Los servicios de geriatría en un hospital general: como seguir demostrando que son necesarios

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Hospital General Tijuana
México



¿qué tan frecuente se hospitaliza un AM?

- De todos los mayores de 65 años, el 25% requieren de hospitalización.
- 10% población
  - 30 % de hospitalizaciones
  - 50% costos de hospitalización

- Pacientes se deterioran en el hospital.

Flanders SA, Podrazik PM, Whelan C, Blaum H. Acute Hospital Care in Hazzard´s Principles of Geriatrics and Gerontology.

Características

	YOUNGER THAN 65 YR	65 YR AND OLDER
Percentage of U.S. population	88%	12%
Percent of hospital stays	65.3%	34.7%
Mean length of stay (days)	4.0	5.7
Admitted through emergency department (%)	36.2%	57.4%
Died in hospital (%)	0.9%	4.7%

Flanders SA, Podrazik PM, Whelan C, Blaum H. Acute Hospital Care in Hazzard´s Principles of Geriatrics and Gerontology.

Situación en México

¿Quienes son los adultos mayores mexicanos?

- **11.7 millones (9.7%)**.
- Entre 2000 y 2010 **crecieron a una tasa anual de 3.8%**, ello conducirá a la **duplicación de esta población en 18 años.**
- Esperanza de vida general **76.4 años**
- **Más adultos mayores que menores de 5 años**
- **87 hombres por cada 100 mujeres**

Fuente: Censo de población y vivienda INEGI 2010
CONAPO: A propósito del día Mundial del Envejecimiento Septiembre de 2014

EL ESTADO DE SALUD DE LOS ADULTOS MAYORES EN MEXICO

APARENTEMENTE SANOS Y FUNCIONALES

ENFERMEDADES CRÓNICAS NO TRASMISIBLES:
HTA
Diabetes
ECV
Cardiopatías
Demencias

MULTI MORBILIDAD + FRAGILIDAD

SINDROMES GERIÁTRICOS:
Caídas
Malnutrición / Sarcopenia
Dolor
Deterioro sensorial
Depresión

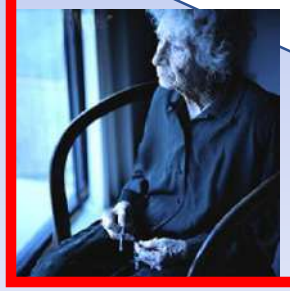
DEPENDIENTES

11.7 millones

2 millones









55%

20%

25%

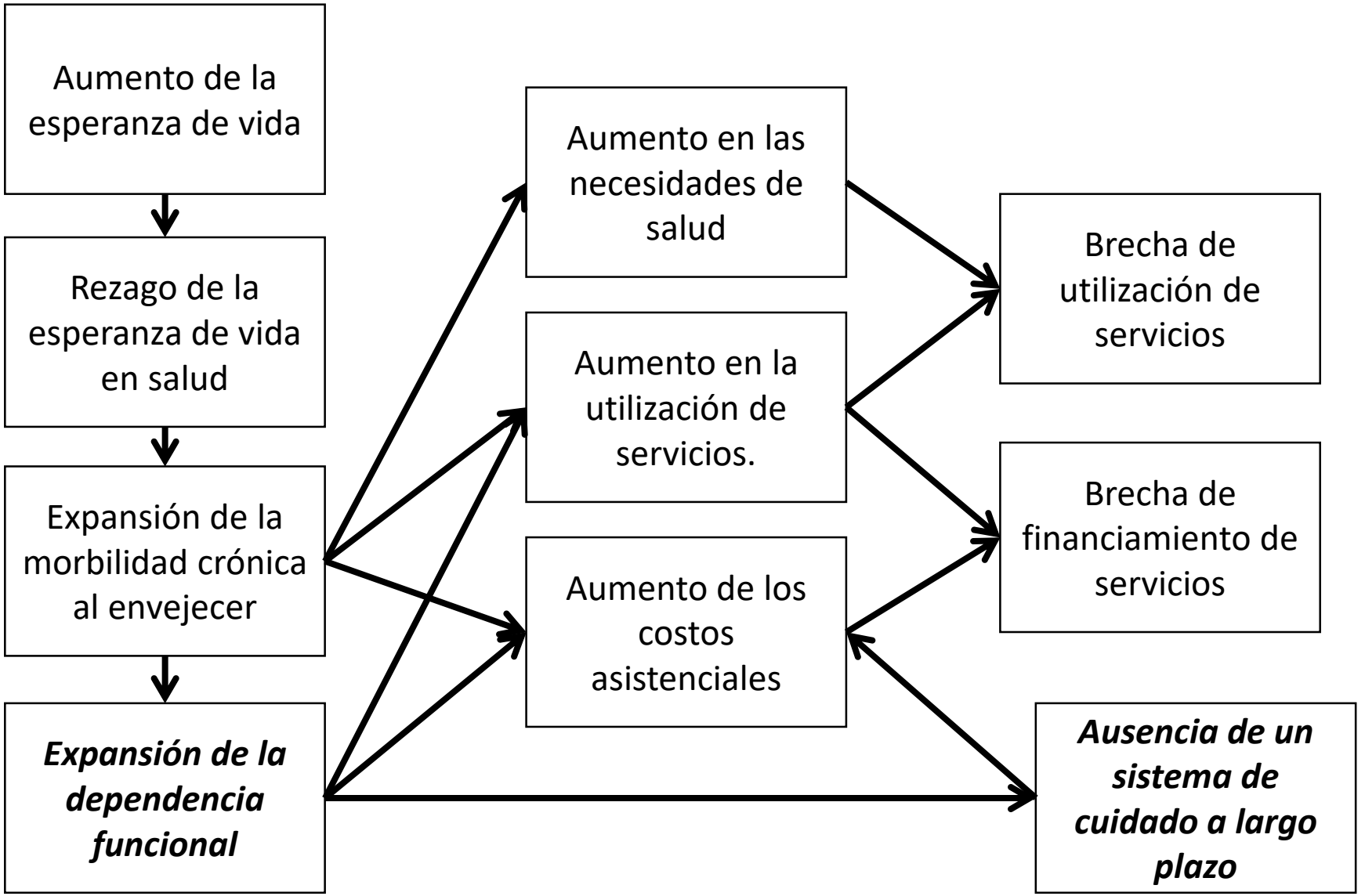
5%

Proporción de hospitalizaciones



SSA 2015

El impacto de la enfermedad crónica y la dependencia funcional sobre los servicios de salud.




eFotosBebes.com

Enfermedades mas frecuentes en defunciones

Anemia	29	46%
Enfermedades respiratorias	27	42%
Trastornos cardiacos	20	31%
Hipertensión arterial	15	23%
IRC/IVU	12	19%
Diabetes mellitus	10	15%

Vazque E, Zuniga C. Marcadores de fragilidad del anciano hopitalizado 2006

Diagnósticos mas frecuentes en defunciones

Choque séptico	(19)	(30%)
EVC	14	22%
Sx urémico	12	19%
NAC	10	15%
EABC	5	7%
STDA	5	7%
Otros	17	26%

Vazquez E, Zuniga C. Marcadores de fragilidad del anciano hopitalizado 2006

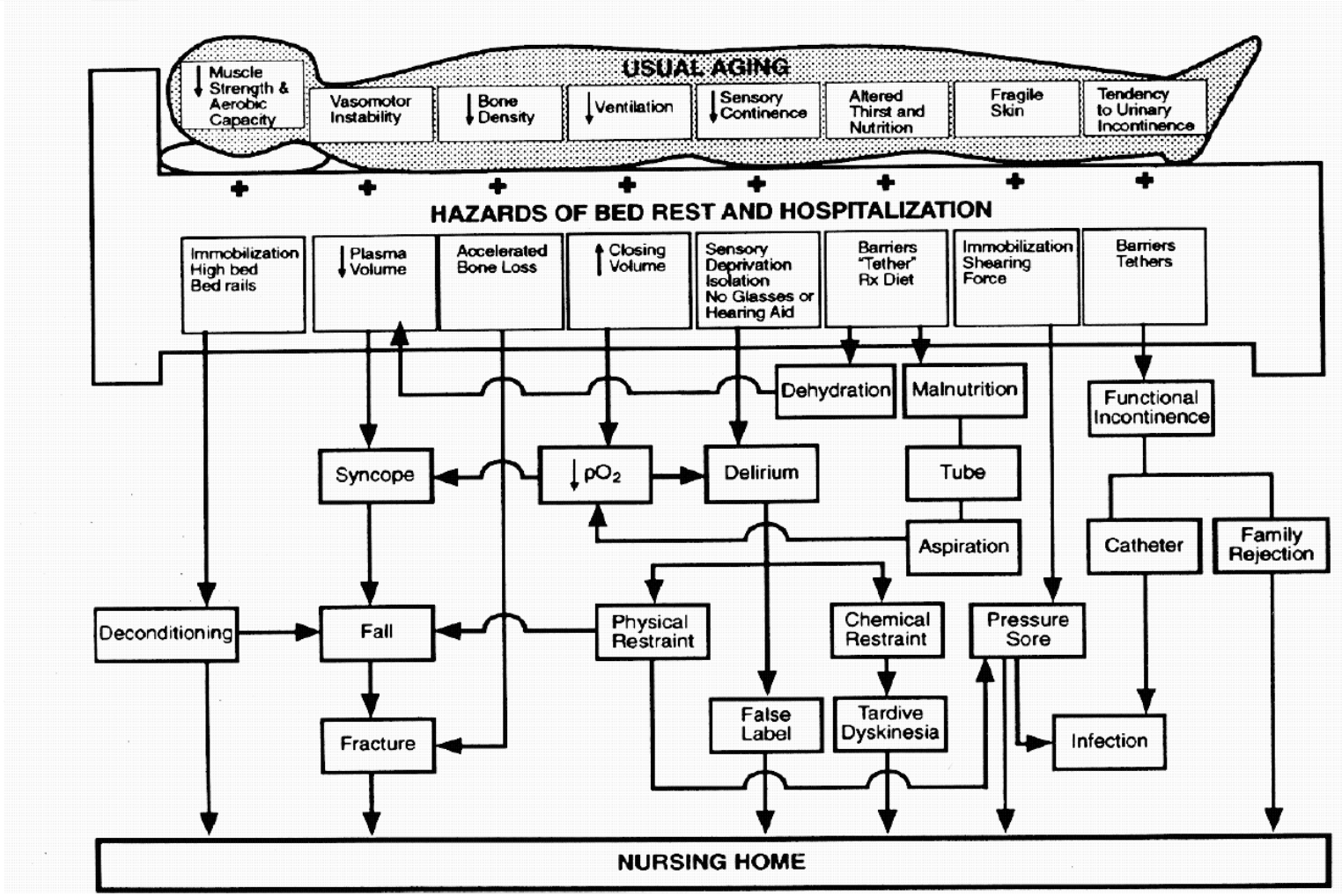




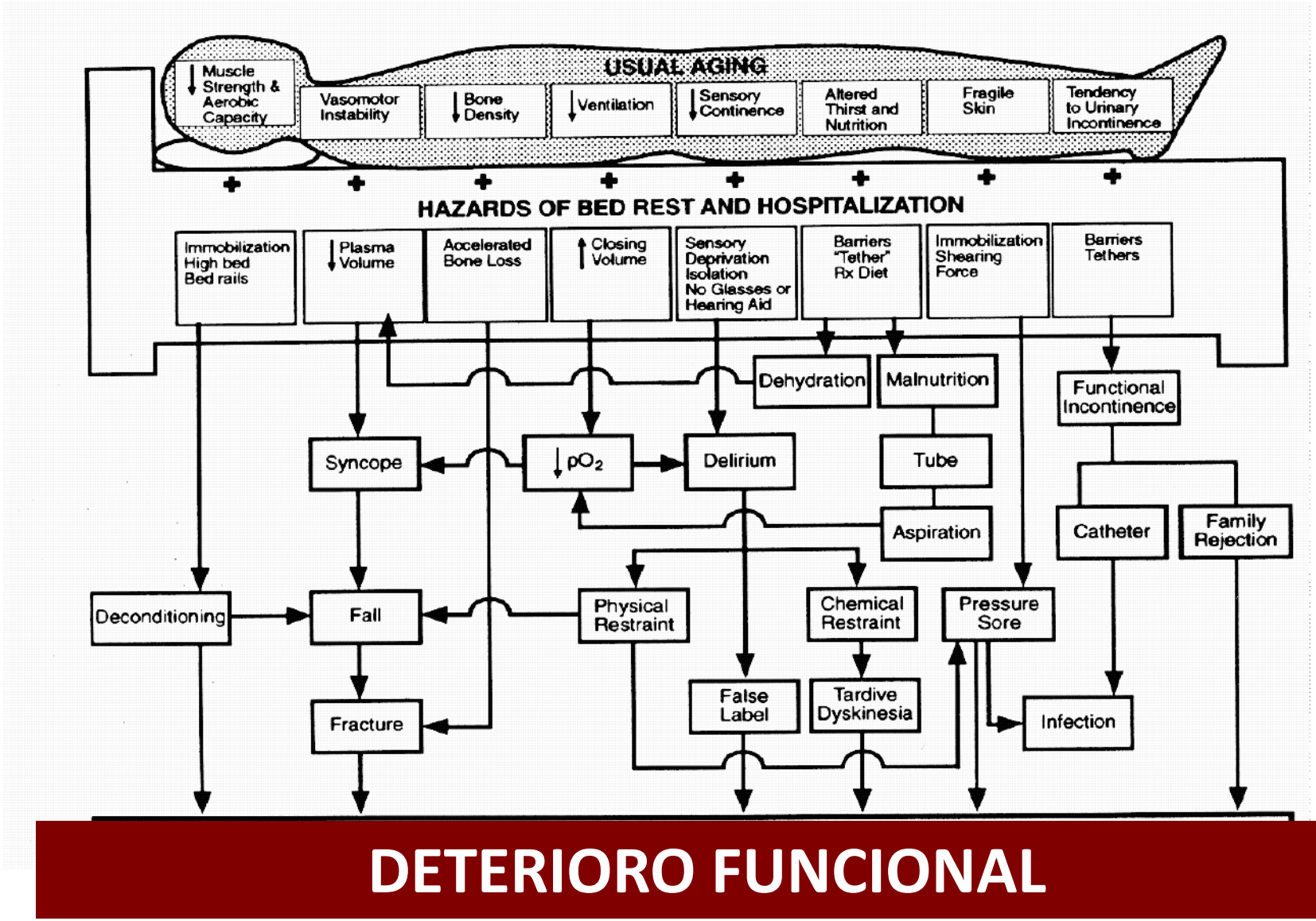


Hazards of Hospitalization of the Elderly

Morton C. Creditor, MD



Annals of Internal Medicine. 1993;118:219-223.



DETERIORO FUNCIONAL

Annals of Internal Medicine. 1993;118:219-223.

Envejecimiento	Hospitalización	Efectos primarios potenciales	Consecuencias secundarias potenciales
Disminución fuerza muscular y capacidad aeróbica	Inmovilización, camas altas y barandales	Desacondiciona-miento, caídas	Dependencia
Inestabilidad vasomotora	Disminución volumen plasmatico	Síncope, mareo	Caídas, fracturas
Insensibilidad baroreceptores y disminución ACT	Inaccecibilidad a líquidos	Síncope, mareo	Caídas, fracturas
Disminución DMO	Perdida acelerada de hueso	Incremento riesgo fracturas	Fracturas

Annals of Internal Medicine. 1993;118:219-223.

Envejecimiento	Hospitalización	Efectos primarios potenciales	Consecuencias secundarias potenciales
Ventilación reducida	Incremento en volumen de cierre	Disminución PaO2	Síncope, delirium
Disminución capacidad sensorial	Deprivación sensorial, aislamiento, no lentes, no auxiliares auditivos	Delirium	Falsa etiqueta, sujeciones físicas y químicas
Alteraciones sed, gusto, olfación y salud oral	Dietas	Deshidratación, desnutrición	Disminución volumen plasmático
Incontinencia urinaria	Barreras	Incontinencia funcional	Cateterismo

Annals of Internal Medicine. 1993;118:219-223.

Por el propio envejecimiento

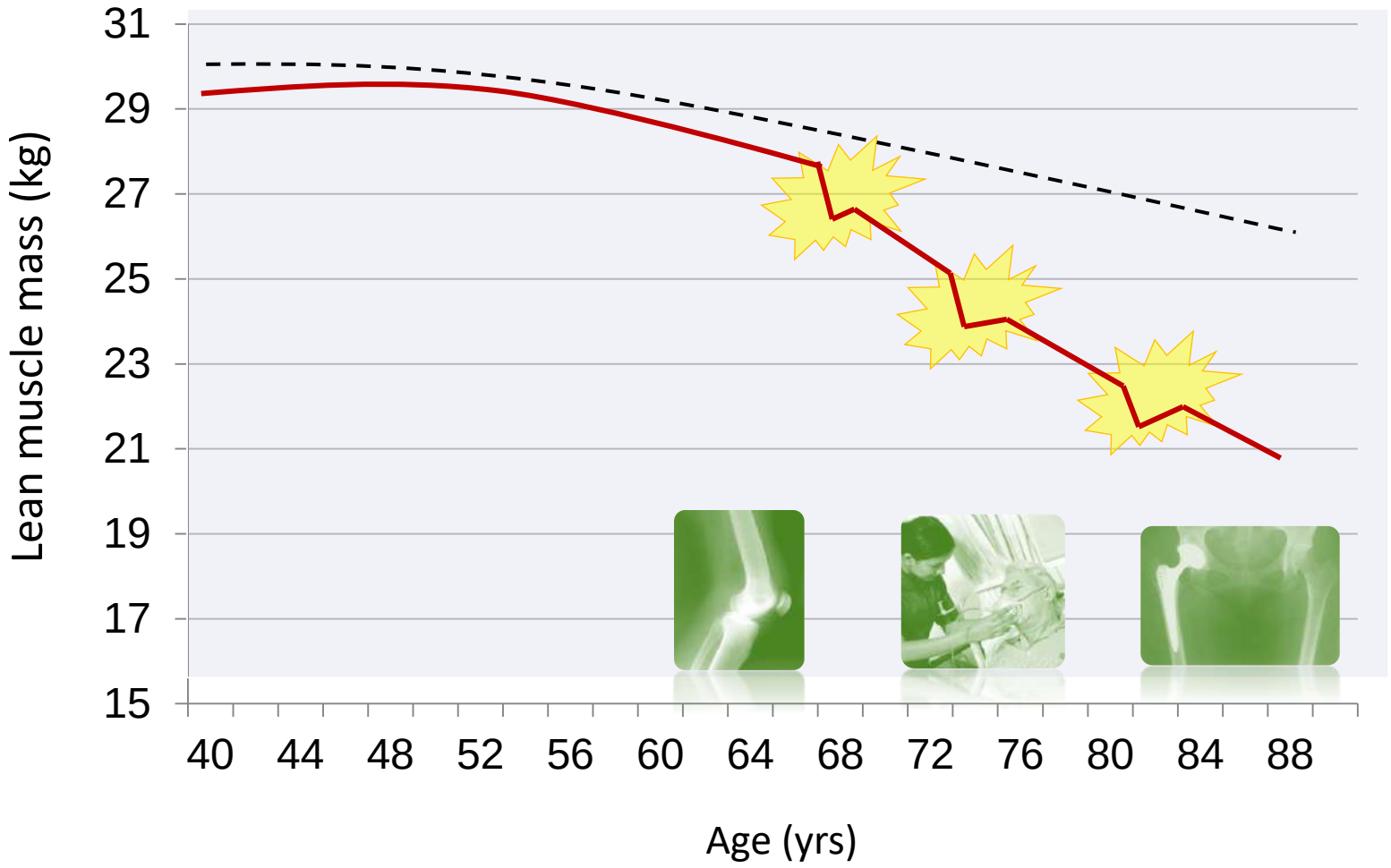
- Disminuye la masa muscular
- Incrementa el riesgo de desorientación
- Aumenta la resorción ósea
- Alteración en la mecánica pulmonar
- Aumento de incontinencia urinaria
- Aumento de prevalencia y frecuencia de Depresión.

¿Razones del Deterioro Funcional en el hospital?

- Edad
- Por la misma enfermedad
- Desacondicionamiento
- SARCOPENIA
- Efectos Adversos del Tratamiento
- Por el medio Ambiente
- Restricciones y Sujeciones
- Sobreprotección de personal y familiares

Alternate model of muscle loss

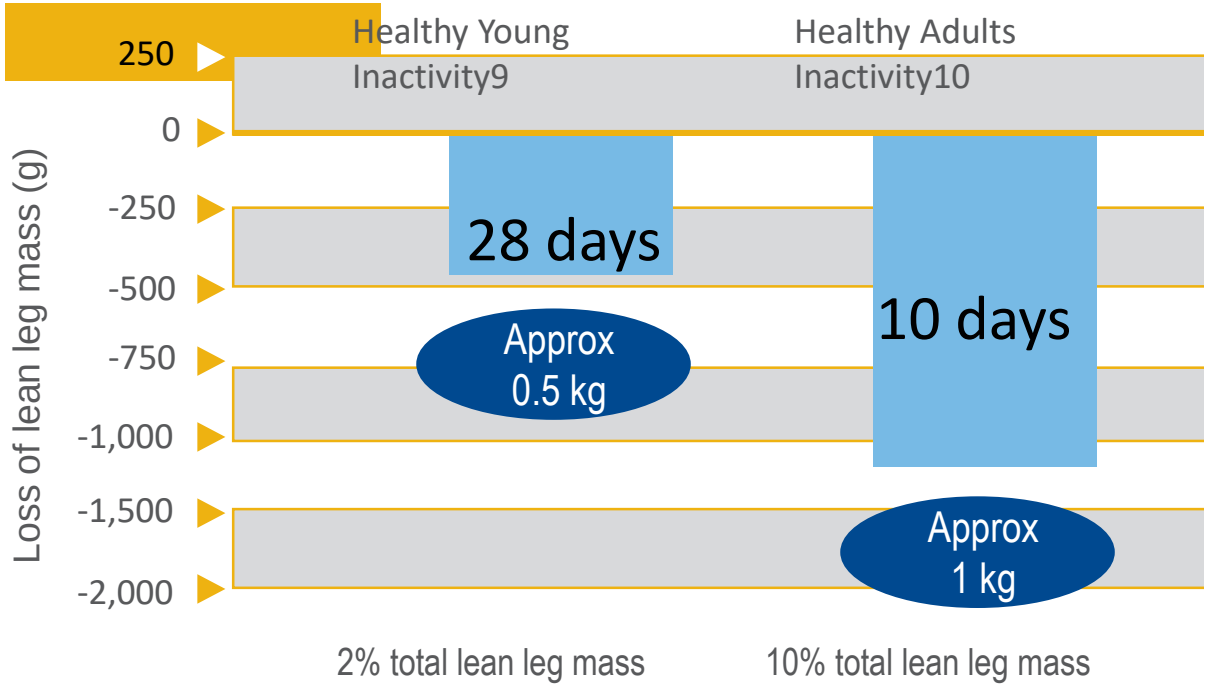
- developing tactical nutrition interventions -



Cortesia: Dr. Douglas Paddon-Jones

El reposo en cama o la hospitalización se asocia con una pérdida significante de Masa Muscular[9-11]

LBM LOSS ASSOCIATED WITH BED REST OR HOSPITALIZATION IN HEALTHY YOUNG ADULTS, HEALTHY AGING ADULTS, AND HOSPITALIZED OLDER PATIENTS



9. Kortebein P et al. *JAMA*. 2007;297:1772-1774.
10. Paddon-Jones D et al. *J Clin Endocrinol Metab*. 2004;89:4351-4358.
11. Paddon-Jones D. Presented at: 110th Abbott Nutrition Research Conference; June 23-25, 2009; Columbus, Ohio.

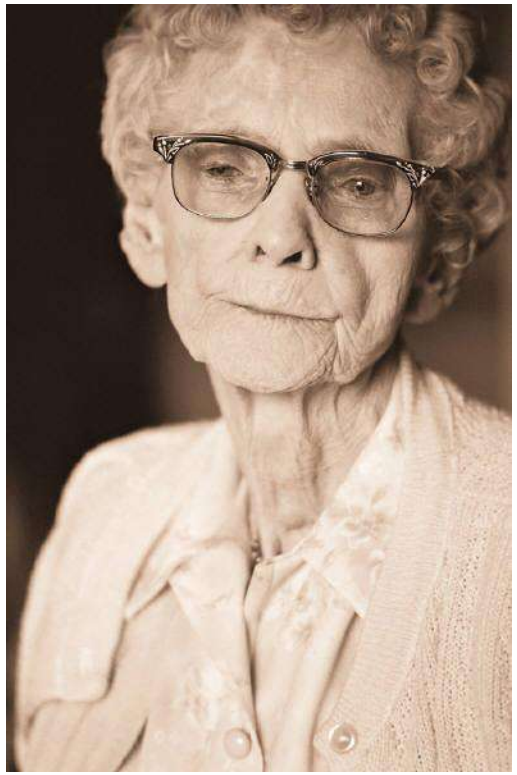
Riesgo de Deterioro en el Anciano Hospitalizado

- Entre el ingreso y el día 2, ocurre deterioro en la movilidad, transferencia, ir al baño, alimentación, y arreglo personal.
- 65% de los pacientes presentan deterioro de la movilidad entre el ingreso y día 2.
- Entre el día 2 y el alta, 67% no mejoraron y 10% se deterioraron más.

J Am Geriatr Soc 38: 1296-1303,1990

Descenlaces clínicos y funcionales con la hospitalización y reposo en cama

- Discapacidad[1]
  - Asociación fuerte en los frágiles y en los NO frágiles
- Deterioro en actividades de la vida diaria y en la marcha[2]
  - 30%–55% de ancianos egresados del hospital no pueden realizar las AVD o requieren de asilo



1. Gill T et al. *JAMA* 2004;292:2115-2124.
2. Ferrucci L et al. *JAMA* 1997;277:728-734.

- **Generalmente, el médico se enfoca a una enfermedad específica que ponen en peligro la vida o la función (por ejemplo, Infarto agudo del miocardio).**



- **Poca o ninguna atención se da a los resultados funcionales, determinantes críticos en la Calidad de Vida, independencia física, costo del cuidado y pronóstico.**

Decline in muscle strength during hospital stay in a geriatric acute care unit in a poor community Hospital.

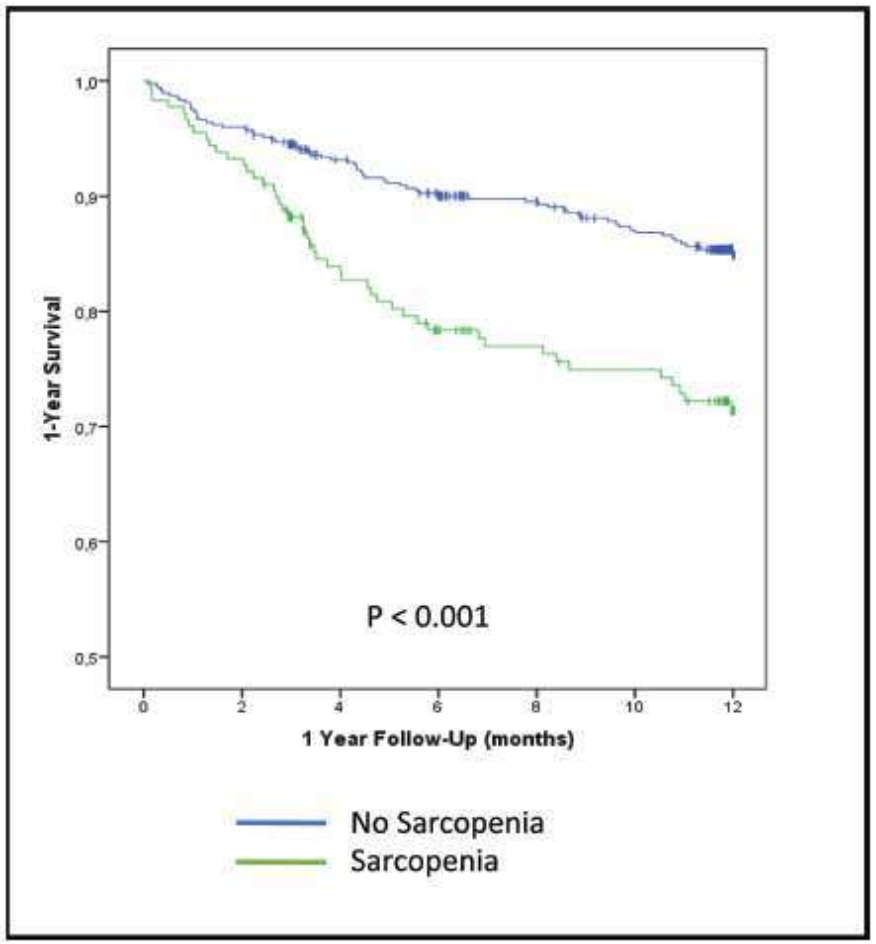
Clemente Zuniga-Gil MD1, Christian Peralta-Alarcón MD1, Stephanie Rojas-Mariscal MD1, Ricardo Valdez-Rosas MD1, Nathalie Beltrán-García MD1, Cynthia Meza-Ruiz MD1, Miguel A. García Grimshaw MD1, Marco Espinoza-Flores MD1, Mario Ulises Perez-Zepeda MD PhD2. Department of Geriatrics of Hospital General de Tijuana. Instituto Nacional de Geriatria. México

Mas de la mitad de los pacientes hospitalizados presentaron deterioro de la fuerza muscular

Fuerza de prensión al ingreso	**18.4 Kg**
Fuerza de prensión al egreso	16.6 Kg
Diferencia	1.82 Kg

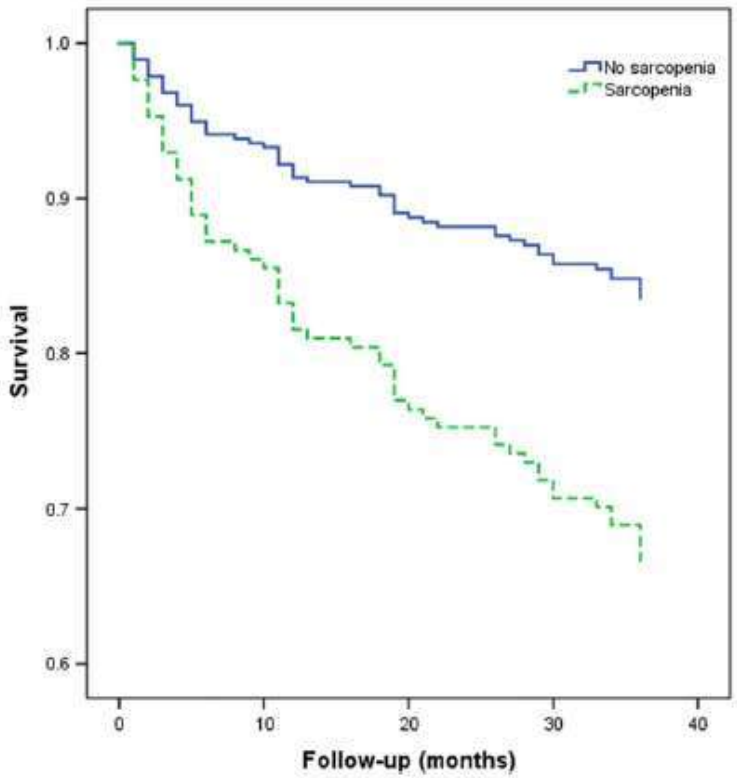
JNHA 2017

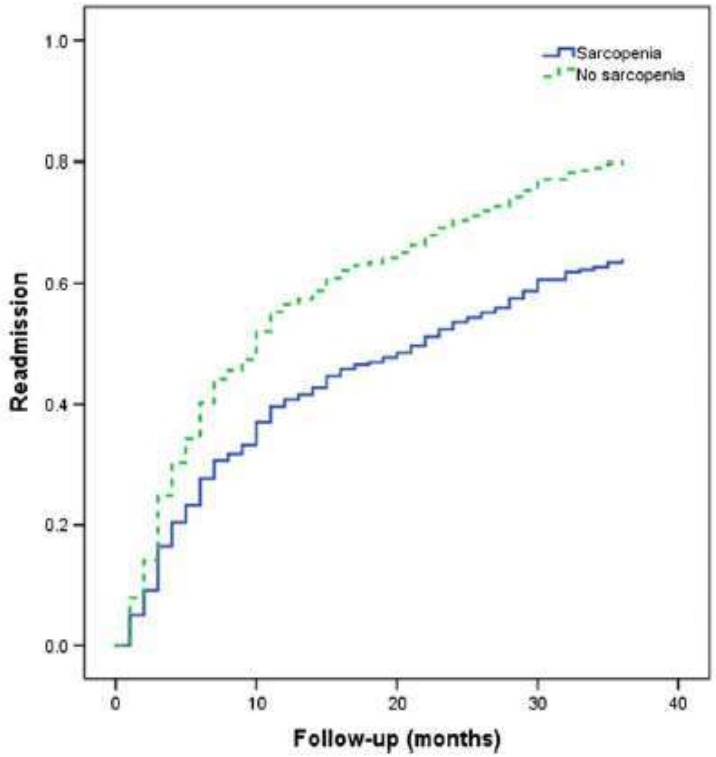
Association of Sarcopenia With Short- and Long-term Mortality in Older Adults Admitted to Acute Care Wards: Results From the CRIME Study



Vetrano DL, Landi F, Volpato S et al.
J Gerontol A Biol Sci Med Sci 2014
September;69(9):1154–1161

Sarcopenia predicts readmission and mortality in elderly patients in acute care wards: a prospective study





Yang M et al. Journal of Cachexia, Sarcopenia and Muscle (2016)

Deterioro funcional

	-6 a -5	-4 a -3	-2 a -1	0
Edad	76.5	73.3	73.6	73.4
EIH	4.5	5.1	6.1	5.6
Mortalidad	75%	23.5%	6.5%	1.2%
MM<19	65%	67%	77%	65%
Carga	2.5	2.5	2.3	2.3

Zuniga C et al. JNHA 2008

Research Article

Defining Aging Phenotypes and Related Outcomes: Clues to Recognize Frailty in Hospitalized Older Patients

Maura Marcucci,[1,2,*] Carlotta Franchi,[3,*] Alessandro Nobili,[3] Pier Mannuccio Mannucci,[4] and Ilaria Ardoino[2]; REPOSI Investigators

J Gerontol A Biol Sci Med Sci, 2017, Vol. 72, No. 3, 395–402

Reconocer sujetos en riesgo

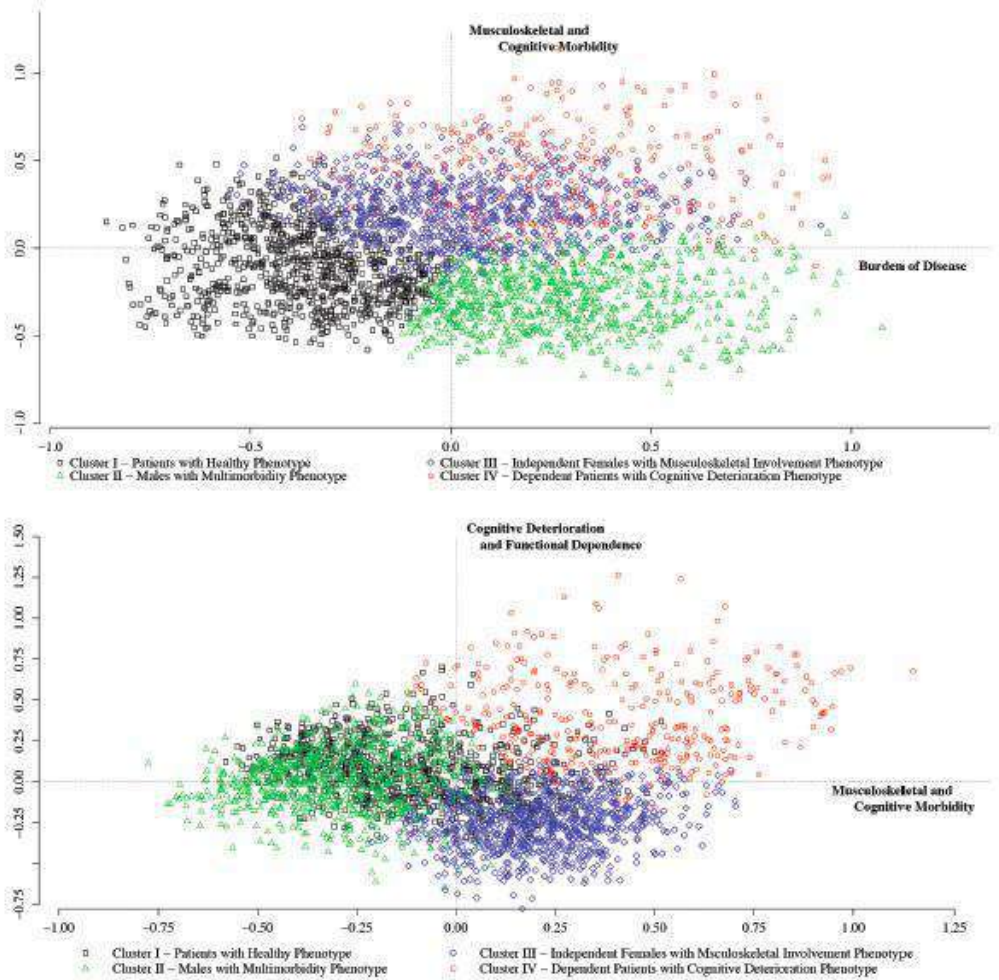


Figure 1. Results from hierarchical cluster analysis: the cloud of individuals according to clusters. (Upper panel) The cloud is plotted on the plane determined by the first and the second factorial axes. (Lower panel) The cloud is plotted on the plane identified by the second and the third factorial axes.

Marucci M et al. J Gerontol A Biol Sci Med Sci, 2017, Vol. 72, No. 3, 395–402

Reconocer sujetos en riesgo

Table 3. Results of Multivariable Logistic Regression Models for In-hospital and 3-Month Mortality

	In-hospital Mortality		3-Month Mortality	
	OR	(95% CI)	OR	(95% CI)
Cluster I	Reference		Reference	
Cluster II	2.27	(1.15–4.46)	1.66	(1.13–2.44)
Cluster III	0.79	(0.34–1.87)	0.60	(0.37–0.96)
Cluster IV	5.15	(2.58–10.26)	1.86	(1.15–3.00)
Country (Spain vs Italy)	1.79	(0.63–5.14)	3.39	(1.71–6.70)

Marucci M et al. J Gerontol A Biol Sci Med Sci, 2017, Vol. 72, No. 3, 395–402

Reconocer sujetos en riesgo

Brief Report

Frailty and Risk of Adverse Outcomes in Hospitalized Older Adults: A Comparison of Different Frailty Measures

Table 3
Predicting In-Hospital Mortality: Comparison Between Frailty Measures

Frailty Measures	OR (95% CI)*	*P* Value
FI	1.15 (1.00–1.33)	.05
FRAIL	3.31 (1.43–7.67)	.005
TFI	1.06 (0.83–1.34)	.658
CFS	2.57 (1.14–5.83)	.023

*Adjusted for age, sex, and severity of illness.

Chong E et al. JAMDA 18 (2017) 638.e7e638.e11

SYSTEMATIC REVIEW

The association between cognitive impairment and functional outcome in hospitalised older patients: a systematic review and meta-analysis

Peter Hartley[1], Nathalie Gibbins[1], Amanda Saunders[1], Kerry Alexander[1], Eimear Conroy[1], Rebecca Dixon[1], Joseph Lang[1], Jasmine Luckett[1], Tim Luddington[1], Roman Romero-Ortuno[2,3]

Hartley P et al. Age and Ageing 2017; 0: 1–9

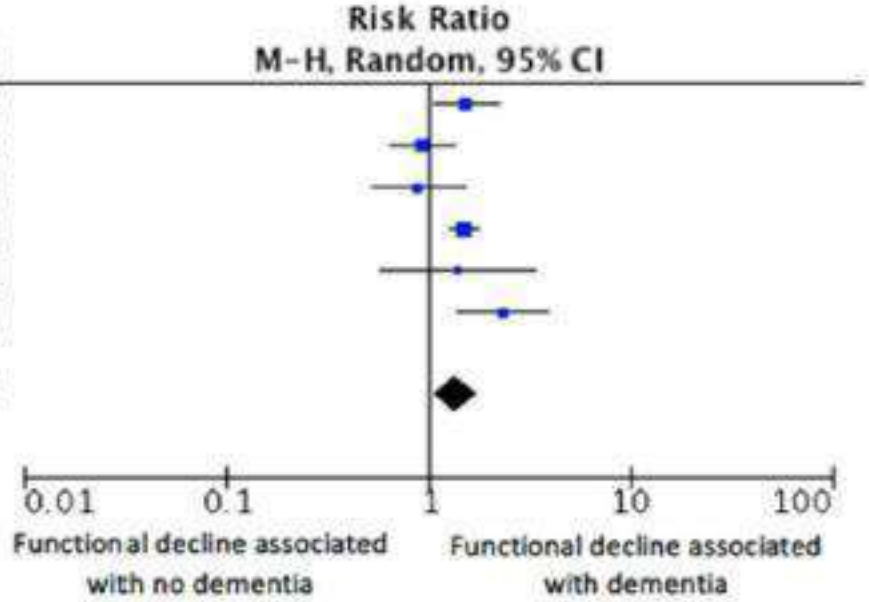
Deterioro funcional en el paciente hospitalizado con deterioro cognitivo

(a)

Study or Subgroup	Dementia Events	Dementia Total	No Dementia Events	No Dementia Total	Weight	Risk Ratio M-H, Random, 95% CI
Barnes 2012	23	60	97	389	19.3%	1.54 [1.07, 2.21]
Hartley 2016	29	138	102	452	19.2%	0.93 [0.65, 1.34]
McCusker 2001	32	184	16	82	13.2%	0.89 [0.52, 1.53]
Mudge 2010	41	50	184	337	27.8%	1.50 [1.28, 1.77]
Naruishi 2014	13	150	7	112	6.7%	1.39 [0.57, 3.36]
Zekry 2011	40	148	17	146	13.8%	2.32 [1.38, 3.90]
Total (95% CI)		**730**		**1518**	**100.0%**	**1.36 [1.05, 1.76]**
Total events	178		423			

Heterogeneity: $Tau^2 = 0.06$; $Chi^2 = 12.67$, $df = 5$ ($P = 0.03$); $I^2 = 61\%$

Test for overall effect: $Z = 2.31$ ($P = 0.02$)



Hartley P et al. Age and Ageing 2017; 0: 1–9

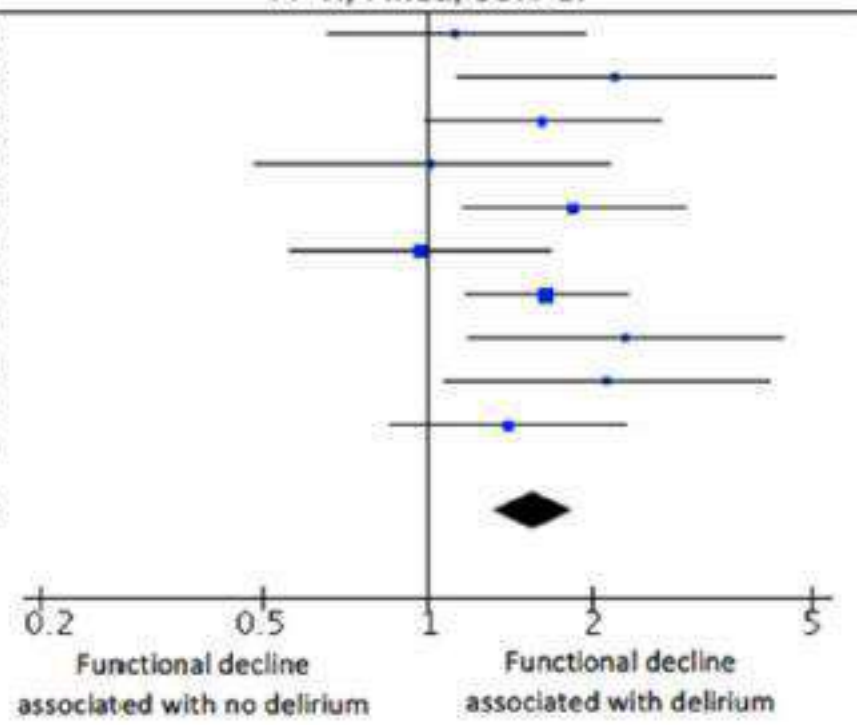
Deterioro funcional en el paciente hospitalizado con deterioro cognitivo

(b)

Study or Subgroup	Delirium Events	Total	No delirium Events	Total	Weight	Risk Ratio M-H, Fixed, 95% CI
Chen 2010	6	10	57	107	7.2%	1.13 [0.66, 1.93]
Francis 1992	8	20	21	115	4.6%	2.19 [1.13, 4.24]
Friedman 2008	15	35	30	113	10.6%	1.61 [0.99, 2.64]
Hansen 1999	3	5	40	68	4.1%	1.02 [0.49, 2.14]
Inouye 1993	18	43	33	145	11.2%	1.84 [1.16, 2.92]
McCusker 2001	32	179	16	87	16.0%	0.97 [0.56, 1.67]
Murray 1993	38	91	51	200	23.7%	1.64 [1.17, 2.30]
Noriega 2015	10	35	21	168	5.4%	2.29 [1.18, 4.42]
O'Keeffe 1997	12	47	15	124	6.1%	2.11 [1.07, 4.17]
Velilla 2012	40	63	10	22	11.0%	1.40 [0.85, 2.29]
Total (95% CI)		**528**		**1149**	**100.0%**	**1.55 [1.31, 1.83]**
Total events	182		294			

Heterogeneity: $Chi^2 = 9.42$, $df = 9$ ($P = 0.40$); $I^2 = 4\%$

Test for overall effect: $Z = 5.20$ ($P < 0.00001$)



Hartley P et al. Age and Ageing 2017; 0: 1–9

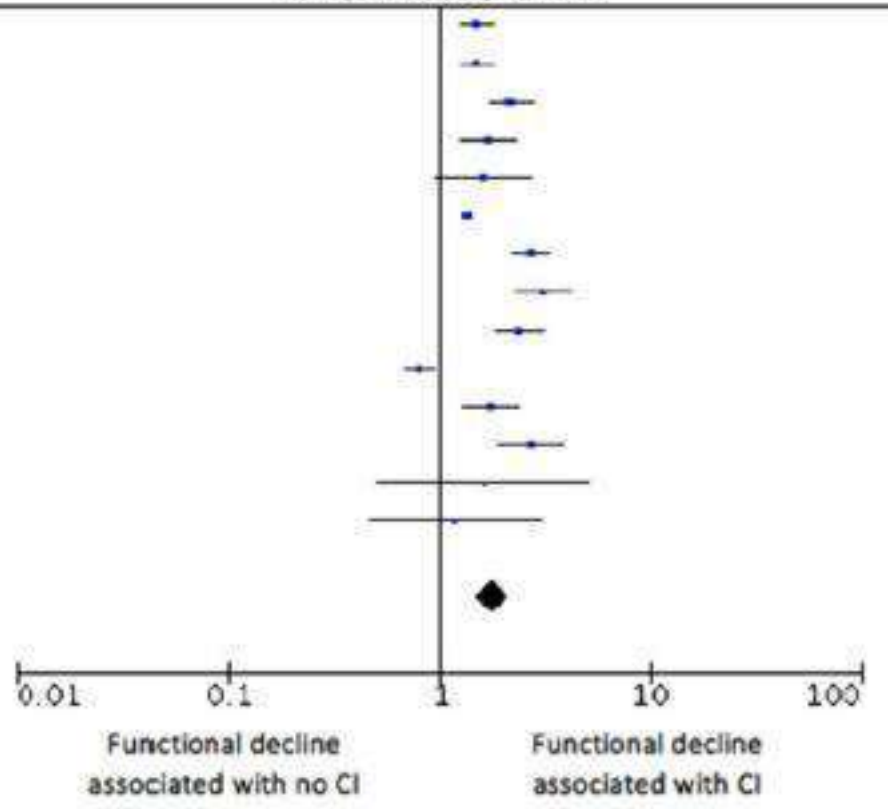
Deterioro funcional en el paciente hospitalizado con deterioro cognitivo

(c)

Study or Subgroup	CI Events	CI Total	No CI Events	No CI Total	Weight	Risk Ratio M-H, Random, 95% CI
Bo 2016	189	619	151	736	8.6%	1.49 [1.24, 1.79]
Chaudhry 2004	220	459	131	403	8.7%	1.47 [1.24, 1.75]
Cornette 2005	59	107	106	415	8.1%	2.16 [1.70, 2.74]
Hansen 1999	13	15	30	58	7.4%	1.68 [1.22, 2.30]
Inouye 1993	12	31	38	157	5.5%	1.60 [0.95, 2.70]
Kruse 2013 (1)	9311	20785	4281	13035	9.3%	1.36 [1.33, 1.40]
Mehta 2011	90	151	162	734	8.5%	2.70 [2.24, 3.26]
Pedone 2005	76	1903	93	7158	7.6%	3.07 [2.28, 4.14]
Sands 2003	73	217	113	796	8.0%	2.37 [1.84, 3.05]
Socorro 2015	136	442	223	581	8.6%	0.80 [0.67, 0.95]
Sánchez 2011	27	39	49	123	7.6%	1.74 [1.29, 2.35]
Volpato 2007	47	355	66	1331	7.1%	2.67 [1.87, 3.81]
von Renteln-Kruse 2015	24	197	3	40	2.1%	1.62 [0.51, 5.14]
Zekry 2011	5	37	17	146	2.9%	1.16 [0.46, 2.94]
Total (95% CI)		**25357**		**25713**	**100.0%**	**1.77 [1.46, 2.14]**
Total events	10282		5463			

Heterogeneity: Tau² = 0.10; Chi² = 162.42, df = 13 (P < 0.00001); I² = 92%
Test for overall effect: Z = 5.79 (P < 0.00001)

Footnotes
(1) Random slopes as predicted by the model as oppose to actual data points

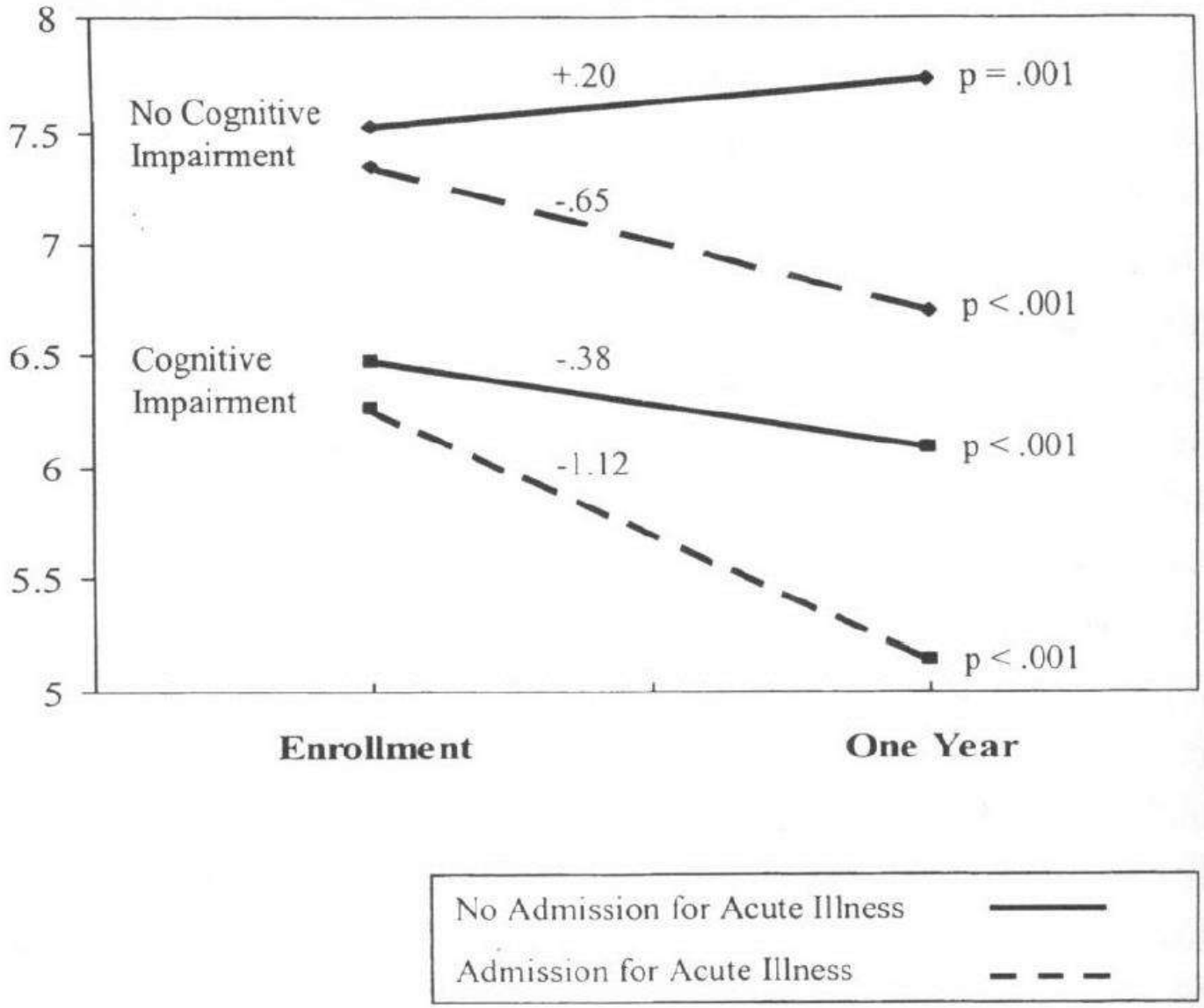


Hartley P et al. Age and Ageing 2017; 0: 1–9

Relación entre hospitalización y deterioro funcional

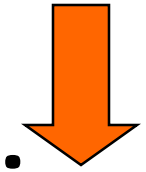
Condición	OR	IC 95%
Alt Cognición	1.93	1.53 – 2.43
Hospitalización	2.26	1.82 – 2.81
Alt Cognición + hospitalización	3.56	2.77 – 4.57

Sands LP, Yaffe K, Liu LY. J Jerontol 2002; 57ª:M449-M454



Sands LP, Yaffe K, Liu LY. J Jerontol 2002; 57ª:M449-M454

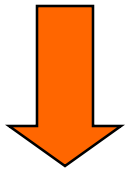
Anciano Hospitalizado



Deterioro Físico y/o Cognitivo

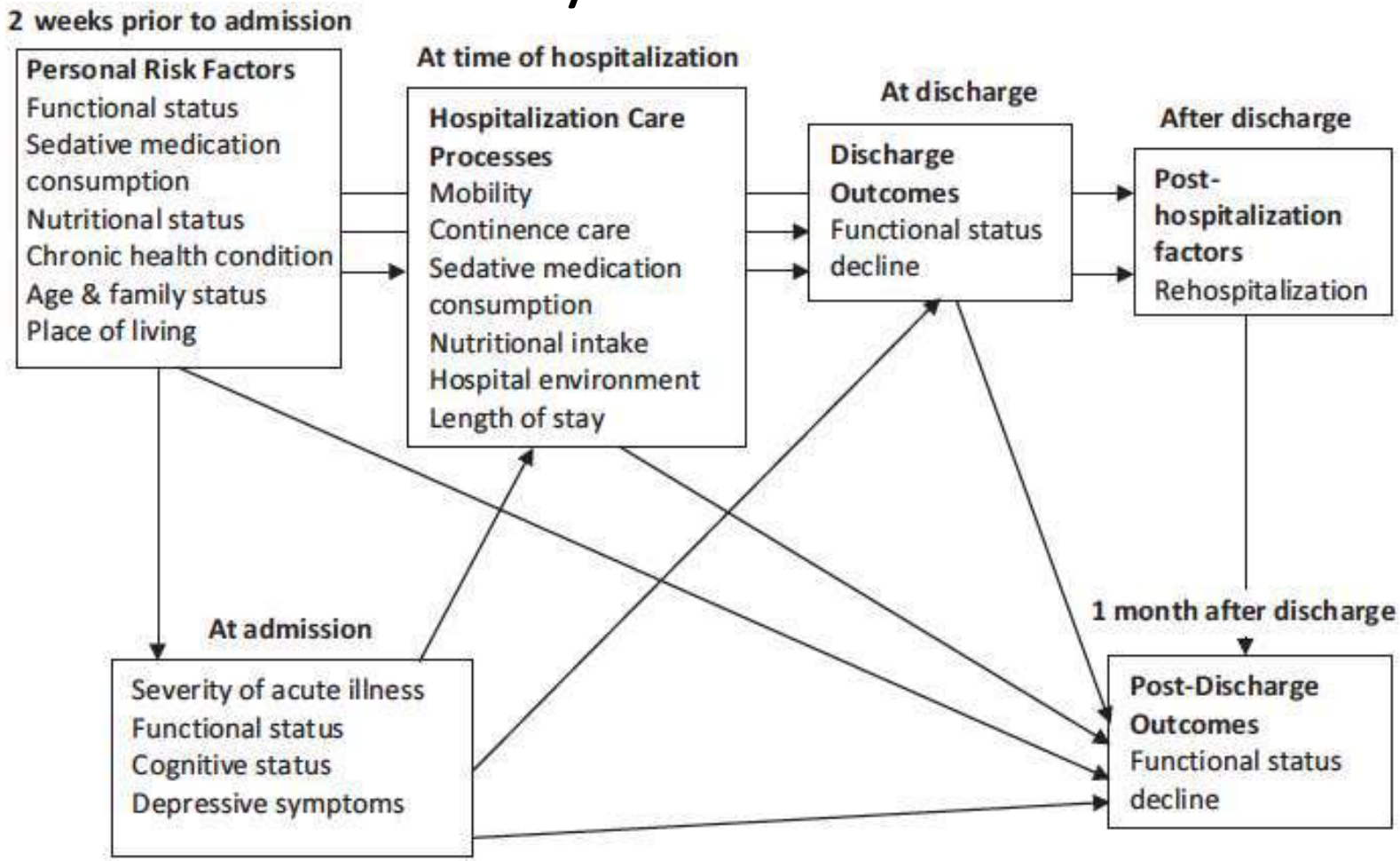


Institucionalización



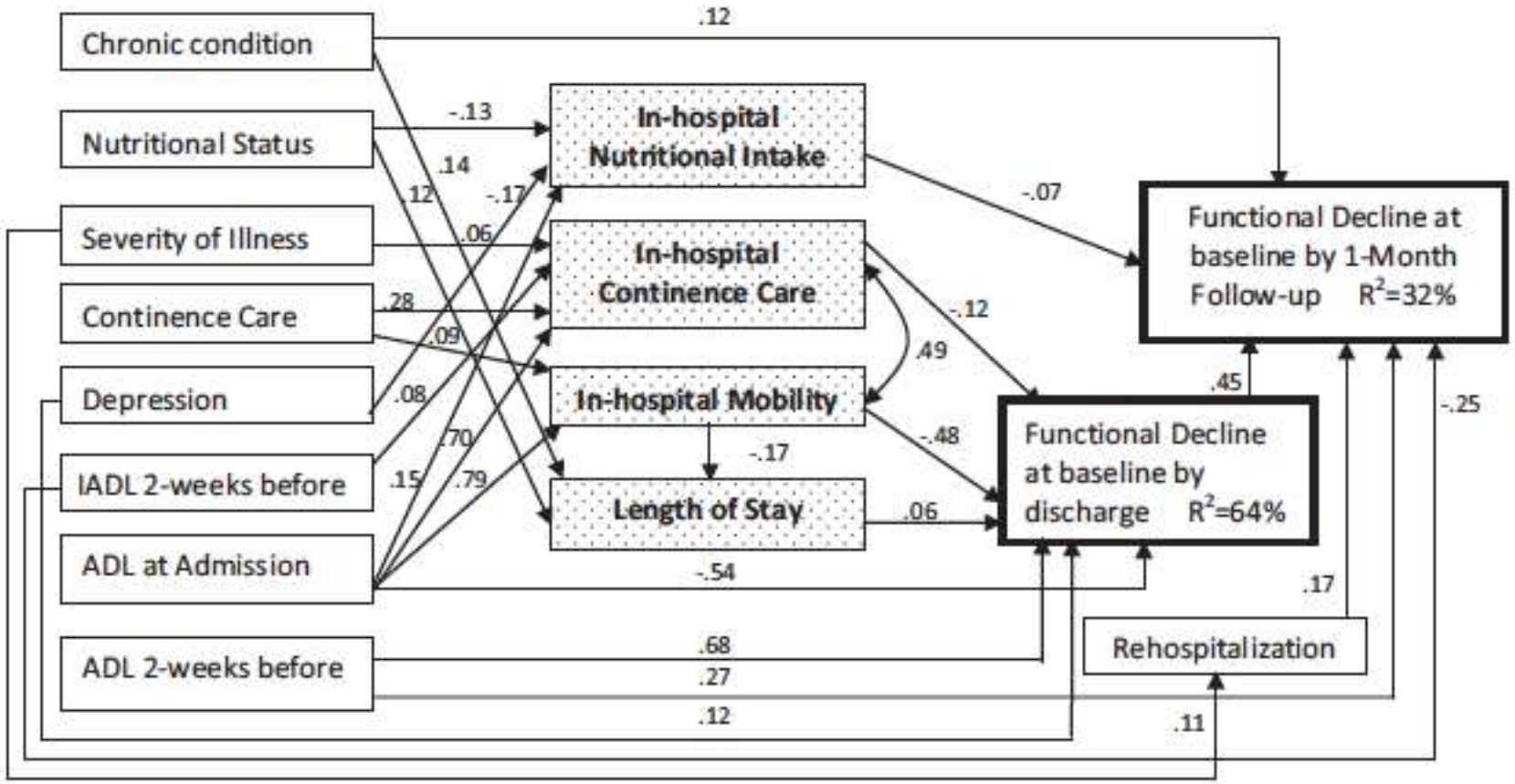
Muerte

Modelo del proceso de hospitalización en el deterioro funcional y desenlace



Zisberg A. J Am Geriatr Soc 63:55–62, 2015.

Modelo del proceso de hospitalización en el deterioro funcional y desenlace



Zisberg A. J Am Geriatr Soc 63:55–62, 2015.



Programa de Cuidados Geriátricos de Yale

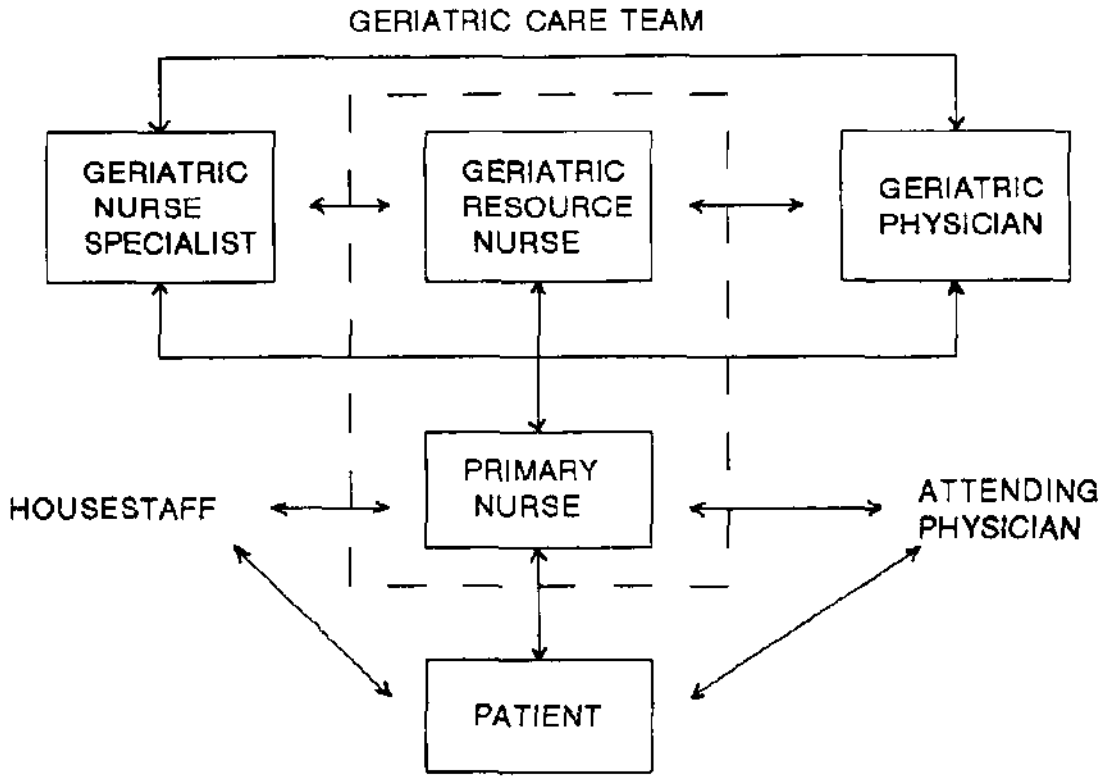


FIGURE 1. The Yale Geriatric Care Program: Model of Care. The Geriatric Resource Nurses often served as primary nurses for frail geriatric patients.

Inouye S et al. J Am Geriatr SOC 41:13451352,1993

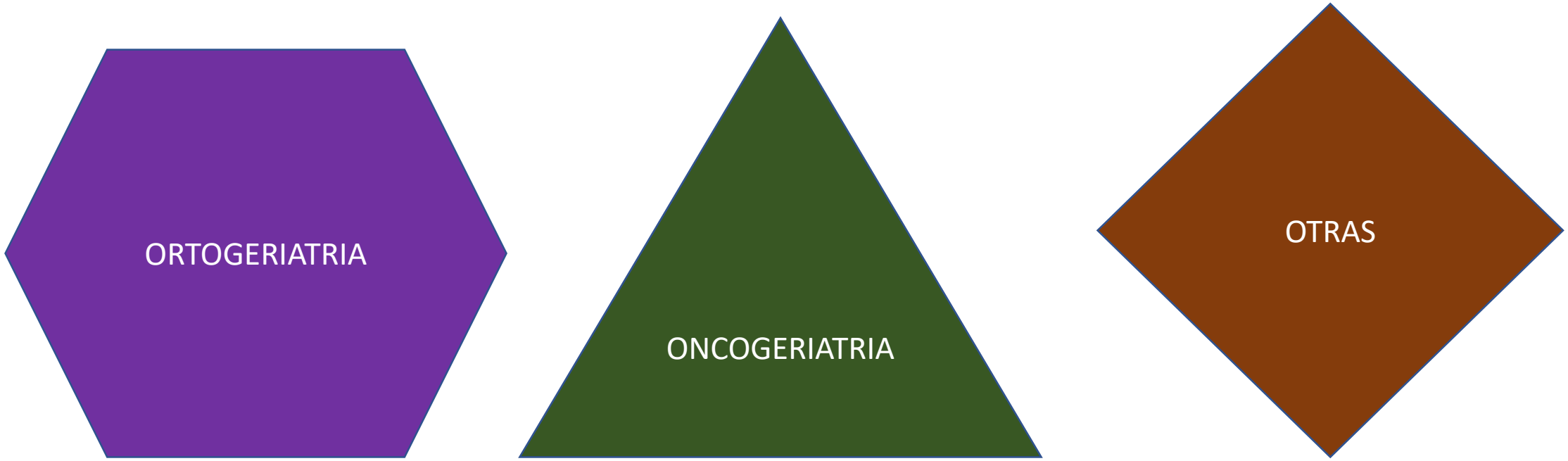
Diferentes programas / Diferentes desenlaces

ACUTE CARE FOR THE ELDERLY
ACE
Ambiente especializado
Centrado en el paciente
Evaluación médica
Planes interdisciplinarios
Adecuar a nececidades

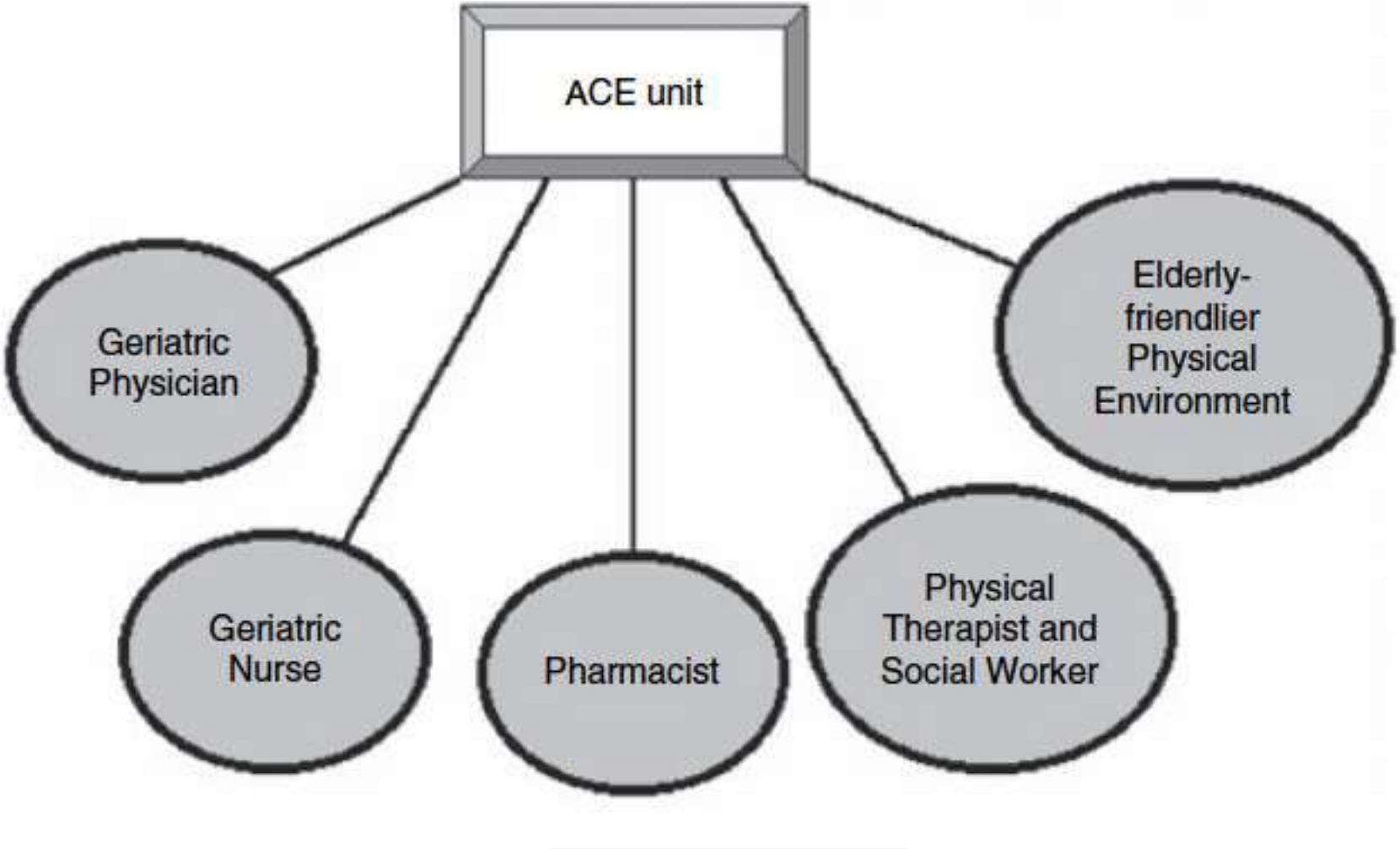
GERIATRIC EVALUATION AND MANAGEMENT
GEM
Dirigido
Post agudo
Buenos desenlaces
Costoso

GERIATRIC ASSESSMENT UNITS
GAU
Agudo o post agudo
Multidisciplinario
NO ambiente
NO enfermería especializada

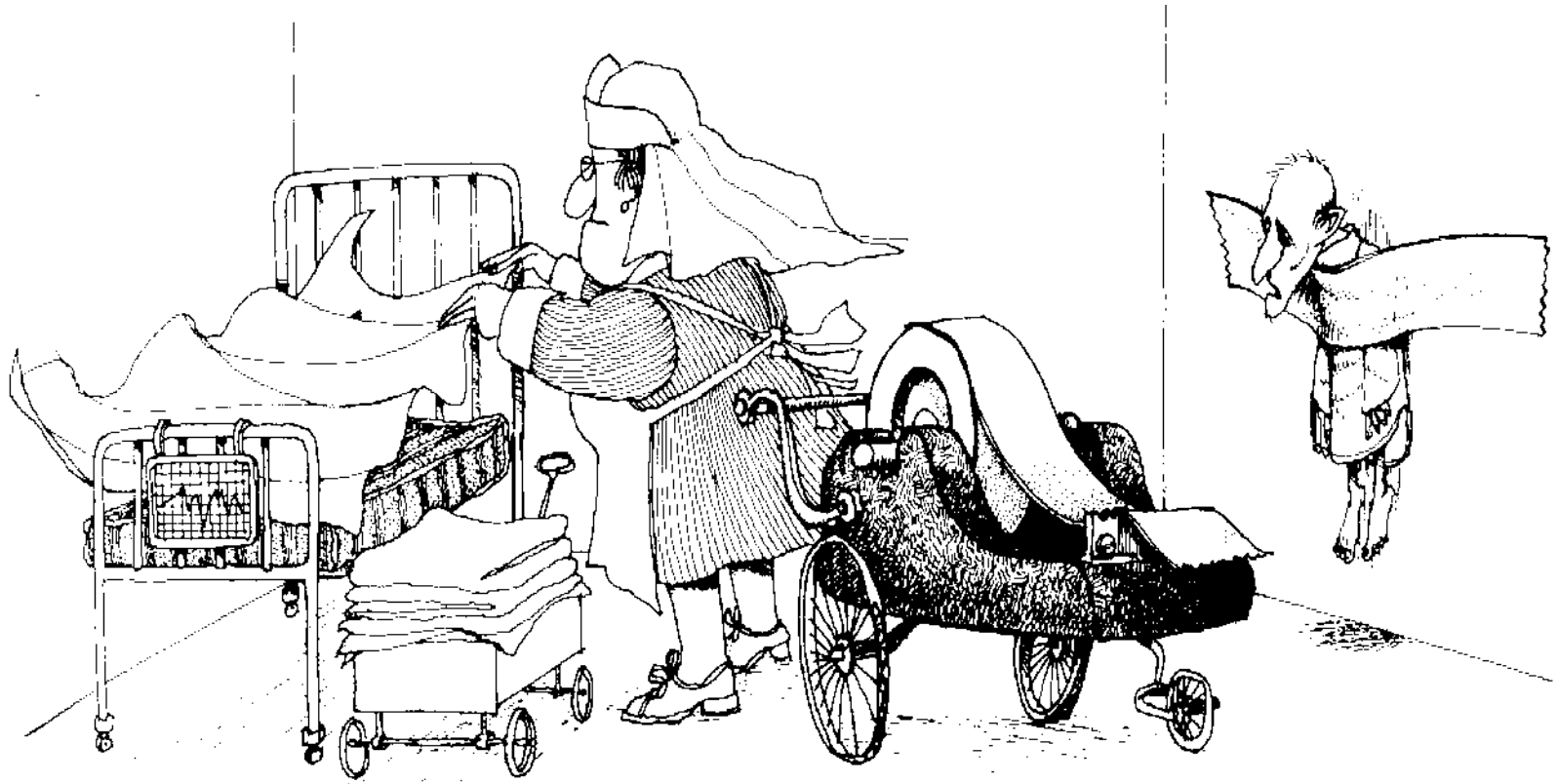
Diferentes programas / Diferentes desenlaces



Programas integrales (PACE)



Eng C et lal. J Am Geriatr Soc 1997;45:223-232.



Elementos críticos de una intervención

- Abordaje en equipo.
- Unidad especializada.
- Dirigido.
- Planeación de egreso.
- Comunicación entre profesionales.

Hickman L et al. Journal of Advanced Nursing 2007; 60(2), 113–126

Desempeño de los diferentes componentes de una Unidad de Cuidados Geriátricos Agudos

Table 1. Effect Sizes (ESs) of Outcomes According to Acute Care for Elders (ACE) Component

	Medical Review		Early Rehabilitation		Early Discharge Planning		Prepared Environment		Patient-Centered Care	
Outcome	ES, Mean (Range)	n/N	ES, Mean (Range)	n/N	ES, Mean (Range)	n/N	ES, Mean (Range)	n/N	ES, Mean (Range)	n/N
All Outcomes	0.20		0.20		0.17		0.11		0.20	
Falls	0.56 (N/A)	1/1	0.56 (N/A)	1/1	0.08 (–0.10–0.25)	0/2	N/A	0/0	0.24 (–0.10–0.56)	1/3
Pressure ulcers	0.59 (N/A)	1/1	0.59 (N/A)	1/1	0.49 (0.0–0.98)	0/2	N/A	0/0	0.52 (0.0–0.98)	1/3
Delirium	0.25 (–0.05–0.51)	2/3	0.23 (–0.05–0.51)	1/2	0.05 (N/A)	0/1	0.29 (N/A)	1/1	0.25 (–0.05–0.51)	2/3
Functional decline	0.22 (0.0–0.55)	2/6	0.23 (0.0–0.55)	2/5	0.20 (0.0–0.55)	1/4	0.10 (0.0–0.17)	0/4	0.22 (0.0–0.55)	2/6
Length of hospital stay	0.16 (0.04–0.38)	1/4	0.16 (0.04–0.38)	1/4	0.16 (0.04–0.38)	1/4	0.09 (0.04–0.13)	0/3	0.16 (0.04–0.38)	1/4
Discharge to home	0.14 (–0.02–0.31)	1/6	0.14 (–0.02–0.31)	1/5	0.17 (–0.02–0.31)	1/6	0.17 (–0.02–0.31)	1/3	0.14 (–0.02–0.31)	1/10
Discharge to nursing home	0.17 (0.08–0.25)	0/2	0.17 (0.08–0.25)	0/2	0.17 (0.08–0.25)	0/2	0.08 (N/A)	0/1	0.16 (0.08–0.25)	0/3
Cost[a]	0.09 (0.02–0.20)	1/4	0.09 (0.02–0.20)	1/4	0.09 (0.02–0.20)	1/4	0.06 (0.02–0.08)	0/3	0.09 (0.02–0.20)	1/4

Fox MT et al. J Am Geriatr Soc 61:939–946, 2013

Acute Care for the Elderly: A Literature Review

Nasiya N. Ahmed, M.D. and Shannon E. Pearce, G.N.P.

TABLE 2. OVERALL SUMMARY OF STUDIES: ACUTE CARE FOR THE ELDERLY (ACE) VERSUS USUAL-CARE

Outcome Variables	*Increased*	*Decreased*	*Neutral*
Cost*	2,14	11,15	11,15
Length of stay		2,3,11–13	12
Hospital readmission		12,13	3,11
Nursing home placement		2,3,11,14,15,17	
Functional decline		2–4,15,17	11
Delirium		13,19	3

POPULATION HEALTH MANAGEMENT
Volume 13, Number 4, 2010

Acute care of severely frail elderly patients in a CGA-unit is associated with less functional decline than conventional acute care

Niklas Ekerstad[1,2]
Synneve Dahlin Ivanoff[3]
Sten Landahl[4]
Göran Östberg[5]
Maria Johansson[5]
David Andersson[6]
Magnus Husberg[2]
Jenny Alwin[2]
Björn W Karlson[7]

Clinical Interventions in Aging 2017:12 1239–1249

Cuidados Geriátricos Agudos vs manejo convencional

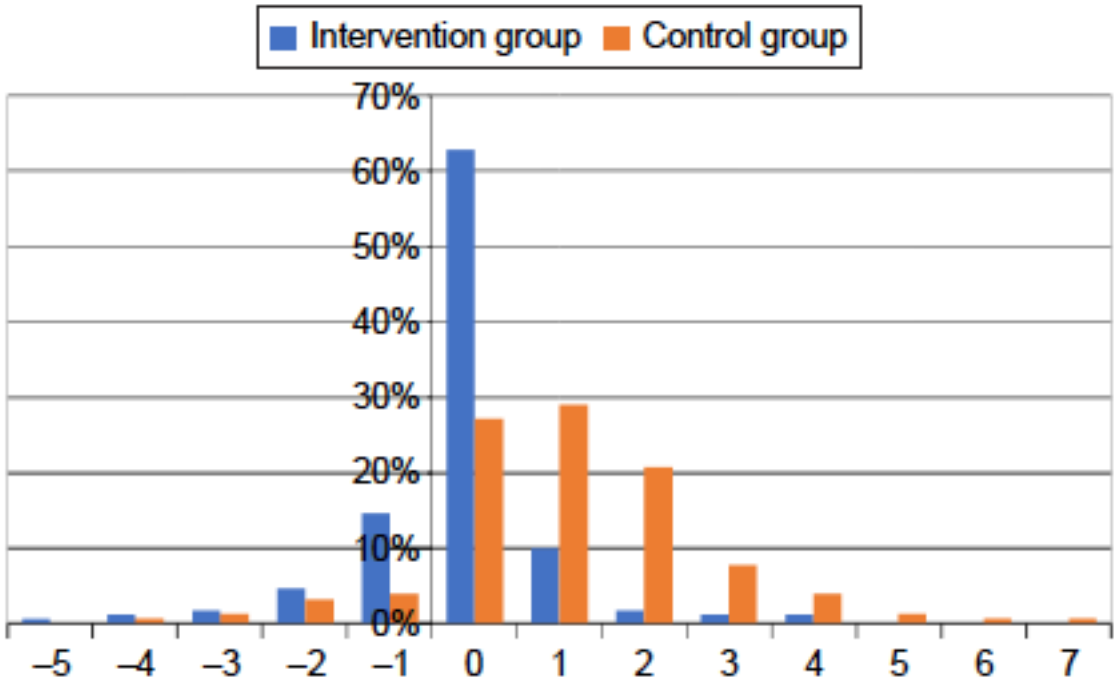
Figures	Comprehensive geriatric assessment and care	Conventional acute medical care
Department and facilities	Two MÄVA (acute elderly care CGA units) wards with a total of 48 beds; one, two, or four-bedded rooms Division of Internal Medicine and Emergency Care	Wards of internal and emergency medicine; one, two, or four-bedded rooms Division of Internal Medicine and Emergency Care
Team members		
Physicians	Yes. Specialists in internal medicine, family medicine, and/or geriatrics	Yes. Specialists in internal medicine
Licensed practical nurses	Yes. Including specialized admission and discharge nurses	Yes
Occupational therapists	Yes	No. Only counseling
Physiotherapists	Yes	No. Only counseling
Nutritionists	No. Only counseling	No. Only counselling
Treatment	Systematic, structured interdisciplinary comprehensive geriatric assessment and care by validated instruments focusing on: somatic and mental health, medication review, functional and activity ability including early rehabilitation, social situation Early discharge planning	Following routines at departments of internal medicine and emergency care in accordance with guidelines
Admission route	Directly to the MÄVA ward via ambulance or primary care	Via the emergency ward

Ekertad N et al.Clinical Interventions in Aging 2017:12 1239–1249

Cuidados Geriátricos Agudos vs manejo convencional

Table 3 Adjusted analysis by multiple logistic regression of risk of decline in ADLs until follow-up (3 months)

	OR (95% CI)	*P*-value
Clinic		
CGA unit (intervention group)	0.093 (0.052–0.164)	<0.0001
Conventional care (control group)	REF	
Sex		
Female	1.358 (0.775–2.382)	0.285
Male	REF	
Age	1.031 (0.981–1.084)	0.231
Charlson Comorbidity Index score	0.955 (0.803–1.136)	0.601



Ekertad N et al.Clinical Interventions in Aging 2017:12 1239–1249

Cuidados Geriátricos Agudos vs manejo convencional

Table 4 Adjusted analysis by multiple logistic regression of increase in degree of frailty until follow-up (3 months)

	OR (95% CI)	*P*-value
Clinic		
CGA unit (intervention group)	0.229 (0.131–0.400)	<0.0001
Conventional care (control group)	REF	
Sex		
Female	0.864 (0.509–1.467)	0.588
Male	REF	
Age	0.996 (0.950–1.045)	0.876
Charlson Comorbidity Index score	0.995 (0.842–1.175)	0.951

Ekertad N et al.Clinical Interventions in Aging 2017:12 1239–1249

BMJ

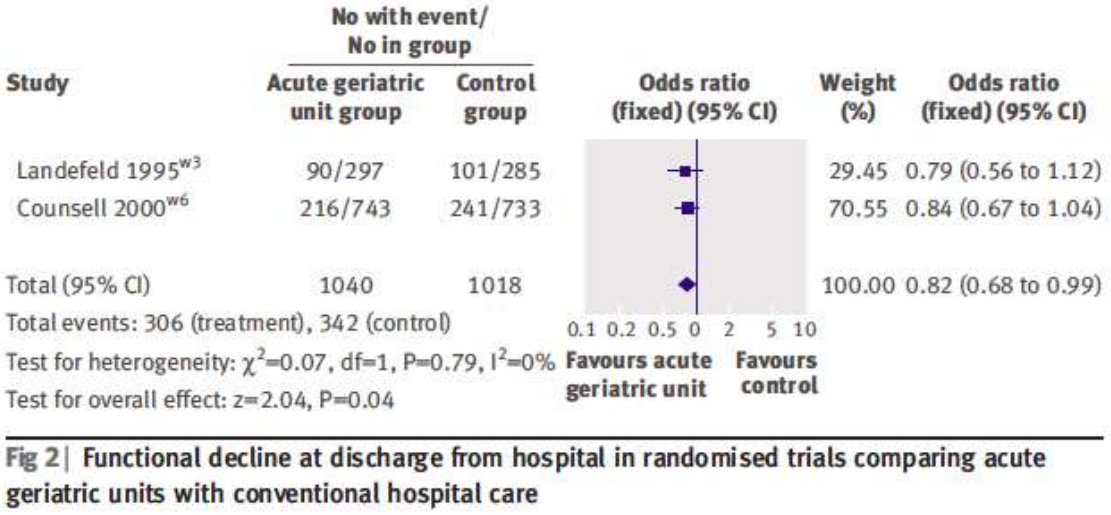
RESEARCH

Effectiveness of acute geriatric units on functional decline, living at home, and case fatality among older patients admitted to hospital for acute medical disorders: meta-analysis

Juan J Baztán, consultant geriatrician,[1] Francisco M Suárez-García, geriatrician,[2] Jesús López-Arrieta, consultant geriatrician,[3] Leocadio Rodríguez-Mañas, chief of department,[4] Fernando Rodríguez-Artalejo, professor of preventive medicine and public health[5,6]

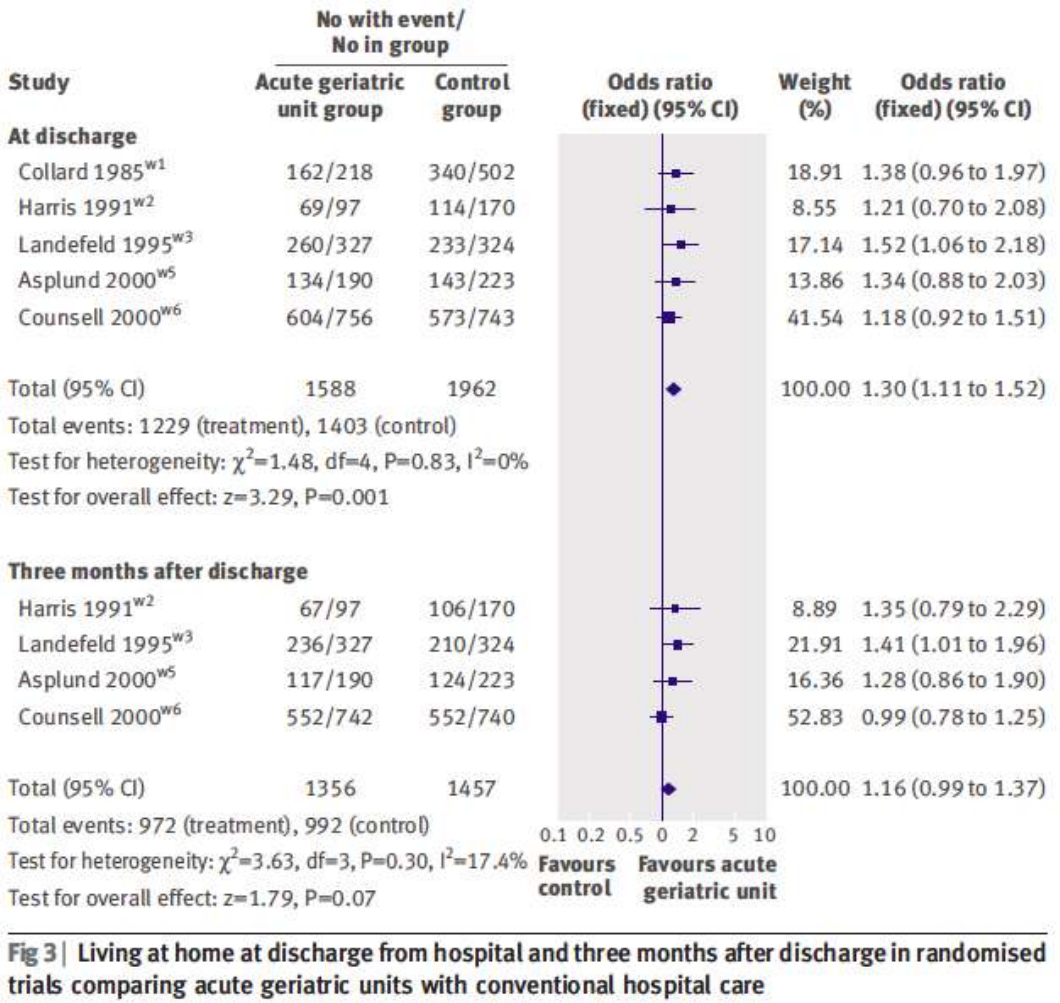
BMJ 2009;338:b50

Efectividad de las unidades de cuidados geriátricos agudos



Study	No with event/ No in group: Acute geriatric unit group	Control group	Odds ratio (fixed) (95% CI)	Weight (%)	Odds ratio (fixed) (95% CI)
Landefeld 1995[w3]	90/297	101/285		29.45	0.79 (0.56 to 1.12)
Counsell 2000[w6]	216/743	241/733		70.55	0.84 (0.67 to 1.04)
Total (95% CI)	1040	1018		100.00	0.82 (0.68 to 0.99)
Total events: 306 (treatment), 342 (control)					
Test for heterogeneity: χ^2=0.07, df=1, P=0.79, I^2=0%					
Test for overall effect: z=2.04, P=0.04					

Fig 2 | Functional decline at discharge from hospital in randomised trials comparing acute geriatric units with conventional hospital care



Study	No with event/ No in group: Acute geriatric unit group	Control group	Odds ratio (fixed) (95% CI)	Weight (%)	Odds ratio (fixed) (95% CI)
At discharge					
Collard 1985[w1]	162/218	340/502		18.91	1.38 (0.96 to 1.97)
Harris 1991[w2]	69/97	114/170		8.55	1.21 (0.70 to 2.08)
Landefeld 1995[w3]	260/327	233/324		17.14	1.52 (1.06 to 2.18)
Asplund 2000[w5]	134/190	143/223		13.86	1.34 (0.88 to 2.03)
Counsell 2000[w6]	604/756	573/743		41.54	1.18 (0.92 to 1.51)
Total (95% CI)	1588	1962		100.00	1.30 (1.11 to 1.52)
Total events: 1229 (treatment), 1403 (control)					
Test for heterogeneity: χ^2=1.48, df=4, P=0.83, I^2=0%					
Test for overall effect: z=3.29, P=0.001					
Three months after discharge					
Harris 1991[w2]	67/97	106/170		8.89	1.35 (0.79 to 2.29)
Landefeld 1995[w3]	236/327	210/324		21.91	1.41 (1.01 to 1.96)
Asplund 2000[w5]	117/190	124/223		16.36	1.28 (0.86 to 1.90)
Counsell 2000[w6]	552/742	552/740		52.83	0.99 (0.78 to 1.25)
Total (95% CI)	1356	1457		100.00	1.16 (0.99 to 1.37)
Total events: 972 (treatment), 992 (control)					
Test for heterogeneity: χ^2=3.63, df=3, P=0.30, I^2=17.4%					
Test for overall effect: z=1.79, P=0.07					

Fig 3 | Living at home at discharge from hospital and three months after discharge in randomised trials comparing acute geriatric units with conventional hospital care

Baztán JJ et al. BMJ 2009;338:b50

Unidad de cuidados geriátricos agudos Vs Servicio interconsultante

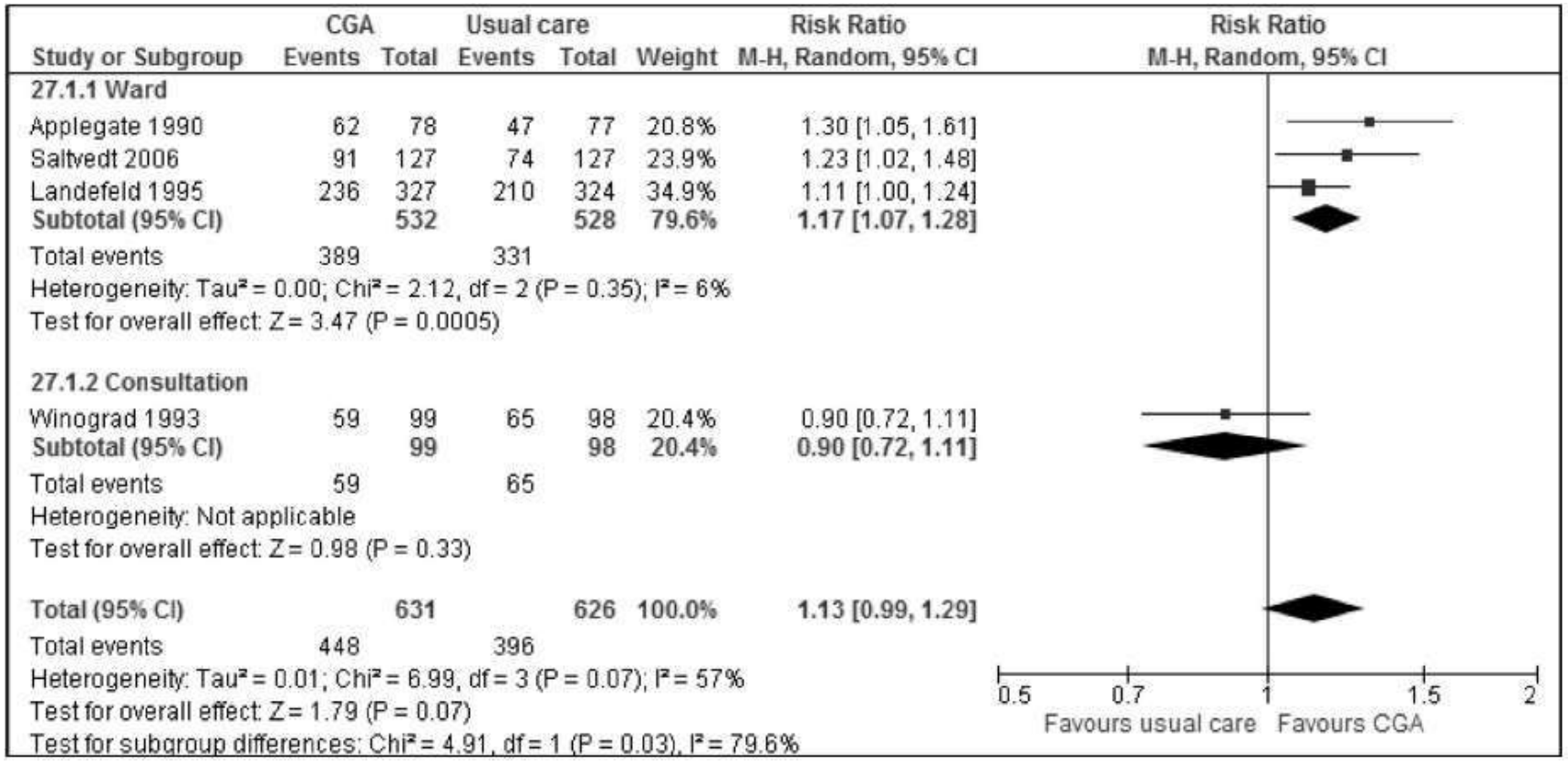


Fig. 2. Effects on the change in housing outcome in the frail group by CGA-*consult* and CGA-*ward*.

Ekdahl AW et al. European Geriatric Medicine 6 (2015) 523–540

Cochrane Library

Cochrane Database of Systematic Reviews

Comprehensive geriatric assessment for older adults admitted to hospital (Review)

Ellis G, Gardner M, Tsiachristas A, Langhorne P, Burke O, Harwood RH, Conroy SP, Kircher T, Somme D, Saltvedt I, Wald H, O'Neill D, Robinson D, Shepperd S

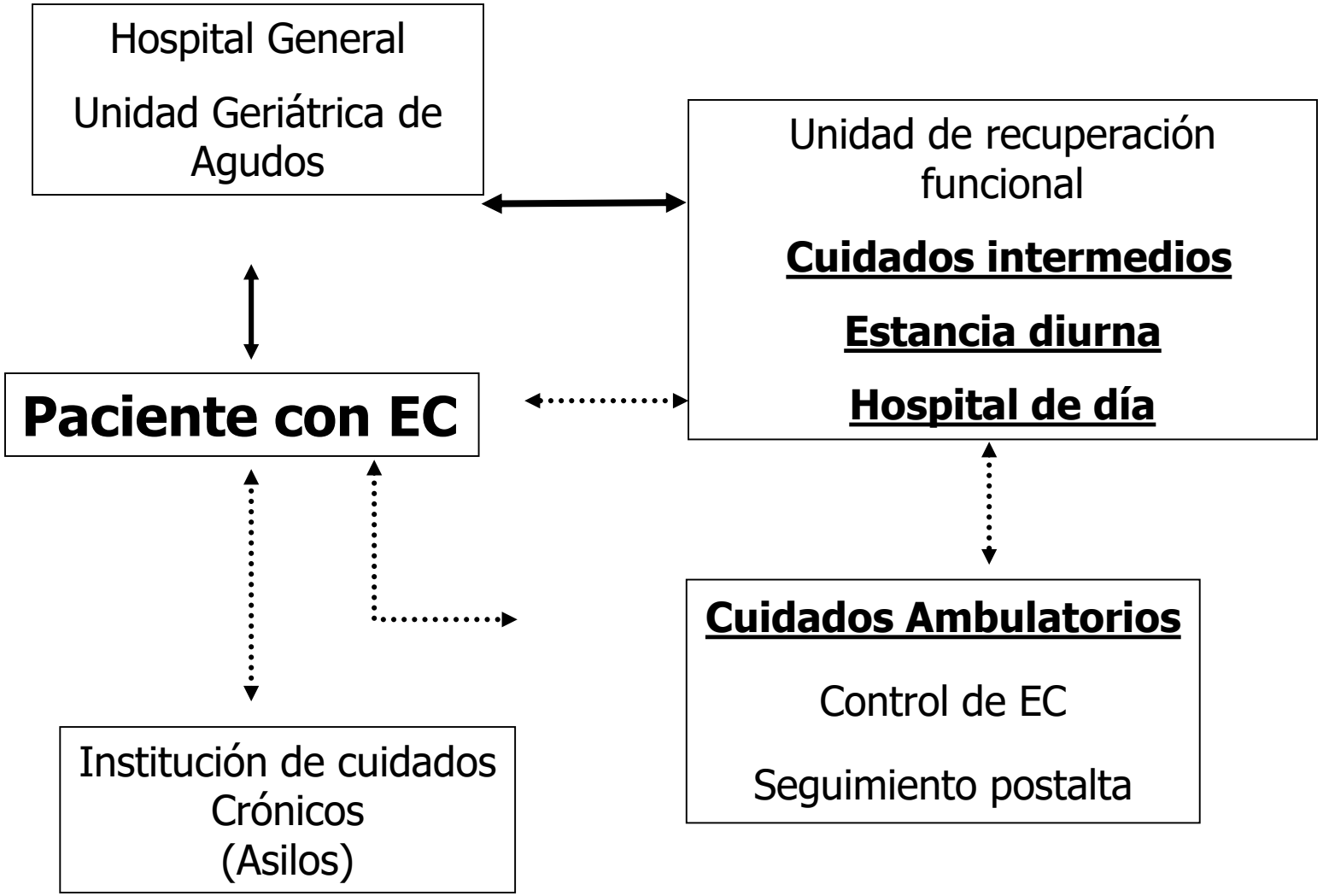
Cochrane Database of Systematic Reviews 2017, Issue 9. Art. No.: CD006211.

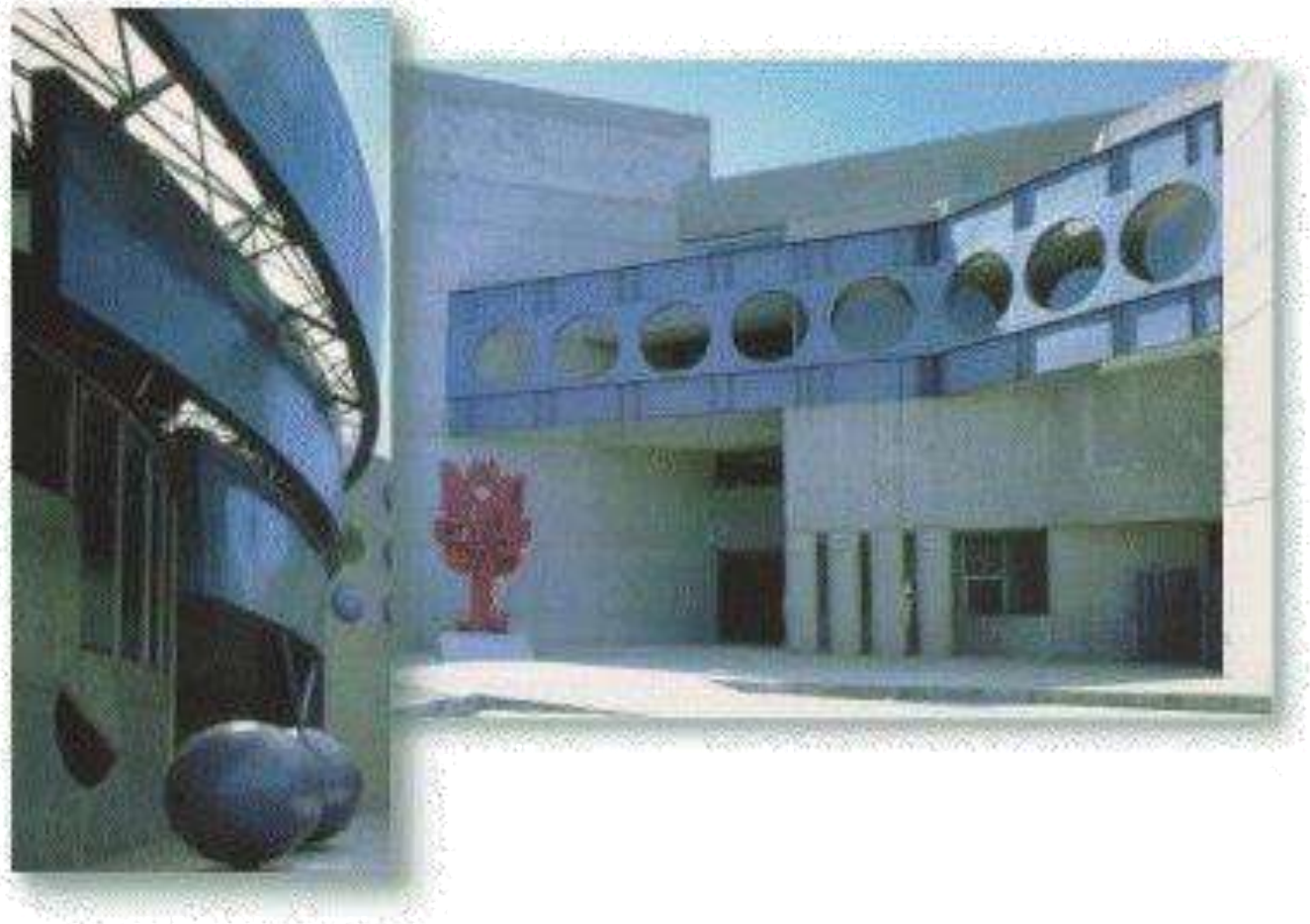
La evaluación geriátrica integral en la hospitalización aguda

- 29 ensayos clínicos
- 13,766 sujetos
- 9 países
- Mas probabilidades de seguir vivos y en casa
  - RR 1.06 (IC 95% 1.01 a 1.10)
- Menos riesgo de ser ingresados a residencias para AM
  - RR 0.80 (IC 95% 0.72 a 0.89)
- Ligero incremento en costos por QALY, LY, LYLAH
- Sin diferencias en: Mortalidad, dependencia

Cochrane Database of Systematic Reviews 2017, Issue 9. Art. No.: CD006211.

Modelos de Atención:









Panorama de la Geriatría en el Hospital General de Tijuana





Hospital General

- 2do nivel
- 35 años de servicio
- 210 camas



Medicina Interna 1999

26 camas

0 de Geriatría

8 Médicos Especialistas/Subespecialistas

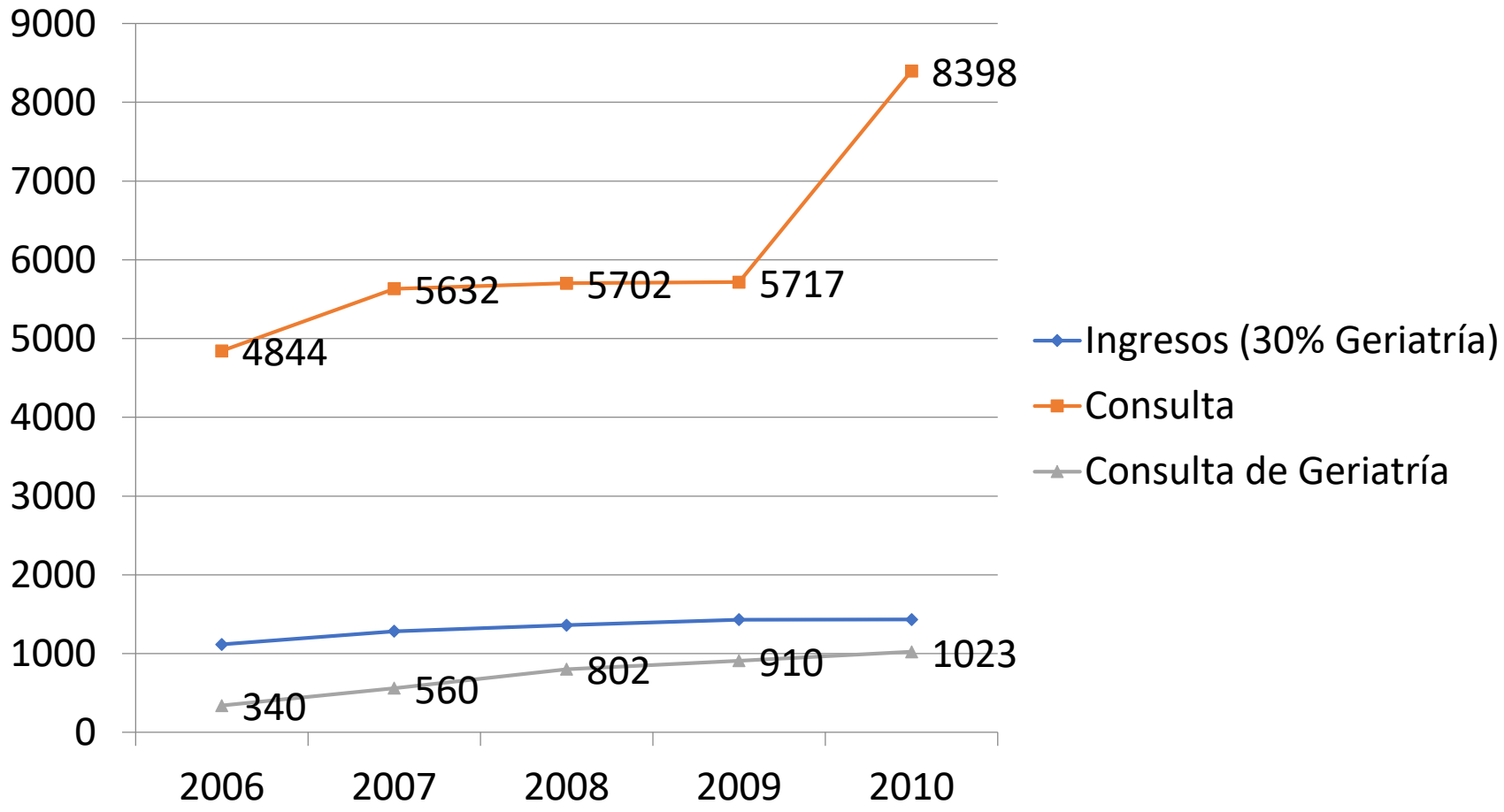
1 Geriatra

Medicos internos

Enfermeras

Residente

Medicina Interna 2006 -2010



Impacto de la intervención

	MI	UCGA	P
Mortalidad	17.6	7.62	.003
EIH	6.6	4.3	.001
Reingresos	5.6%	1.27%	.03
No. Dxs	1.8	5.8	.0001







Zuniga C et al. J Nutr Health Aaging 2008

Geriatría

- Consulta externa
  - Consulta de 1 vez
  - Consulta subsecuente
  - Clínica de memoria
- Unidad de cuidados geriátricos agudos
  - Agudos
  - Recuperación funcional
  - Ortogeriatría
- Investigación
  - Sarcopenia
  - Delirium
  - Fracturas de cadera
- Futuro





Geriatría 2018

ENFERMERAS DE BASE

JEFA DE ENFERMERAS

RESIDENTES, ESTUDIANTES Y BECARIOS

10 + Camas

MEDICOS PASANTES

3 GERIATRAS

NEUROLOGIA
PSIQUIATRIA
NUTRICION
TRABAJO SOCIAL
OTRAS ESPECIALIDADES











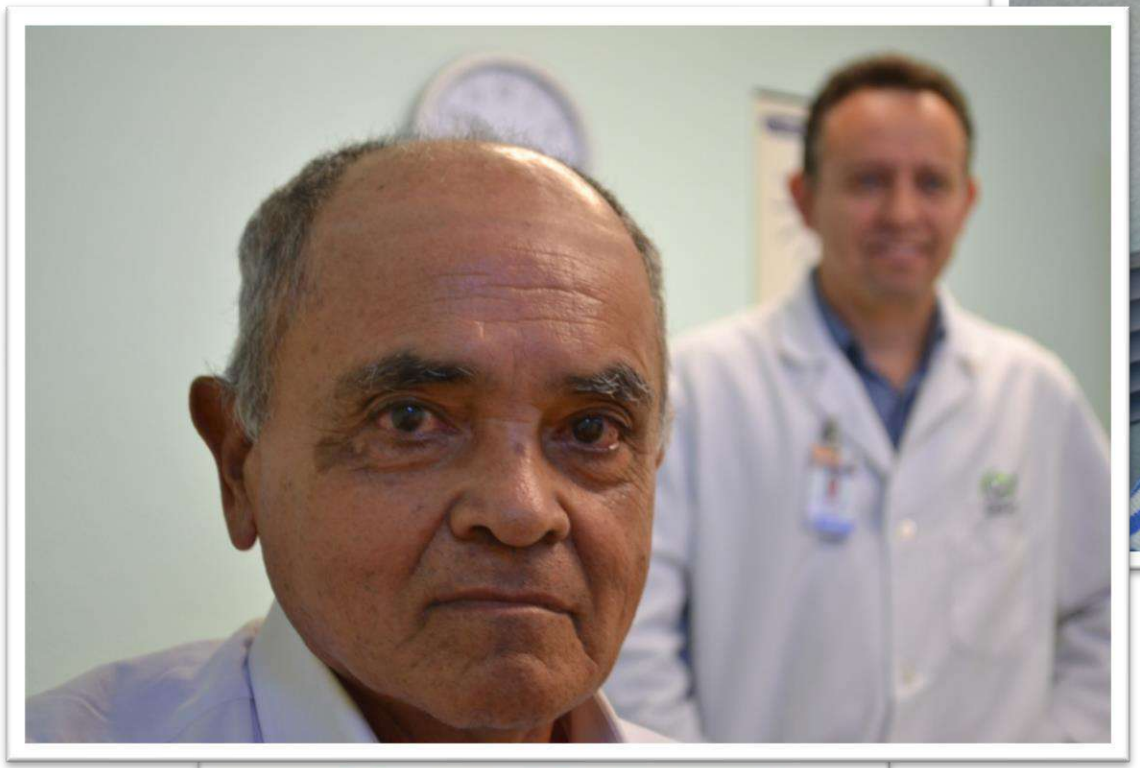

CAMA 1
Secure


UNIDAD DE CUIDADOS
AGUDOS EN GERIATRÍA



Mensajes para llevar a casa !!!!

- Cada vez mas AM hospitalizados.
- La interacción AM / hospital es de alto riesgo
- Múltiples mecanismos implicados
- Varias respuestas probadas
- Elegir y/o diseñar la propia
  - Necesidades
  - Objetivos
  - Capacidad







¡Muchas gracias !