

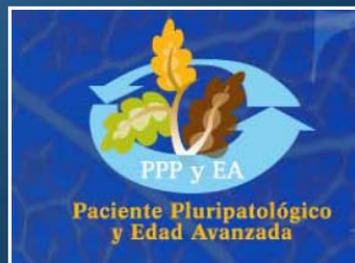
Síndrome Confusional Agudo como factor pronóstico en ingresos médicos: reingresos y mortalidad

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INTRODUCCIÓN

Síndrome:

- ▶ No es una enfermedad
- ▶ Está causado por múltiples causas orgánicas, cerebrales o no

Confusional:

- ▶ Disminución del nivel de conciencia y del intelecto (obnubilación, confusión)

Agudo:

- ▶ Clásicamente, inicio agudo (horas o días), curso breve y fluctuante y, en ocasiones, rápida mejoría al tratar la causa que lo produce

PREVALENCIA

Prevalencia: 14-24%

- ▶ Al llegar a urgencias y en las primeras 24 horas de ingreso

Incidencia: 6-56%

- ▶ Aparece durante el ingreso

Inouye SK. Clin Geriatr Med 1998; 14: 745

Prevalencia de delirium en pacientes ingresados por procesos médicos

Francesc Formiga^a, Antonio San José^b, Alfonso López-Soto^c, Domingo Ruiz^d, Agustín Urrutia^e y Enric Duaso^f

Med Clin (Barc). 2007;129(15):571-3

- Estudio transversal en 6 hospitales con 165p
- La prevalencia de *Delirium* fue del **25,4%**

Modelo multifactorial

**Factores
predisponentes**

Vulnerabilidad alta

Demencia

**Enfermedad
grave**

**Independencia
física y mental**

Vulnerabilidad baja

**Factores
precipitantes**

Agresión más grave

Politraumatismo

Cirugía mayor

Psicofármaco

**Privación
sensorial**

Agresión menos grave



Subtipos de *delirium*

Según la actividad psicomotriz:

- ▶ Hiperactivo (15-25%)
- ▶ Hipoactivo (20-25%)
- ▶ Mixto hiper e hipoactivo (35-50%)
- ▶ Inclasificable o normal (15%)

Liptzin B et al. Br J Psychiatr, 1992

Confusion Assessment Method (CAM)

- ▶ Se creó siguiendo criterios DSM-III-R
- ▶ Se adapta bien a los criterios DSM-IV
- ▶ Puede ser utilizado por personal no facultativo
- ▶ Valora 4 áreas esenciales:
 - Comienzo agudo y curso fluctuante
 - Inatención
 - Pensamiento desorganizado
 - Alteración del nivel de conciencia

$$1 + 2 + (3 \text{ ó } 4) = \textit{delirium}$$

CAM en pacientes hospitalizados

▶ Sensibilidad	94-100%
▶ Especificidad	90-95%
▶ Valor predictivo positivo	91-94%
▶ Valor predictivo negativo	90-100%

Inouye SK. An Intern Med 1990

PRONÓSTICO DEL *DELIRIUM*

- **Mortalidad**
- **Ingresos y Reingresos hospitalarios**
- **Institucionalización**

MORTALIDAD

MORTALIDAD A CORTO PLAZO

Estudio	Ámbito	OR/HR
Inouye SK, 1998	Hospital médico	2,1 [IC] 95% 1,1-4
Ely, 2004	UCI	3.2 [IC] 95% 1.4-3
Lin SM. 2004	UCI	2,5 [IC] 95% 1,56-8,15
Giltay EJ, 2006	Cirugía cardiaca de derivación Ao-Co	2,1 [IC] 95% 1,1-4,1

Ely EW et al. JAMA. 2004;291(14):1753-62

Inouye SK et al. J Gen Intern Med. 1998;13(4):234-42

Giltay EJ et al.. Eur J Cardiothorac Surg. 2006;30(1):140-7.

Lin SM et al. Crit Care Med. 2004;32(11):2254-9

MORTALIDAD A LARGO PLAZO

Estudio	Tiempo	OR/HR
Francis J, 1992	2 años	1,82 [IC] 95% 1,04-3,19
George J, 1996	1 año	2,3 [IC] 95% 1,25-4,35
Inouye SK, 1998	3 meses	1,6 [IC] 95% 0,8-3,2
Rockwood 1999	1 año	1.80 [IC] 95% 1.11-2.92
Mc Cusker, 2002	1 año	2,11 [IC] 95% 1,18-3,77 ajustada
Kakuma R, 2003	6 meses	7,24 [IC] 95% 1,62-32,35
Pitkala KH, 2004	1 año 2 años	1,86 [IC] 95% 1,1-3,1 1,76 [IC] 95% 1,1-2,8
Mc Away CJ, 2006	1 año	2,64 [IC] 95% 1,60-4,35 delirium alta vs no delirium 1,53 [IC] 95% 0,96-2,43) no delirium vs delirium resuelto

MORTALIDAD Y SUBTIPO DE DELIRIUM

N=457 post-agudos Seguimiento 1 año

Patient Characteristic	Hazard Ratio	95% CI	<i>p</i> Value
Normal	1.00	—	—
Hyperactive	1.23	0.70, 2.18	.47
Mixed	1.26	0.73, 2.14	.40
Hypoactive	1.62	1.11, 2.37	.01
Age	1.06	1.04, 1.08	.0001
Female	0.61	0.45, 0.82	.001
CCS	1.09	1.03, 1.15	.004
Dementia	0.74	0.54, 1.02	.07
Delirium severity*	1.05	1.01, 1.09	.02

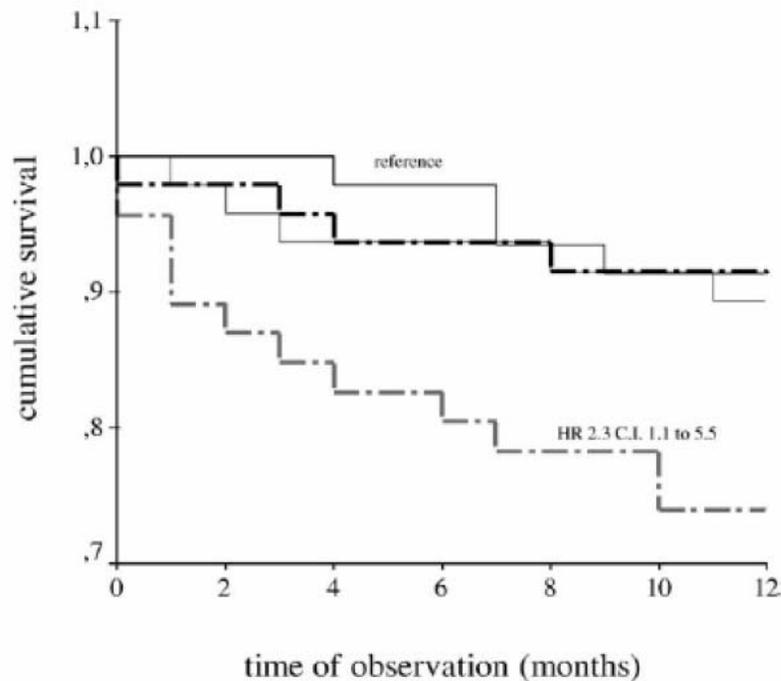
MORTALIDAD EN PACIENTES CON DELIRIUM NO DIAGNÓSTICADO

Table 3. Bivariate Comparison by Detection Status

Characteristic	No Delirium (n = 77)	Detected Delirium (n = 17)	Undetected Delirium (n = 13)	Pearson χ^2 P-value
Male, n (%)	27 (35.1)	8 (47.1)	5 (38.5)	.649
Age, mean \pm SD	80.40 \pm 8.67	79.47 \pm 6.54	78.92 \pm 4.46	.780
Total activities of daily living score, mean \pm SD	21.10 \pm 7.18	22.06 \pm 6.34	20.62 \pm 5.98	.837
Informant Questionnaire on Cognitive Decline in the Elderly score, mean \pm SD	3.62 \pm 0.72	3.78 \pm 0.81	3.82 \pm 0.77	.553
Died by 6 months, n (%)	3 (3.9)	2 (11.8)	4 (30.8)	.005
Died by 18 months, n (%)	11 (14.3)	2 (11.8)	4 (30.8)	.284
Number of comorbid conditions, mean \pm SD	5.83 \pm 2.20	6.18 \pm 2.48	5.62 \pm 2.50	.784
Number of medications, mean \pm SD	4.06 \pm 2.84	4.81 \pm 2.61	5.31 \pm 2.53	.252

SD = standard deviation.

MORTALIDAD EN PACIENTES CON DELIRIUM Y DEMENCIA



No delirium Ni demencia 8%

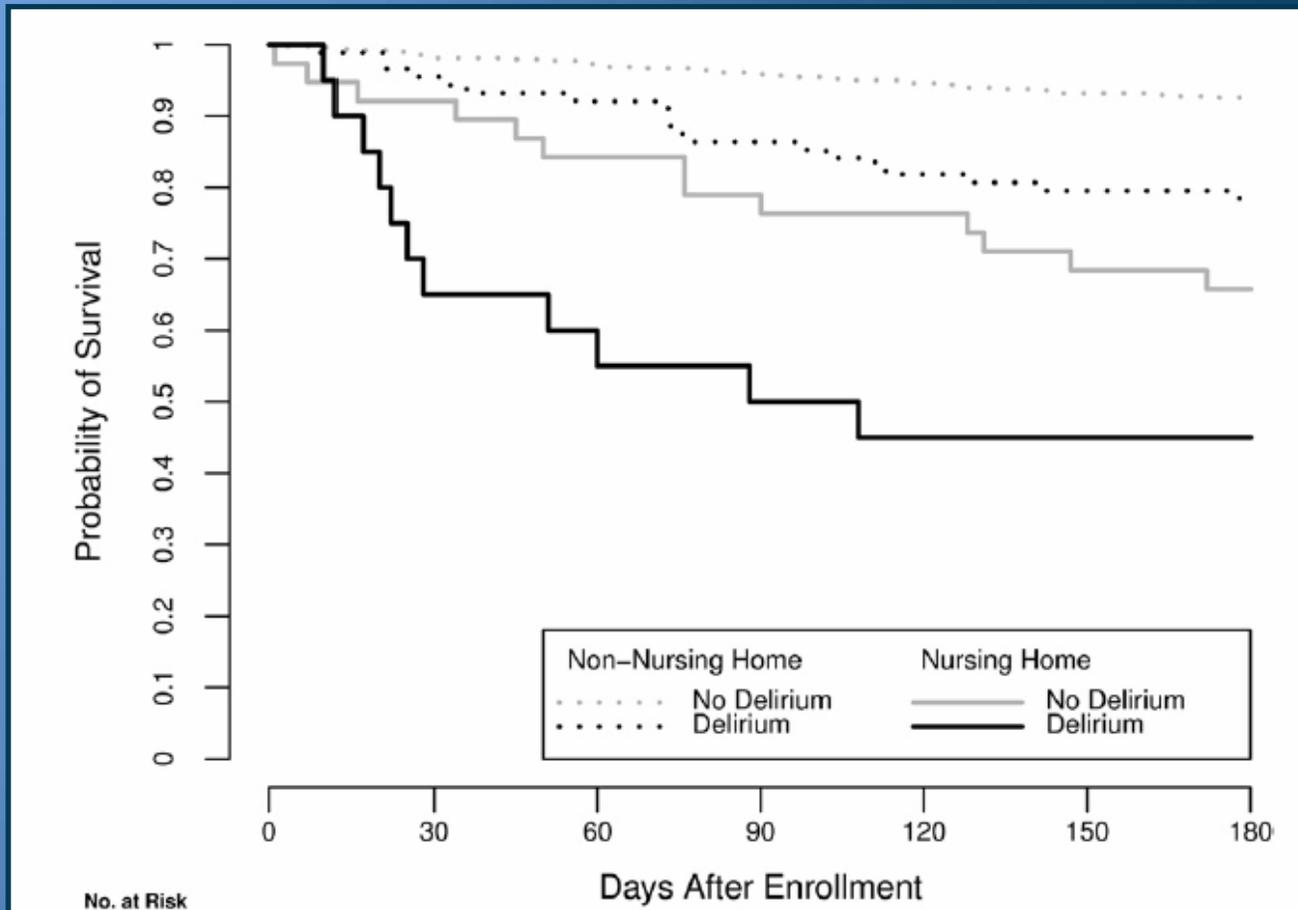
Demencia SIN delirium 10%

Delirium SIN demencia 10%

Demencia + Delirium 28%

Delirium in the Emergency Department: An Independent Predictor of Death Within 6 Months

Jin H. Han, MD, MSc, Ayumi Shintani, MPH, PhD, Svetlana Eden, MS, Alessandro Morandi, MD, Laurence M. Solberg, MD, John Schnelle, PhD, Robert S. Dittus, MD, MPH, Alan B. Storrow, MD, E. Wesley Ely, MD, MPH



- 628p

- Delirium: 17%

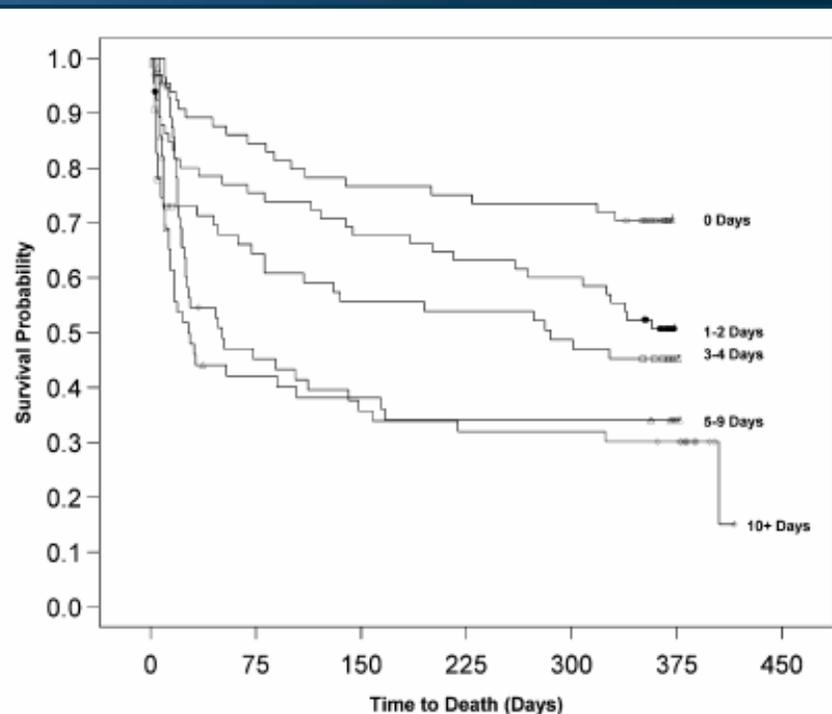
Days of Delirium Are Associated with 1-Year Mortality in an Older Intensive Care Unit Population

Margaret A. Pisani¹, So Yeon Joyce Kong², Stanislav V. Kasl², Terrence E. Murphy³, Katy L. B. Araujo³, and Peter H. Van Ness^{2,3}

TABLE 2. COX SURVIVAL MODEL: PREDICTORS OF SURVIVAL 1 YEAR AFTER INTENSIVE CARE UNIT ADMISSION (N = 300)

Variable	HR (95% CI)	P Value
ICU delirium days, time-varying, d	1.10 (1.02–1.18)	0.01
Age, yr	1.03 (1.01–1.05)	0.009
Male	1.33 (0.95–1.86)	0.10
Nonwhite race	0.76 (0.47–1.22)	0.26
Dementia	1.07 (0.72–1.58)	0.74
Instrumental activities of daily living (range, 0–6)	1.30 (1.16–1.45)	<0.001
Admission from emergency room	0.79 (0.55–1.13)	0.19
Charlson comorbidity index	1.21 (1.11–1.31)	<0.001
ICU admitting diagnosis: respiratory disorder	0.71 (0.48–1.05)	0.09
APACHE II score minus Glasgow Coma Component	1.05 (1.02–1.08)	0.001
Intubation	1.38 (0.83–2.30)	0.22
Receipt of opioids or benzodiazepines in the ICU	1.24 (0.70–2.19)	0.46
Receipt of haloperidol in the ICU	0.78 (0.52–1.19)	0.25
ICU length of stay, time-varying, d	0.98 (0.93–1.05)	0.59

Definition of abbreviations: APACHE = Acute Physiology and Chronic Health Evaluation; CI = confidence interval; HR = hazard ratio; ICU = intensive care unit.



The impact of delirium on the prediction of in-hospital mortality in intensive care patients

Mark van den Boogaard^{1†}, Sanne AE Peters^{2†}, Johannes G van der Hoeven¹, Pieter C Dagnelie², Pieter Leffers², Peter Pickkers¹, Lisette Schoonhoven³

van den Boogaard *et al. Critical Care* 2010, **14**:R146
<http://ccforum.com/content/14/4/R146>

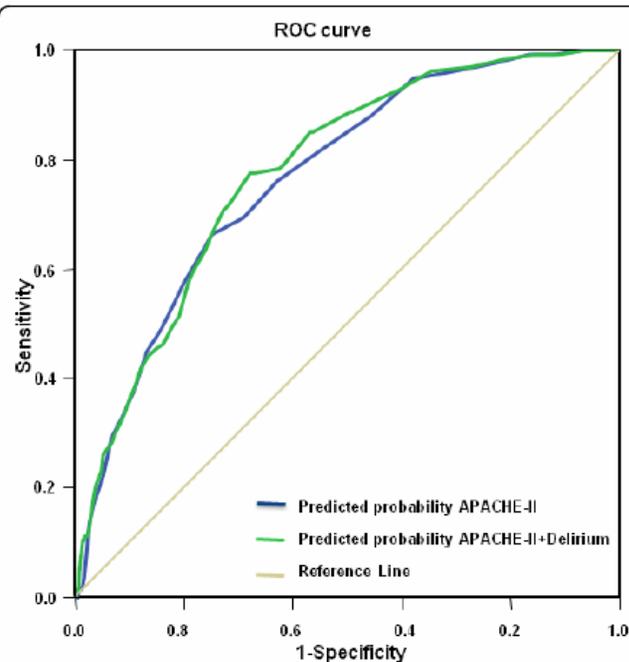


Figure 1 Receiver-operating-characteristic and the area under the curve of different prediction models with and without delirium. APACHE-II, Acute Physiology and Chronic Health Evaluation-II.

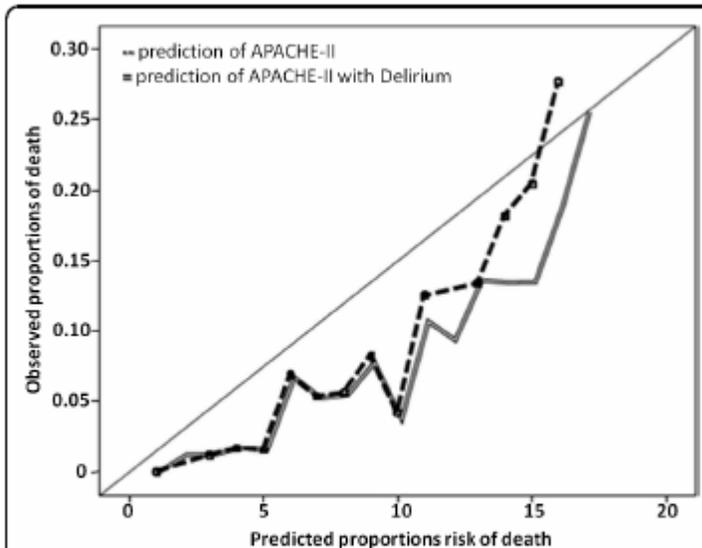


Figure 2 Calibration plots of the APACHE-II model and of the APACHE-II model with delirium. APACHE-II, Acute Physiology and Chronic Health Evaluation-II.

Conclusions: Although delirium is a significant predictor of mortality in ICU patients, adding delirium as an additional variable to the APACHE-II model does not result in an improvement in its predictive estimates.

Hospital use, institutionalisation and mortality associated with delirium

EAMONN M. P. EELES^{1,3}, RUTH E. HUBBARD^{1,2}, SUSAN V. WHITE¹, M. SINEAD O'MAHONY¹
 GEORGE M. SAVVA⁴, ANTONY J. BAYER¹

Table 2. Hazard ratio for death within 5 years for patients aged ≥ 75 years admitted acutely to a general medical service

	Hazard ratio (95% confidence interval)		P-value
	Unadjusted	Adjusted ^a	
Effect of delirium on mortality during index admission	4.5 (3.0–6.8)	3.5 (2.3–5.6)	<0.0001
Effect of delirium on mortality during first year after admission	4.0 (2.8–5.9)	3.2 (2.1–4.8)	<0.0001
Effect of delirium on mortality from second to fifth year after admission	2.4 (1.6–3.6)	2.0 (1.3–3.2)	0.002
Dementia	2.1 (1.6–2.8)	1.3 (0.9–1.8)	0.14
>85 years	1.8 (1.3–2.4)	1.5 (1.1–2.0)	0.01
Male gender	1.1 (0.8–1.5)	1.2 (0.9–1.6)	0.31
Institutionalised	2.8 (2.0–3.9)	1.4 (0.9–2.1)	0.17
Greenfield illness severity ^b	1.9 (1.4–2.6)	1.8 (1.3–2.6)	<0.0001
Charlson co-morbidity ^c	1.6 (1.2–2.2)	1.4 (1.1–2.0)	0.02
Dependency on admission ^d	2.5 (1.5–4)	1.6 (0.9–2.9)	0.14

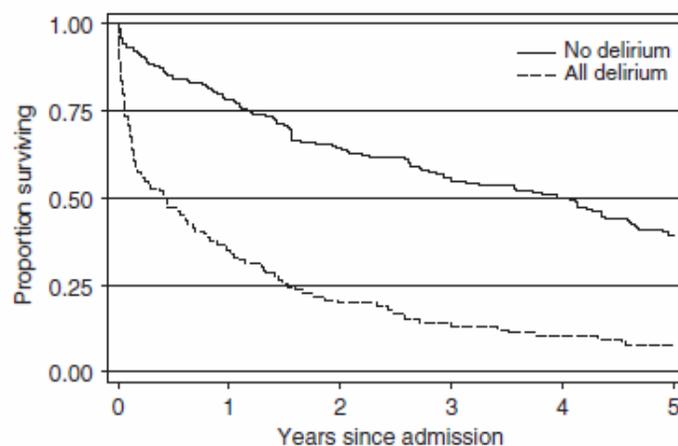


Figure 1. Five-year survival in patients aged ≥ 75 years admitted to a general medical service.

INGRESOS Y REINGRESOS HOSPITALARIOS

Occurrence and outcome of delirium in medical in-patients: a systematic literature review

NAJMA SIDDIQI, ALLAN O. HOUSE, JOHN D. HOLMES

DELIRIUM Y ESTANCIA MEDIA

- ▶ Francis (1990) LOS D = 12.1, C = 7.2 ($P < 0.001$)
- ▶ Gaudet (1993) LOS median D = 42.7, C = 24.7
- ▶ Jitapunkul (1992) LOS median D = 20, C = 16, difference NS
- ▶ Kolbeinssons (1993) LOS D = 20.2, C = 17.3; difference NS
- ▶ O'Keefe (1997) LOS D = 21, C = 11 ($P < 0.001$)
- ▶ Rockwood (1989) LOS D = 20, C = 14 difference NS
- ▶ Vazquez (2000) LOS D = 9.9 (SD 3.5), C = 6.9 (SD 2.5) ($P < 0.05$)
- ▶ Villapando-Berumen (2003) LOS D = 13.4, C = 10.2 ($P = 0.03$)

LOS: length of hospital stay

Prevalencia de delirium en pacientes ingresados por procesos médicos

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Diferencias de los pacientes estudiados según presentaran delirium o no

	Delirium (n = 42)	Sin delirium (n = 123)	p
Edad (años), media (DE)	84,6 (7,8)	78,6 (13,9)	0,009
Sexo			0,53
Mujeres, n (%)	24 (57,1)	77 (62,6)	
Varones, n (%)	18 (42,9)	46 (37,4)	
Institucionalizados, n (%)	11 (26,2)	18 (14,6)	0,08
Índice de Charlson, media (DE)	2,2 (1,2)	2,7 (1,9)	0,1
Demencia, n (%)	21 (50)	16 (13)	0,0001
Accidente cerebrovascular previo, n (%)	9 (21,4)	20 (16,3)	0,44
Índice de Barthel previo al ingreso, media (DE)	54,76 (29)	77,2 (25)	0,0001
Deterioro audición, n (%)	24 (57,1)	29 (23,6)	0,0001
Deterioro de la visión, n (%)	17 (40,5)	19 (15,4)	0,001
Deterioro visión y audición, n (%)	10 (23,8)	7 (5,7)	0,001
Estancia hospitalaria (días), media (DE)	9,3 (6)	8,4 (8)	0,52
N.º de medicamentos previos, media (DE)	5,2 (3,8)	5,6 (3,9)	0,56
Más de 3 medicamentos, n (%)	27 (64)	82 (66)	0,79
Antecedentes de delirium, n (%)	11 (26,2)	8 (6,6)	0,002
Ingreso programado, n (%)	0	10 (8,1)	0,06
Alguna instrumentalización durante la evaluación, n (%)	38 (90,5)	91 (74)	0,02
Índice Barthel en el momento valoración, media (DE)	17,5 (20,3)	47,8 (29)	0,0001
Caída del índice de Barthel, media (DE)	37,2 (22)	29,4 (19)	0,02
Deshidratación, n (%)	15 (35,7)	18 (14,6)	0,003
Anemia, n (%)	24 (57,1)	73 (59,8)	0,759
Hemoglobina (g/dl), media (DE)	11,5 (2,2)	11,4 (2)	0,80
Albúmina (g/dl), media (DE)	31,1 (4)	33,4 (5)	0,01
Desnutrición, n (%)	15 (35,7)	31 (25,2)	0,27
Creatinina (mg/dl), media (DE)	1,2 (0,8)	1,2 (0,6)	0,009
Urea (mg/dl), media	30,02	51,47	0,01

DE: desviación estándar.

DELIRIUM Y RIESGO DE DETERIORO FUNCIONAL

Table 5. Death or Decline in Activities of Daily Living*

Delirium Status	Baseline to Hospital Discharge				Baseline to 3 Months			
	Events n/N (%)	OR	Adj OR [†]	95% CI	Events n/N (%)	OR	Adj OR [†]	95% CI
Chicago								
Delirious	2/4 (50)	1.6	0.8	(0.1, 8.0)	5/10 (50)	1.9	1.7	(0.4, 6.8)
Nondelirious	30/77 (39)				50/143 (35)			
Cleveland								
Delirious	20/27 (74)	5.4 [‡]	3.2	(1.1, 9.0)	23/29 (79)	6.0 [‡]	4.6	(1.5, 13.7)
Nondelirious	51/148 (34)				60/154 (39)			
Yale								
Delirious	22/31 (71)	3.7 [‡]	3.3	(1.3, 8.5)	21/32 (66)	3.8 [‡]	2.9	(2.2, 3.8)
Nondelirious	104/260 (40)				89/264 (34)			
All sites								
Delirious	44/62 (71)	4.0 [‡]	2.9	(1.5, 5.5)	49/71 (69)	4.0 [‡]	2.8	(1.5, 5.0)
Nondelirious	185/485 (38)				199/561 (35)			
	Homog test <i>p</i> = .616				Homog test <i>p</i> = .372			

*OR indicates odds ratio; adj OR, adjusted odds ratio; CI, confidence interval; Homog test, Breslow-Day test for homogeneity (see text for details). A total of 180 (of 727 available) subjects were missing from these analyses at hospital discharge: 118 from Chicago, 30 from Cleveland, and 32 from Yale. A total of 48 (of 680 available) subjects were missing at 3-month follow-up: 23 from Chicago, 7 from Cleveland, and 18 from Yale.

[†]Adjusted for age, gender, dementia, APACHE II score, baseline IADL score.

[‡]*p* < .05 (95% CI for crude OR excludes 1.0).

INSTITUCIONALIZACIÓN

DELIRIUM AL ALTA HOSPITALARIA

- En un estudio con seguimiento a los 3 meses después de la hospitalización:
 - El 72% seguían cumpliendo criterios de delirium al alta hospitalaria.
 - Además un 46% y un 13% de los supervivientes seguían cumpliendo criterios al mes y a los tres meses.

Kelly et al. AM J Geriatr Psychiatry 2001; 2: 267-73.

Risk Factors for Delirium at Discharge

Development and Validation of a Predictive Model

Sharon K. Inouye, MD, MPH; Ying Zhang, MD, MPH; Richard N. Jones, ScD; Dan K. Kiely, MPH, MA; Frances Yang, PhD; Edward R. Marcantonio, MD, SM

- ▶ Demencia
- ▶ Deterioro visual
- ▶ Deterioro funcional
- ▶ Alta comorbilidad
- ▶ Uso de restricciones físicas durante el ingreso

Riesgo	Bajo (0-1 factor)	3-4%
	Medio (2-3 factores)	14-18%
	Alto (4-5 factores)	27-63%

Risk Factors for Delirium at Discharge

Development and Validation of a Predictive Model

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Table 5. Risk of Death or Nursing Home Placement During 1-Year Follow-up in the 2 Cohorts

Risk Group (Risk Factors, No.)	Development Cohort (n = 411)		Validation Cohort (n = 461)	
	Subjects ^a	RR (95% CI)	Subjects ^a	RR (95% CI)
Low (0-1)	59/256 (23.0) ^b	1 [Reference]	49/338 (14.5) ^c	1 [Reference]
Intermediate (2-3)	70/124 (56.5) ^b	2.4 (1.6-3.2)	44/112 (39.3) ^c	2.7 (1.9-3.8)
High (4-5)	24/31 (77.4) ^b	3.4 (2.5-4.5)	7/11 (63.6) ^c	4.4 (2.6-7.4)

Hospital use, institutionalisation and mortality associated with delirium

EAMONN M. P. EELES^{1,3}, RUTH E. HUBBARD^{1,2}, SUSAN V. WHITE¹, M. SINEAD O'MAHONY¹
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Table 3. Rate of institutionalisation (residential or nursing home) over the 5-year post-index admission

	Institutionalisation % (<i>n</i> =number of survivors)		
	Delirium	No delirium	<i>P</i> -value
Year 1	40.5%, 37	17.6%, 136	0.03*
Year 2	33%, 21	15.1%, 112	0.05
Year 3	28.5%, 14	13.7%, 95	0.15
Year 4	18%, 11	12.6%, 87	0.61
Year 5	13%, 8	11.5%, 61	0.85

Pronóstico Delirium y fractura de fémur

N=112 > 70 años con Fx Fémur Seguimiento 32 meses

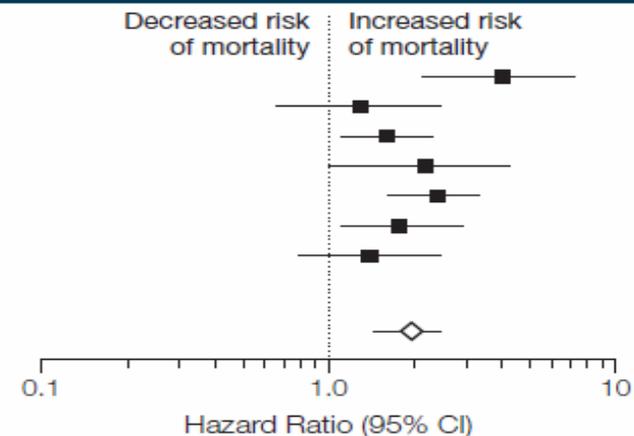
Variables finales	Delirium	No delirium	OR (IC 95%)
Muerte (%)	54,9	34,1	1,6 (1-2,6)
Deterioro cognitivo leve (%)	77,8	40,9	1,9 (1,1-3,3)
Ingreso en Residencia (%)	50	28,6	1,8 (0,9-3,4)

Delirium in Elderly Patients and the Risk of Postdischarge Mortality, Institutionalization, and Dementia

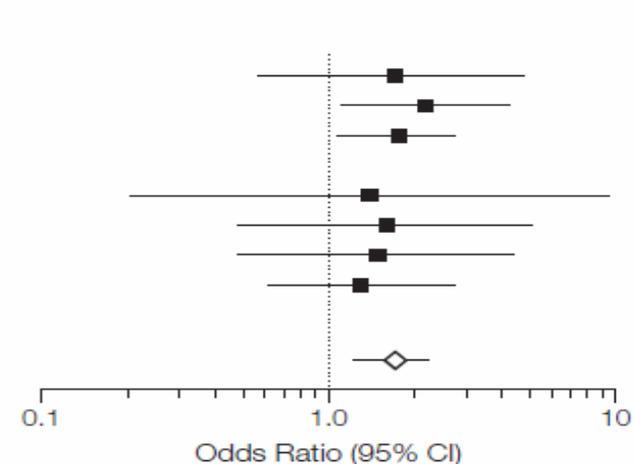
A Meta-analysis

JAMA, July 28, 2010—Vol 304, No. 4

Mortality	Hazard Ratio (95% CI)	Weight, %
González et al, ⁴⁵ 2009	4.04 (2.19-7.46)	11.63
Furlaneto and Garcez-Leme, ⁴¹ 2007	1.28 (0.66-2.48)	10.53
Leslie et al, ⁵² 2005	1.62 (1.13-2.33)	20.29
McCusker et al, ⁶ 2002	2.16 (1.06-4.41)	9.42
Nightingale et al, ⁶⁰ 2001	2.40 (1.66-3.48)	19.93
Rockwood et al, ⁶⁵ 1999	1.80 (1.11-2.92)	15.45
Francis and Kapoor, ⁴⁰ 1992	1.40 (0.79-2.48)	12.76
Heterogeneity: $I^2 = 44.0\%$; $P = .10$		
Random-effects model:	1.95 (1.51-2.52)	100



	Odds Ratio (95% CI)	Weight, %
Bickel et al, ³² 2008	1.70 (0.59-4.91)	7.89
de Rooij et al, ³⁵ 2007	2.20 (1.12-4.32)	19.52
Pitkala et al, ⁶³ 2005	1.76 (1.10-2.81)	40.61
Inouye et al, ⁷ 1998		
Chicago	1.40 (0.20-9.60)	2.39
Cleveland	1.60 (0.50-5.16)	6.46
Yale	1.50 (0.50-4.55)	7.20
Levkoff et al, ⁵¹ 1992	1.30 (0.62-2.74)	15.93
Heterogeneity: $I^2 = 0\%$; $P = .98$		
Random-effects model:	1.71 (1.27-2.23)	100



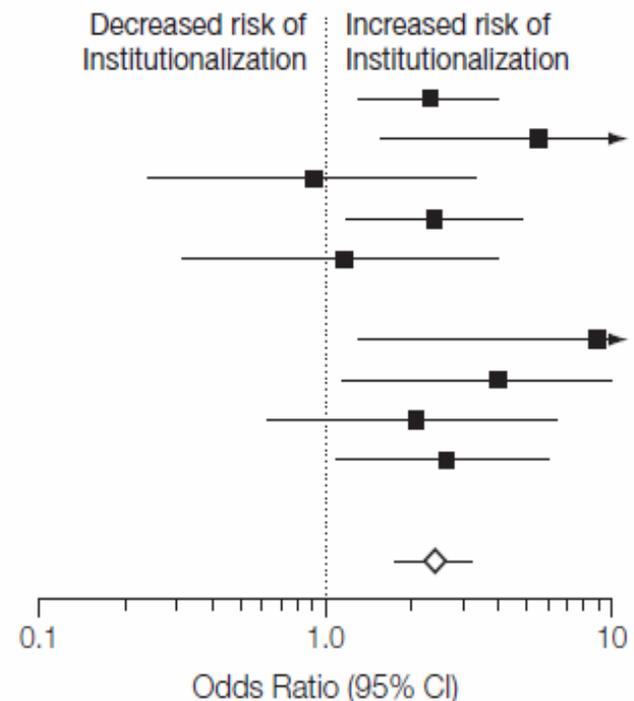
Delirium in Elderly Patients and the Risk of Postdischarge Mortality, Institutionalization, and Dementia

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Institutionalization

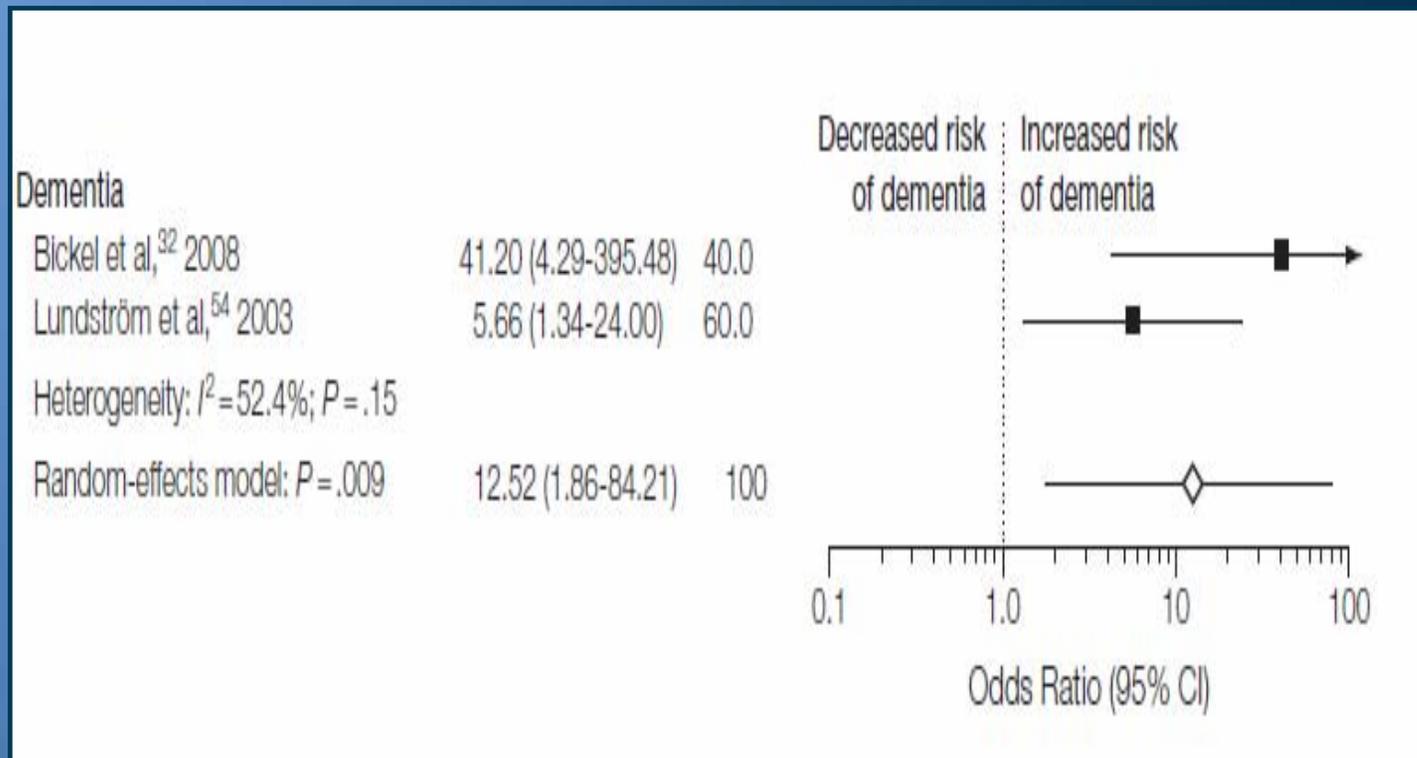
Bellelli et al, ³⁰ 2008	2.30 (1.33-3.98)	32.35
Bickel et al, ³² 2008	5.60 (1.60-19.65)	6.17
Giusti et al, ⁴³ 2006	0.93 (0.25-3.47)	5.61
Pitkala et al, ⁶³ 2005	2.45 (1.21-4.95)	19.66
McCusker et al, ⁶ 2002	1.15 (0.33-4.05)	6.19
Inouye et al, ⁷ 1998		
Chicago	8.60 (1.31-56.45)	2.74
Cleveland	3.90 (1.12-13.56)	6.26
Yale	2.00 (0.63-6.33)	7.34
Francis and Kapoor, ⁴⁰ 1992	2.56 (1.10-5.93)	13.77
Heterogeneity: $I^2 = 0\%$; $P = .48$		
Random-effects model: $P < .001$	2.41 (1.77-3.29)	100



Delirium in Elderly Patients and the Risk of Postdischarge Mortality, Institutionalization, and Dementia

A Meta-analysis

JAMA, July 28, 2010—Vol 304, No. 4



One-Year Health Care Costs Associated With Delirium in the Elderly Population

Douglas L. Leslie, PhD; Edward R. Marcantonio, MD, MSc; Ying Zhang, MD, MPH; Linda Leo-Summers, MPH; Sharon K. Inouye, MD, MPH

Table 3. Adjusted Total 1-Year Health Care Costs^a

Measure	Costs, Mean (SD), \$			P Value
	Delirium Group	Nondelirium Group	Difference (Delirium–Nondelirium)	
Total costs per survival day	461 (570)	166 (195)	295	<.001
Total costs, method 1 ^b	65 755 (58 247)	49 452 (43 806)	16 303	.005
Total costs, method 2 ^c	117 620 (109 530)	53 199 (54 698)	64 421	<.001
Total costs, method 3 ^d	120 349 (181 274)	59 833 (55 155)	60 516	<.001

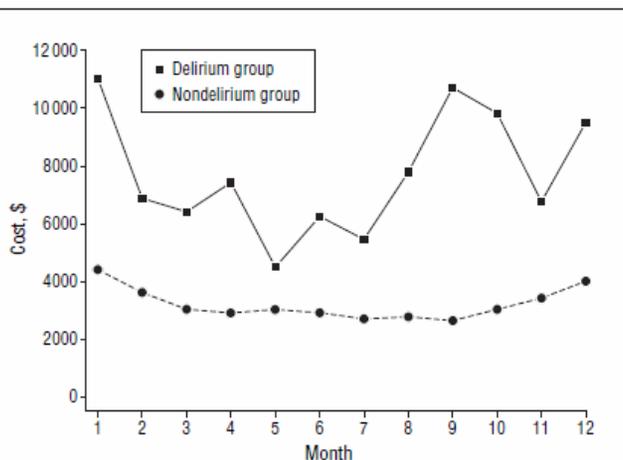
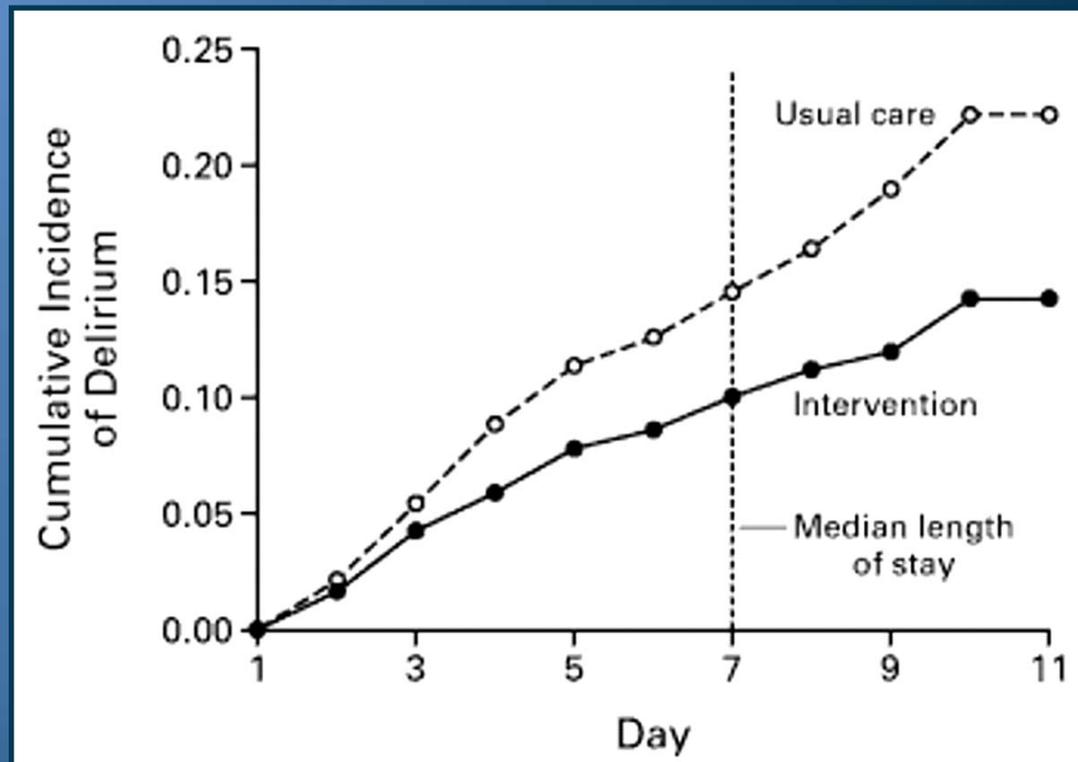


Figure. Mean total health care costs (reported in 2005 dollars) by month, adjusted for all of the variants in the regression models, specifically, index hospitalization; patient age, race, and sex; whether the patient received the delirium prevention intervention; Charlson comorbidity score; whether the patient had dementia; the number of impairments in activities of daily living; whether the patient died during follow-up; and the interaction of the Charlson comorbidity score with whether the patient died.

**¿PODEMOS CAMBIAR LA
HISTORIA NATURAL DEL
DELIRIUM EN EL PACIENTE
HOSPITALIZADO?**

A MULTICOMPONENT INTERVENTION TO PREVENT DELIRIUM IN HOSPITALIZED OLDER PATIENTS

SHARON K. INOUE, M.D., M.P.H., SIDNEY T. BOGARDUS, JR., M.D., PETER A. CHARPENTIER, M.P.H.,
LINDA LEO-SUMMERS, M.P.H., DENISE ACAMPORA, M.P.H., THEODORE R. HOLFORD, PH.D., AND LEO M. COONEY, JR., M.D.



Effects of a Hospitalist Model on Elderly Patients With Hip Fracture

Michael P. Phy, DO; David J. Vanness, PhD; L. Joseph Melton III, MD; Kirsten Hall Long, PhD; Cathy D. Schleck; Dirk R. Larson, MS; Paul M. Huddleston, MD; Jeanne M. Huddleston, MD

Arch Intern Med. 2005;165:796-801

Table 5. Inpatient Complications*

Complication	Standard Group (n = 236)	Hospitalist Group (n = 230)	P Value
Major			
Death	8 (3.4)	10 (4.4)	.59
Respiratory failure	8 (3.4)	9 (3.9)	.76
Pulmonary edema	2 (0.9)	1 (0.4)	>.99
MI	12 (5.1)	12 (5.2)	.95
Renal failure	7 (3.0)	5 (2.2)	.59
Intermediate			
Pneumonia	29 (12.3)	33 (14.4)	.51
CHF	13 (5.5)	21 (9.2)	.13
Unstable angina	2 (0.9)	8 (3.5)	.06
Atrial fibrillation	17 (7.2)	20 (8.7)	.55
Acute central nervous system event (eg, TIA or CVA)	2 (0.9)	5 (2.2)	.28
Delirium	42 (17.8)	74 (32.2)	<.001
DVT	2 (0.9)	3 (1.3)	.63
Wound infection	3 (1.3)	7 (3.0)	.22
Minor			
Urinary tract infection	40 (17.0)	47 (20.4)	.33
Falls	10 (4.2)	10 (4.4)	.95
Cellulitis	2 (0.9)	1 (0.4)	>.99
Fracture	1 (0.4)	1 (0.4)	>.99
New cancer	3 (1.3)	3 (1.3)	>.99

Interventions for preventing delirium in hospitalised patients (Review)

Siddiqi N, Holt R, Britton AM, Holmes J



- ▶ Solo 6 estudios con un total de 833p. Todos en áreas quirúrgicas.
- ▶ Solo 1 estudio randomizado con 126p con fractura de fémur, evaluó la eficacia de una intervención geriátrica multidisciplinar frente al cuidado usual. Este estudio sugiere que es necesario tratar a 5,6p para prevenir 1 caso de *delirium*.
- ▶ La conclusión de la Cochrane, es que la evidencia de la efectividad de las intervenciones (FM y No FM) son todavía escasas.

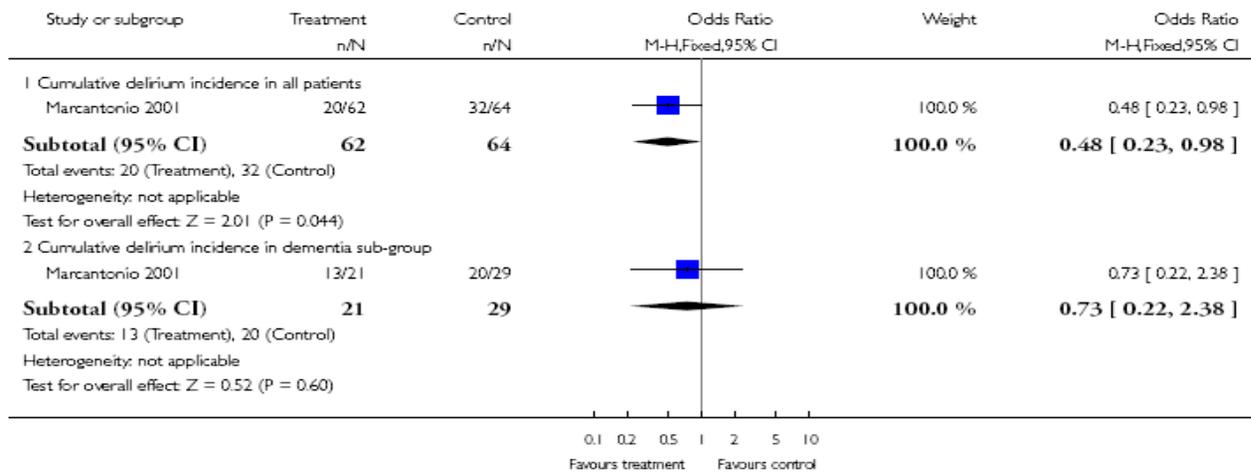
INCIDENCIA DE DELIRIUM

Analysis 6.1. Comparison 6 Proactive geriatric consultation v Usual care, Outcome 1 Cumulative delirium incidence.

Review: Interventions for preventing delirium in hospitalised patients

Comparison: 6 Proactive geriatric consultation v Usual care

Outcome: 1 Cumulative delirium incidence



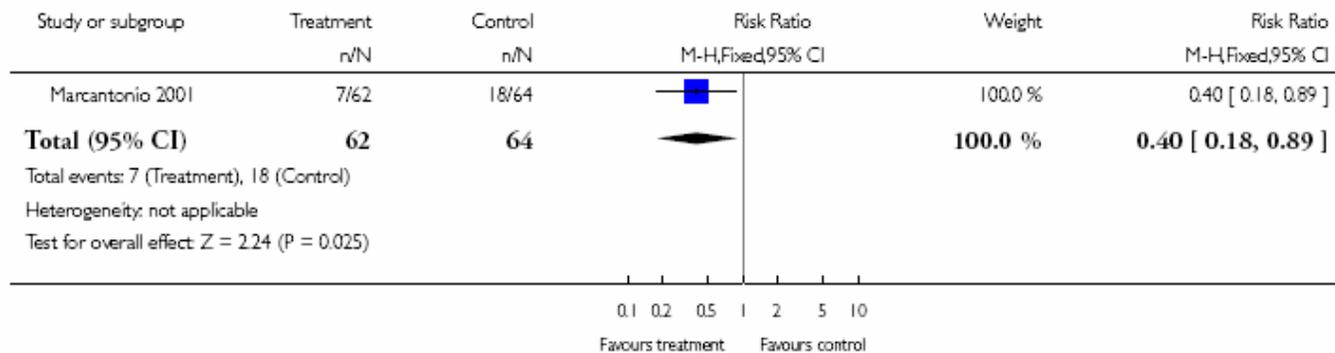
INCIDENCIA DE *DELIRIUM* GRAVE

Analysis 6.3. Comparison 6 Proactive geriatric consultation v Usual care, Outcome 3 Severity- cumulative incidence of severe delirium.

Review: Interventions for preventing delirium in hospitalised patients

Comparison: 6 Proactive geriatric consultation v Usual care

Outcome: 3 Severity- cumulative incidence of severe delirium



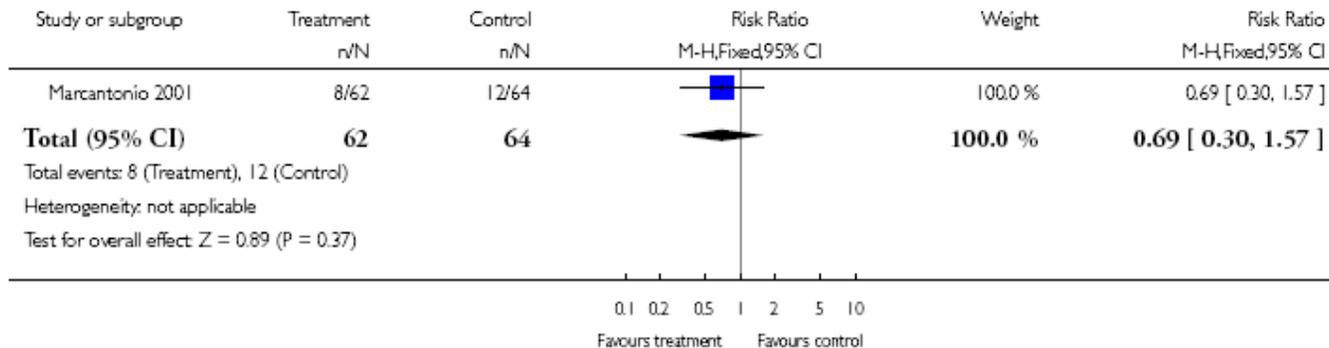
INCIDENCIA DE *DELIRIUM* AL ALTA

Analysis 6.5. Comparison 6 Proactive geriatric consultation v Usual care, Outcome 5 Cognitive status- delirium prevalence at discharge.

Review: Interventions for preventing delirium in hospitalised patients

Comparison: 6 Proactive geriatric consultation v Usual care

Outcome: 5 Cognitive status- delirium prevalence at discharge



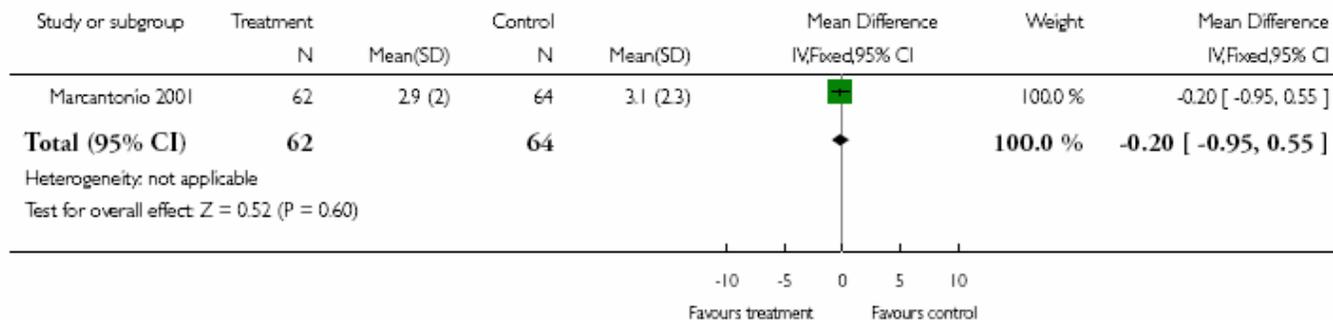
DURACIÓN DEL *DELIRIUM*

Analysis 6.2. Comparison 6 Proactive geriatric consultation v Usual care, Outcome 2 Delirium duration.

Review: Interventions for preventing delirium in hospitalised patients

Comparison: 6 Proactive geriatric consultation v Usual care

Outcome: 2 Delirium duration



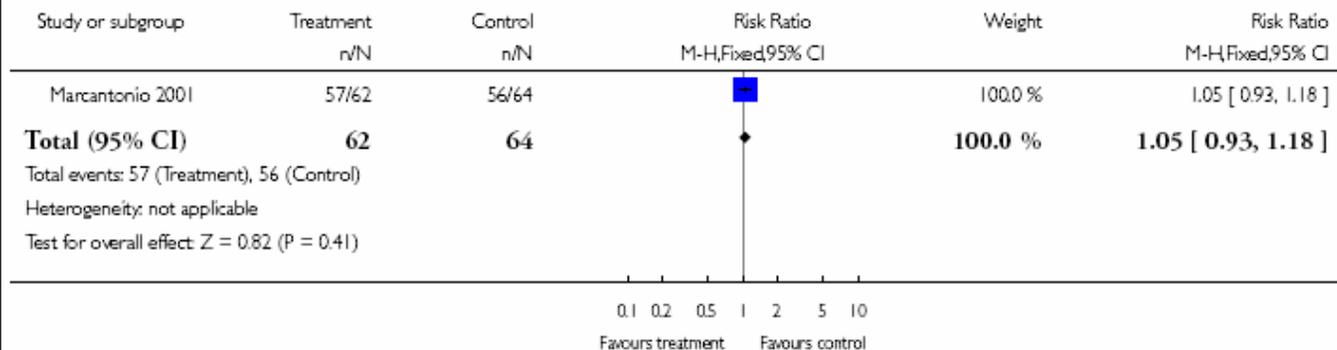
INSTITUCIONALIZACIÓN AL ALTA DEL HOSPITAL

Analysis 6.4. Comparison 6 Proactive geriatric consultation v Usual care, Outcome 4 Institutionalisation at discharge.

Review: Interventions for preventing delirium in hospitalised patients

Comparison: 6 Proactive geriatric consultation v Usual care

Outcome: 4 Institutionalisation at discharge



CONCLUSIONES

- ▶ El *Delirium* es un síndrome geriátrico muy frecuente en el anciano hospitalizado: en áreas médicas 1 de cada 4 pacientes lo presentarán.
- ▶ La etiología es multifactorial y el diagnóstico es clínico (CAM)
- ▶ La fisiopatología es compleja y hemos de tener en cuenta los factores determinantes y predisponentes.
- ▶ Los pacientes con *delirium* presentan de forma significativa una mayor mortalidad, tanto durante el ingreso, como a medio y largo plazo tras el alta hospitalaria.

CONCLUSIONES

- ▶ Los pacientes con *delirium* tienen una estancia hospitalaria más prolongada y un deterioro funcional más acusado durante el ingreso.
- ▶ La prevalencia de delirium al alta hospitalaria es alta. Lo que condiciona un elevado riesgo de institucionalización y de mortalidad a largo plazo.
- ▶ Los pacientes con delirium tienen mayor riesgo de desarrollar una demencia a largo plazo.
- ▶ El delirium condiciona un mayor coste sanitario.
- ▶ Aunque los datos no son definitivos, la intervención no FM parece disminuir la prevalencia, la gravedad y la persistencia al alta de *delirium*.

ALFAGUARA



Laura Restrepo

Delirio

Premio
ALEAGUARA
de novela
2004

