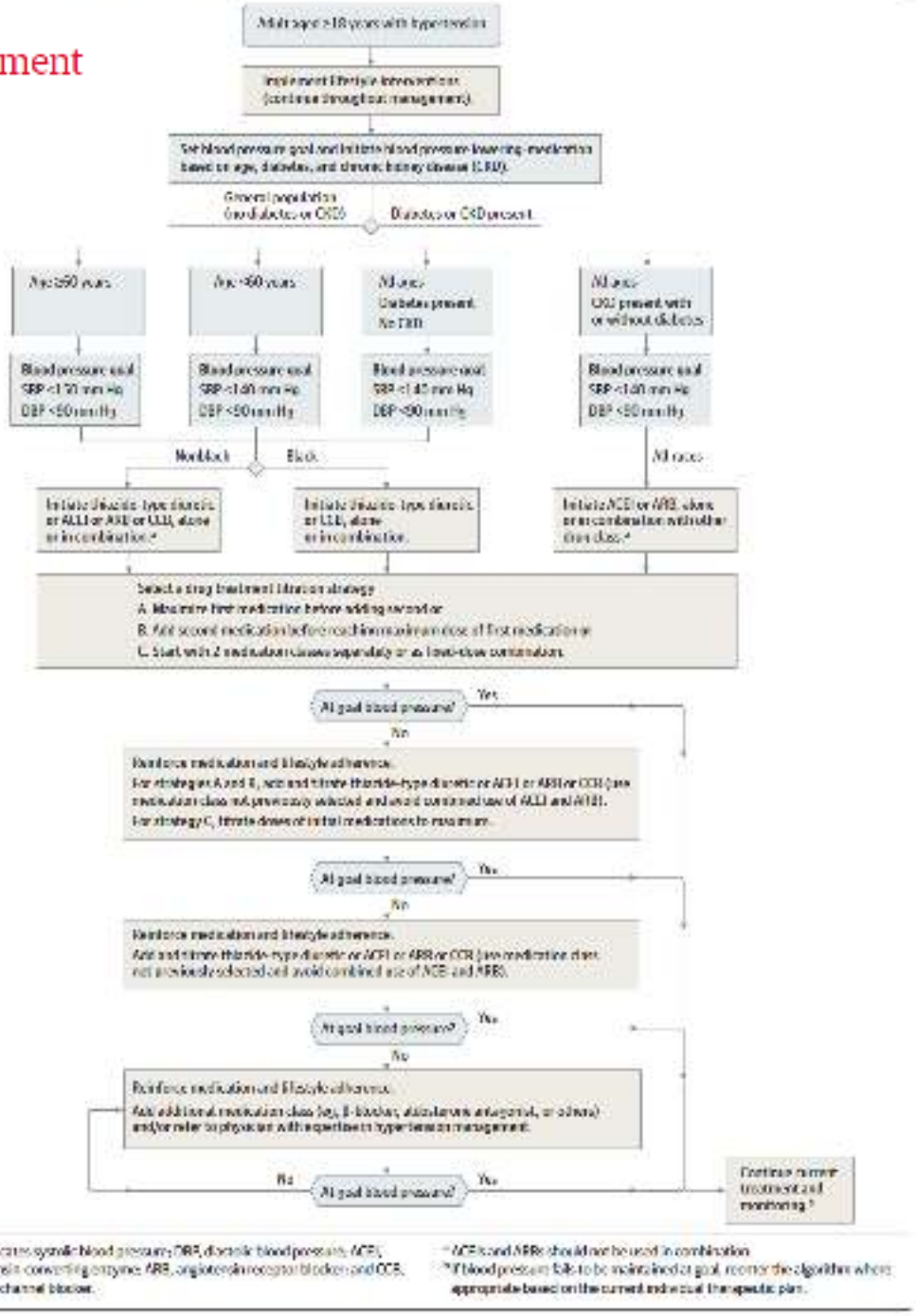
YES **NO**

DIAGNOSIS

YES **NO**

PROGNOSIS
TREATMENT

Figure. 2014 Hypertension Guideline Management Algorithm



SBP indicates systolic blood pressure; DBP, diastolic blood pressure; ACEI, angiotensin-converting enzyme; ARB, angiotensin receptor blocker; and CCB, calcium channel blocker.

*ACEI and ARB should not be used in combination.
†If blood pressure fails to be maintained at goal, reconsider the algorithm where appropriate based on the current and clinical therapeutic plan.

Is it necessary to modulate the prevention strategy according to the level of frailty?

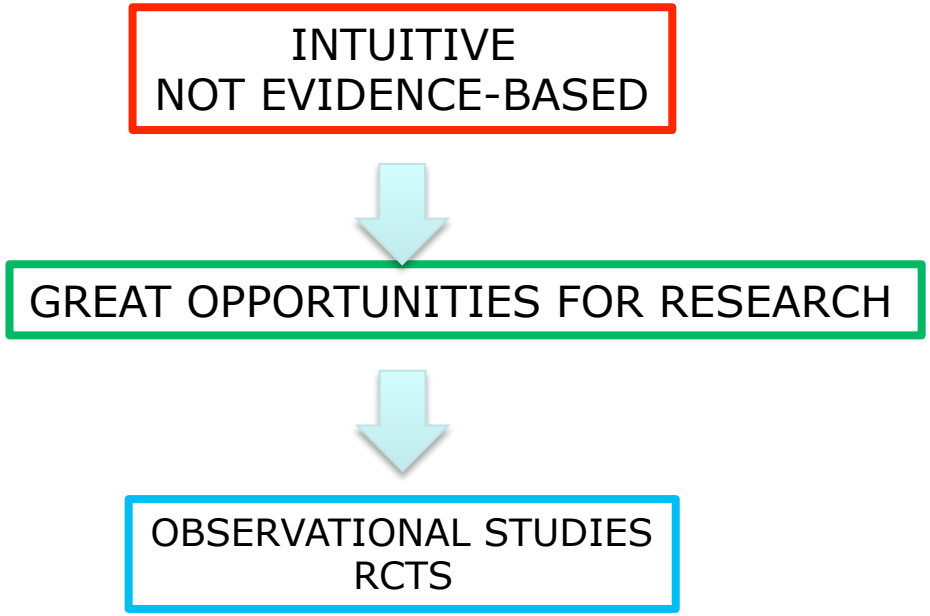
Yes

How should it be modulated

Clinical Phenotypes
By severity
By comorbidity
By setting

With which approaches

Improving diet
Physical exercise
Managing cardiovascular risk
Others



THANK YOU

