Villaggio Amico
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XXIV GIORNATA MONDIALE ALZHEIMER

ASSOCIAZIONE ITALIANA PSICOGERIATRIA

15 settembre 2017

Il delirium, un problema troppo spesso sottovalutato: inquadramento clinico e risultati del Delirium Day

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UNIVERSITÀ DEGLI STUDI DI MILANO BICOCCA

Delirium

- Il delirium è una sindrome neuropsichiatrica caratterizzata da un cambiamento acuto delle performances cognitive (con particolare riferimento alle capacità attentive e alla consapevolezza di se nell'ambiente), un alterato «arousal» e una tendenza alla fluttuazione dei sintomi
  - Acute Brain Dysfunction

Delirium: criteri del DSM-5

A. Disturbo dell' attenzione (i.e., ridotta capacità a dirigere, focalizzare, sostenere e shiftare l' attenzione) e consapevolezza (ridotto orientamento del se nell' ambiente).

B. Il deficit si sviluppa in un periodo di tempo relativamente breve (generalmente ore o pochi giorni), rappresenta un cambiamento dai livelli di attenzione e consapevolezza di base, e tende a fluttuare in gravità nel corso della giornata.

C. É presente un altro deficit cognitivo (es, memoria, disorientamento, linguaggio, abilità visuospaziali, o dispercezioni).

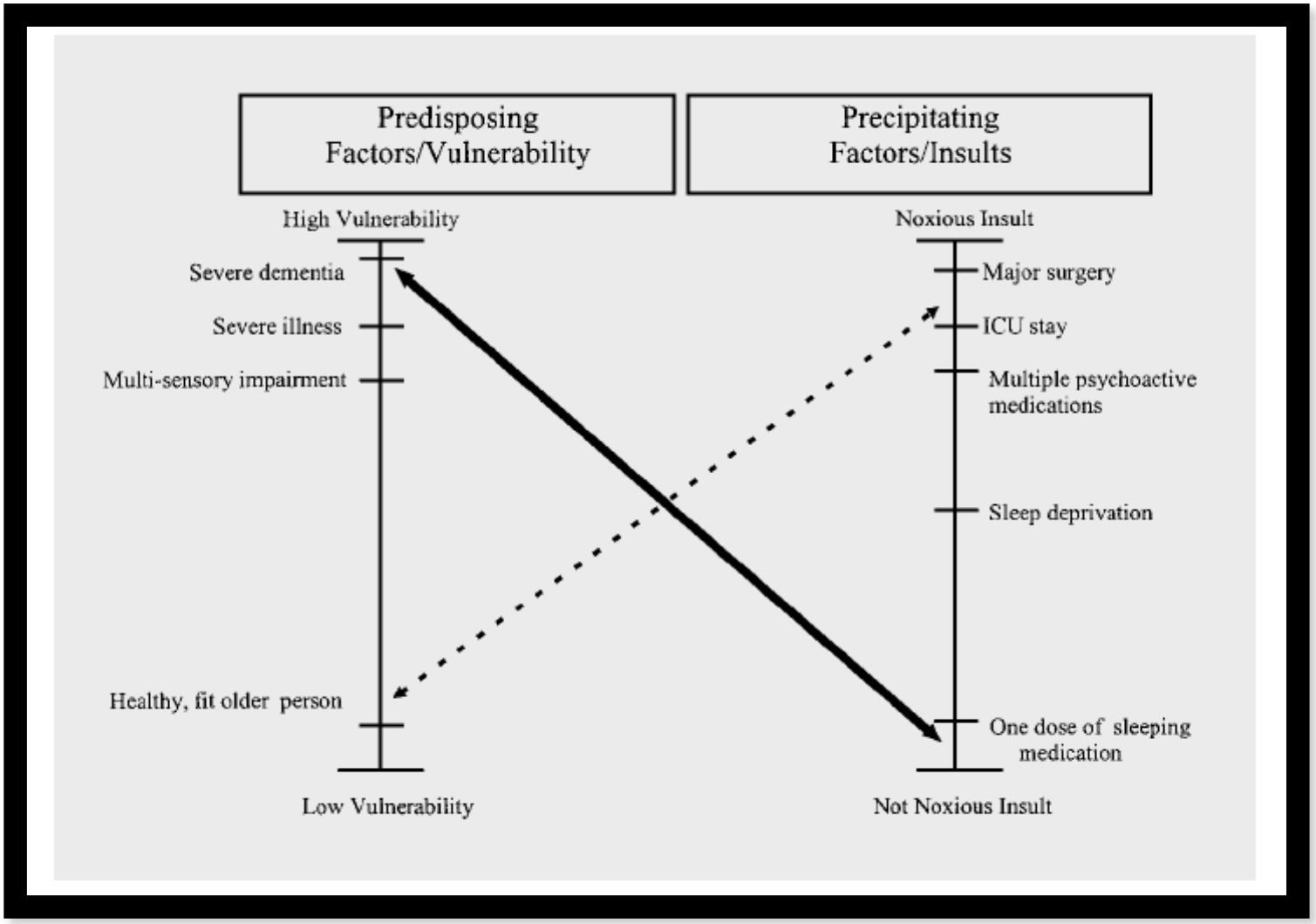
D. I deficit di cui ai criteri A e C non sono spiegabili sulla base di un preesistente (stazionario o in evoluzione) disturbo neurocognitivo e non si verificano in un contesto di grave riduzione dei livelli di arousal (es coma)

E. Vi è evidenza per storia clinica, esame obiettivo o risultati di laboratorio che il delirium è una diretta conseguenza di un problema clinico, intossicazione o sospensione di farmaci, esposizione a tossine, o è dovuto a molteplici eziologie.

Il delirium è presente se tutti e 5 i criteri sono soddisfatti

Am Psychiatr Assoc, May 2013

Multifactorial model of delirium in the elderly



Inouye S.K., Charpentier P.A. JAMA 1996; 275: 825-57

Table 1. Triggers for delirium

Precipitating factors

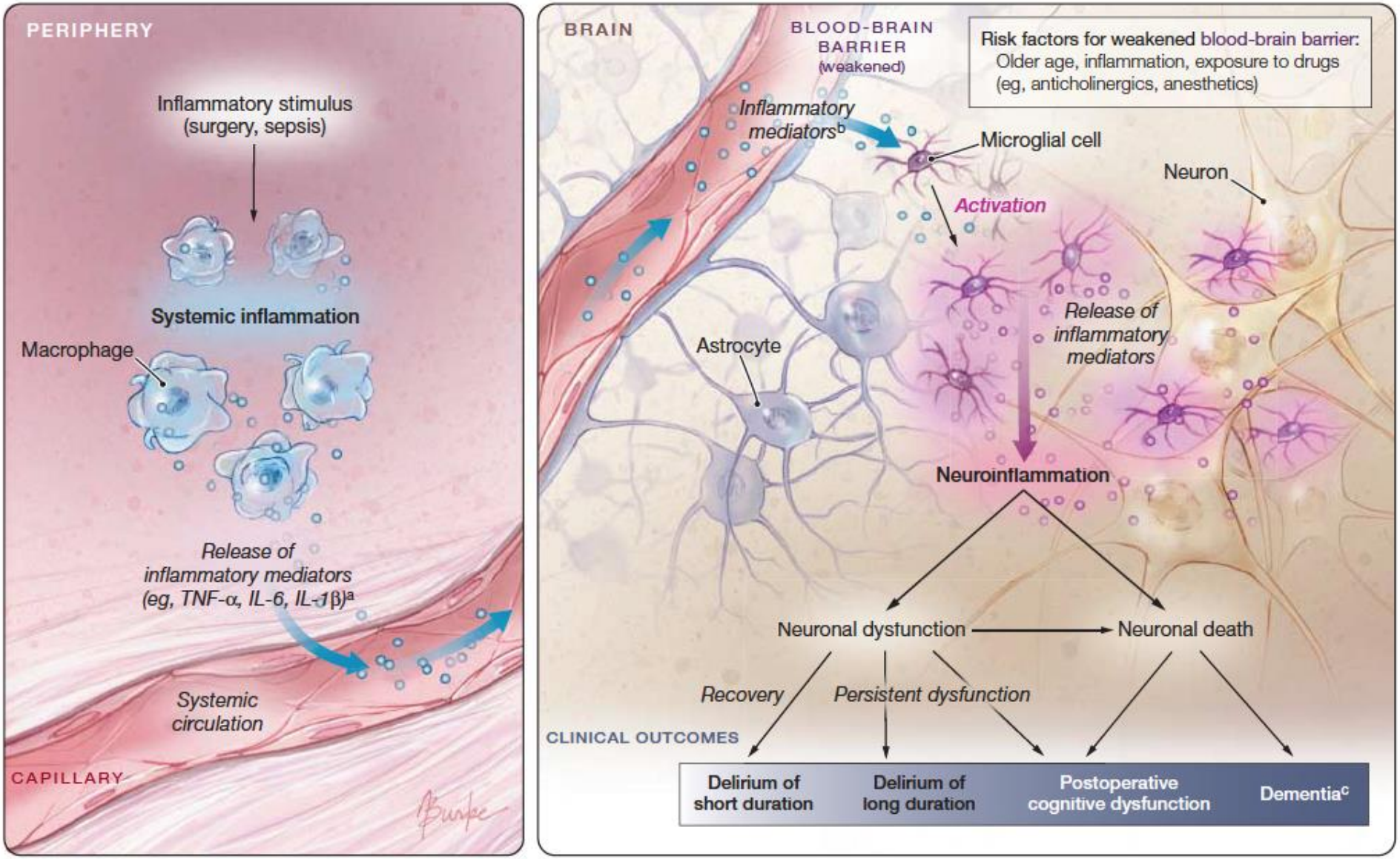
Central	Peripheral	Environmental
Encephalitis	**Constipation**	**Emotional distress**
	Urinary retention	**Sensory impairment**
	Anaemia and nutrition	**Sleep disturbance**
	Folate, B12, thiamine	
	Pain	
	Fracture	
	Toxins/toxin withdrawal	
	Alcohol, drugs, anaesthetic	
seizure	Urine, chest, brain, joint, valve, disc	

Box 3. Medication classes with known delirium potential[22]

- Neuroleptic
- Opioid
- Benzodiazepine
- Anti-histamine
- Dihydropyridine
- H2 receptor antagonist
- Cardiac glycoside
- Steroid
- NSAID
- Tricyclic antidepressant
- Anti-parkinson

NSAID = Non-steroidal anti-inflammatory agent

Figure. Inflammatory Model of the Pathophysiology of Postoperative Delirium



Marcantonio E, JAMA 2012

Perché il delirium interessa i medici «degli organi» e non solo i medici «della psiche»

- "Acute confusion is a far more common herald of the onset of physical illness in an old person than are, for example, fever, pain or tachycardia"
- "Failure to diagnose delirium and to identify and treat its underlying causes may have lethal consequences for the patient, since it may constitute the most prominent presenting feature of myocardial infarction, pneumonia, or some other life-threatening physical illness".

Lipowski ZJ, Am J Psychiatry 1983
Lipowski ZJ, NEJM 1989

THE TIMES 12.11.11

MAGAZINE

MY NIGHTMARE IN HOSPITAL

How a routine operation drove me mad.
By David Aaronovitch

“On Sunday, September 4, I woke up to find that I was no longer mad. It was 2pm, my two brothers were sitting on either side of my hospital bed, my wife between them, the sun was slanting in through the window behind me and the horror that had dominated my life for nearly a week had evaporated. But I will never forget those days and nights of terror and delusion, and will never think about madness in the same way again.”

What had happened to me was unlucky. Three weeks earlier I had presented myself at a London hospital to have keyhole surgery to remove a pre-cancerous growth from my colon.

Delirium
evaluati

Alessandro
Simona Ge
Marco Tra

[a] Department of R
[b] Geriatric Resear
[c] Graduate entry
Limerick, Ireland
[d] Faculty of Nursi
[e] College of Nursi
[f] Hebrew Senior Li
[g] Department of M
[h] University of To
[i] Department of H
[j] Milan Center for

ana Santi [a,b],
ouye [f,g],

University of Limerick,

Table 3
Memories of D-O-M items at baseline (T0) and follow-up (T1) interviews.

Variable	Recorded during delirium (N = 30)*	Remembered by patient T0 (N = 15)**	Remembered by patient at follow-up (N = 12)
Sustained attention (N, %)	30 (100)	10 (33)	6 (20)
Shifting attention (N, %)	30 (100)	9 (30)	6 (20)
Orientation (N, %)	30 (100)	7 (23)	5 (17)
Consciousness (N, %)	26 (87)	8 (27)	3 (10)
Apathy (N, %)	25 (83)	9 (30)	6 (20)
Hypokinesia/psychomotor retardation (N, %)	28 (93)	5 (17)	6 (20)
Incoherence (N, %)	30 (100)	6 (20)	2 (6)
Fluctuation in functioning (N, %)	30 (100)	6 (20)	2 (6)
Restlessness (N, %)	16 (53)	7 (23)	3 (10)
Delusions (N, %)	16 (53)	6 (20)	2 (6)
Hallucinations (N, %)	15 (50)	4 (13)	3 (10)
Anxiety/fear (N, %)	17 (57)	6 (20)	6 (20)

* Items recorded during delirium assessment by the investigators in the 30 patients evaluated at the first evaluation after delirium resolution.

** Items reported by the patients at the baseline (T0) and follow-up (T1) interview. If patients remembered being confused then the neuropsychologists asked patients if they could recall experiencing any symptoms included on the D-O-M.

Contents lists available at ScienceDirect

Journal of Psychosomatic Research

Delirium superimposed on dementia: A quantitative and qualitative evaluation of informal caregivers and health care staff experience

Alessandro Morandi [a,b,*], Elena Lucchi [a,b], Renato Turco [a,b], Sara Morghen [a,b], Fabio Guerini [a,b], Rossana Santi [a,b], Simona Gentile [a,b], David Meagher [c], Philippe Voyer [d], Donna M. Fick [e], Eva M. Schmitt [f], Sharon K. Inouye [f,g], Marco Trabucchi [b,h], Giuseppe Bellelli [b,i,j]

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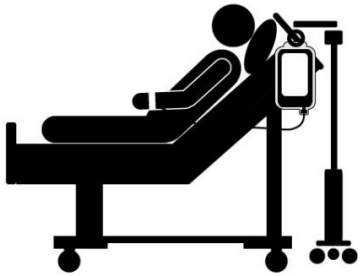
[j] Milan center for Neuroscience (Neuro-Mi), Milan, Italy

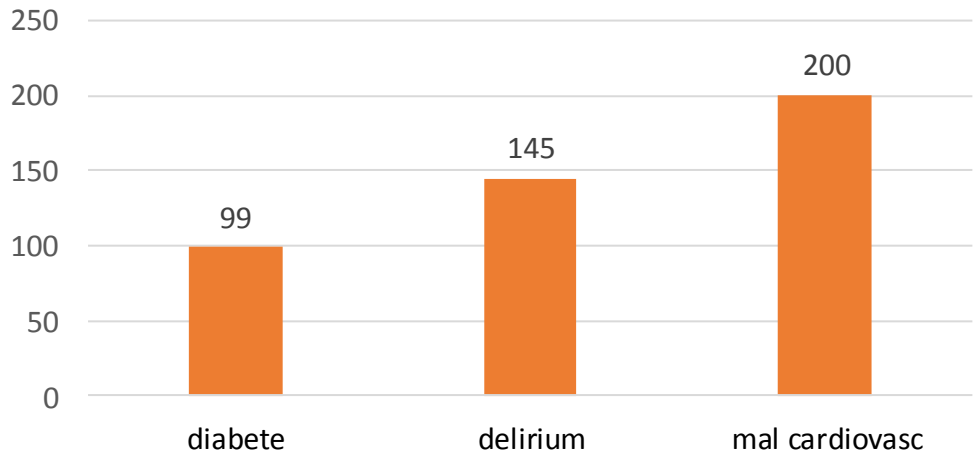
↑ 2x Mortalità intraospedaliera

Ogni giorno di delirium ↑ mortalità
A 6 mesi del 17%

↑ 8x Rischio più elevato di deficit cognitivo/demenza



↑ Durata degenza più elevata di 5-10 giorni



Costo stimato in miliardi $ negli USA

Inouye SK, Lancet 2014; Davis D, Brain 2012; Leslie D, Arch Intern Med 2008; Flaherty J 2011; Bellelli et al, J Am Geriatr Soc 2014;

JAMA Surge

Effect on Del in Pati A Clus

Oral and Nutr

1. Daily oral c
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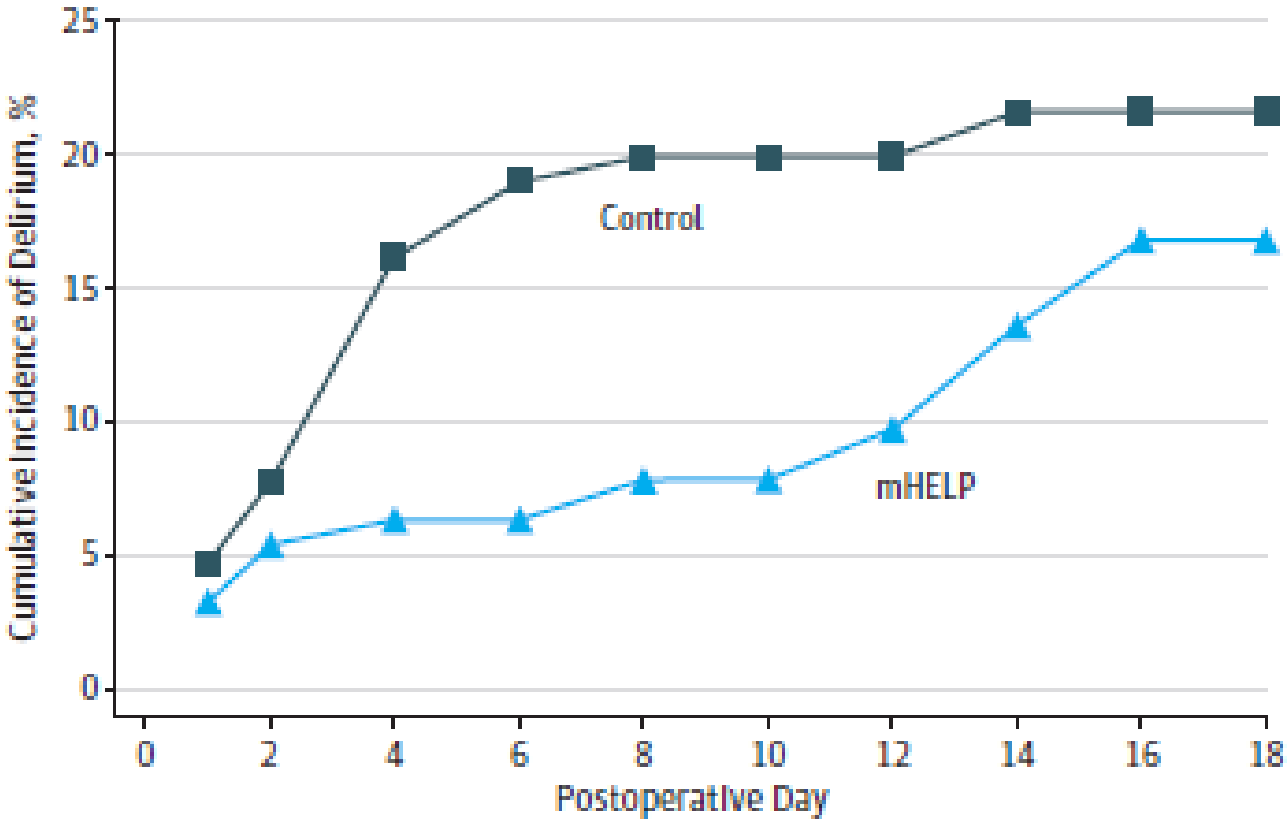
   - Dumping
   - Diet after
   - Tips for d
3. Encourage c

Figure 2. Cumulative Incidence of Delirium by Group



The cumulative incidence of delirium was defined as the probability of the development of delirium during hospitalization. Data on patients were censored at the time of discharge or death. The difference between the groups was significant ($\chi^2 = 5.87$; $P = .02$ by the log-rank test). Because of the smaller sample sizes, the figure does not extend beyond 18 days. mHELP indicates modified Hospital Elder Life Program.

JAMA Surg 2017

….ma quanto è diagnosticato il delirium nella pratica clinica?

Current problems in preventing delirium: recognition of delirium

Table 2
Characteristics of patients included in REPOSI 2010 and 2012, in general and according to the ICD-9 diagnosis of delirium.

2.9%

		Total sample (n = 2521)	Yes delirium (n = 72)	No delirium (n = 2449)	p-Value
Age (years), mean (SD)		79.1 (7.3)	83.7 (6.7)	78.9 (7.3)	<.0001
Females, n (%)		1281 (50.8)	49 (68.1)	1232 (50.3)	.003
Marital status,[a] n (%)	Single (unmarried, divorced, separated)	224 (9.1)	3 (4.2)	221 (9.3)	<.0001
	Married	1318 (53.6)	23 (32.4)	1295 (54.2)	
	Widow/er	918 (37.3)	45 (63.4)	873 (36.5)	
Nursing home residence prior to current hospitalization, n (%)		66 (2.6)	8 (11.1)	58 (2.4)	<.0001
Patients hospitalized in the 6 months prior to current admission, n (%)		764 (30.3)	20 (27.8)	744 (30.4)	.64
Health status					
CIRS index of disease severity, on admission, mean (SD)		1.6 (0.3)	1.7 (0.3)	1.6 (0.3)	0.50
CIRS index of comorbidity, on admission, mean (SD)		3.0 (1.8)	3.1 (1.7)	3.0 (1.8)	0.36
Drugs on admission, means (SD)		5.3 (2.9)	5.1 (2.8)	5.3 (3.0)	0.52
Patients with ≥5 drugs on admission, n (%)		1463 (58.0)	40 (55.6)	1423 (58.1)	0.67
Patients with antipsychotics on admission, n (%)		88 (3.5)	11 (15.3)	77 (3.1)	<.0001
Patients with benzodiazepines on admission, n (%)		339 (13.4)	11 (15.3)	328 (13.4)	0.64
Patients with antidepressants on admission, n (%)		274 (10.8)	19 (26.4)	255 (10.4)	<.0001
Patients with dementia (recorded diagnosis), n (%)		196 (7.8)	28 (38.9)	168 (6.9)	<.0001
SBT, mean (SD)		9.5 (8.0)	18.0 (8.7)	9.3 (7.8)	<.0001
Length of hospital stay, median (IQR)[b]		9 (6–14)	10 (6–15)	9 (6–14)	0.54
In-hospital mortality, n (%)		76 (3.0)	2 (2.8)	74 (3.0)	0.91

Data are given as means (SD), median (interquartile ranges, IQR) or number (%). SBT = Short Blessed Test; CIRS = Cumulative Illnesses Rating Severity scale. Delirium is intended according to ICD-9 diagnosis. p-Value = significance between patients with and without ICD-9 defined delirium.

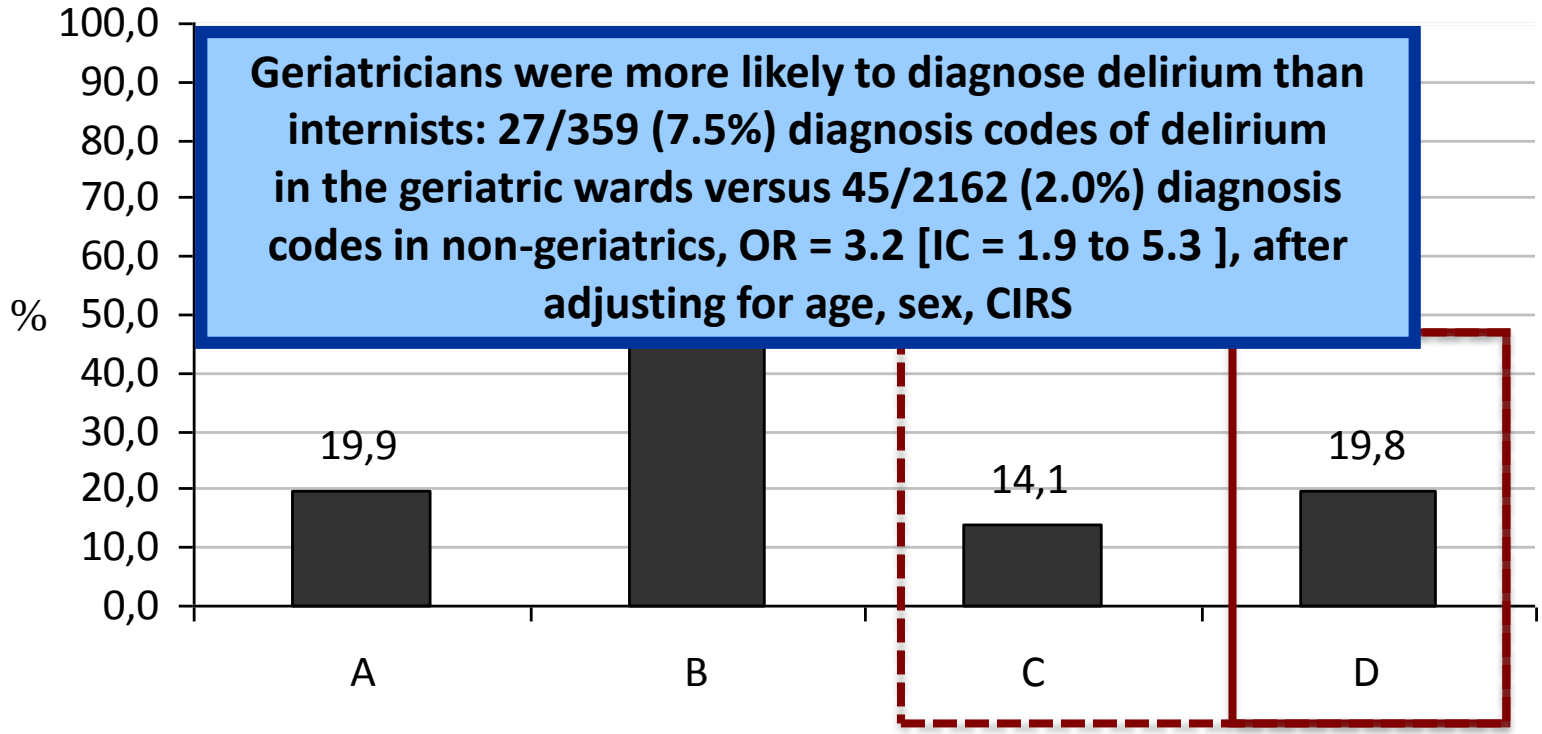
[a] N = 2460.

[b] Wilcoxon test.

Bellelli G et al, Eur J Intern Med 2015

Distribution of clusters of SBT neurocognitive disorders (none, single and combined) in the study

Bellelli et al 2015, Eur J Intern Med 2015



Geriatricians were more likely to diagnose delirium than internists: 27/359 (7.5%) diagnosis codes of delirium in the geriatric wards versus 45/2162 (2.0%) diagnosis codes in non-geriatrics, OR = 3.2 [IC = 1.9 to 5.3], after adjusting for age, sex, CIRS

Group SBT A =patients without neurocognitive disorders;
Group SBT B =patients with neurocognitive disorder only in one domain (i.e., attention, memory and orientation alone) + those with a combined disorder in orientation and memory;
Group SBT C =patients with neurocognitive disorder in attention and in either orientation or memory;
Group SBT D =patients with combined neurocognitive disorders in attention, orientation and memory;

Perché una sottodiagnosi?

Il problema della terminologia

- stato confusionale acuto
- sindrome organica cerebrale
- psicosi post-operatoria
- encefalopatia settica o metabolica
- agitazione
- stato di ottundimento (sopore)
- stato crepuscolare

ORIGINAL INVESTIGATION

Nurses' Recognition of Delirium and Its Symptoms

Comparison of Nurse and Researcher Ratings

Sharon K. Inouye, MD, MPH; Marquis D. Foreman, PhD, RN; Lorraine C. Mion, PhD, RN; Karol H. Katz, MS; Leo M. Cooney, Jr, MD

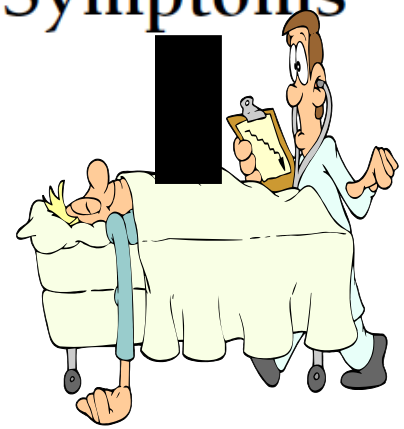
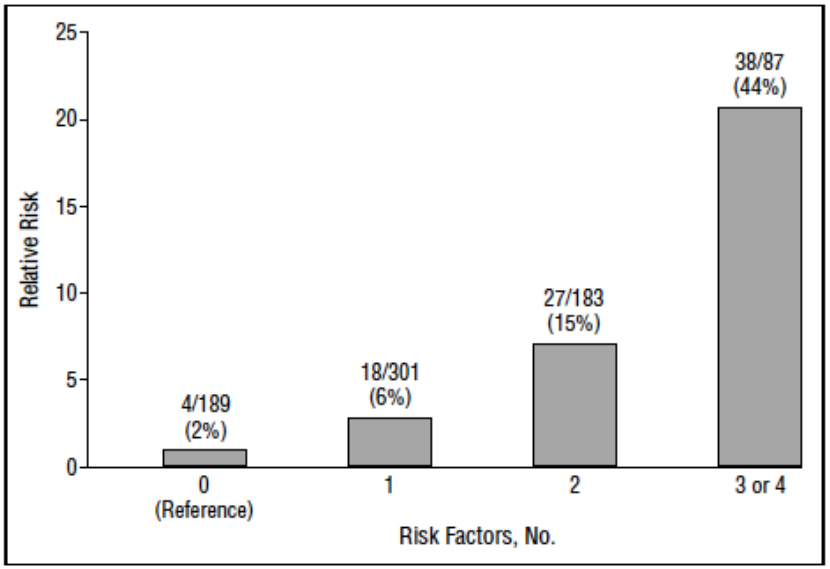


Table 5. Final Independent Risk Factors Associated With Underrecognition of Delirium by Nurses in 760 Patients*

Variable	Adjusted OR (95% CI)
Hypoactive delirium	7.4 (4.2-12.9)
Age ≥80 y	2.8 (1.7-4.7)
Vision impairment	2.2 (1.2-4.0)
Dementia	2.1 (1.2-3.7)



Inouye SK, et al. Arch Intern Med 2001

Delirium o demenza: perché una diagnosi differenziale

- "It is important to distinguish delirium from dementia, as **the two syndromes carry different prognostic implications. It is a grave error to attach the label of senile dementia to a patient suffering only from delirium, yet such misdiagnosis is not uncommon and may cause disastrous consequences for the patient and his or her family**. To avoid misdiagnosis one needs to consider the evolution of the patient's symptoms over time as well as his or her behavior and cognitive performance at the time of examination"

Lipowski ZJ, Am J Psychiatry 1983
Lipowski ZJ, NEJM 1989

Il progetto Delirium Day

"Delirium Day": a nationwide point prevalence study of delirium in older hospitalized patients using an easy standardized diagnostic tool

Giuseppe Bellelli[1,2,3*], Alessandro Morandi[3,4], Simona G. Di Santo[5], Andrea Mazzone[6], Antonio Cherubini[7], Enrico Mossello[8], Mario Bo[9], Angelo Bianchetti[10], Renzo Rozzini[11], Ermellina Zanetti[2], Massimo Musicco[12,13], Alberto Ferrari[14,15], Nicola Ferrara[16,17,18] and Marco Trabucchi[3,19,20] on behalf of the Italian Study Group on Delirium (ISGoD)

ASSOCIAZIONE ITALIANA PSICOGERIATRIA

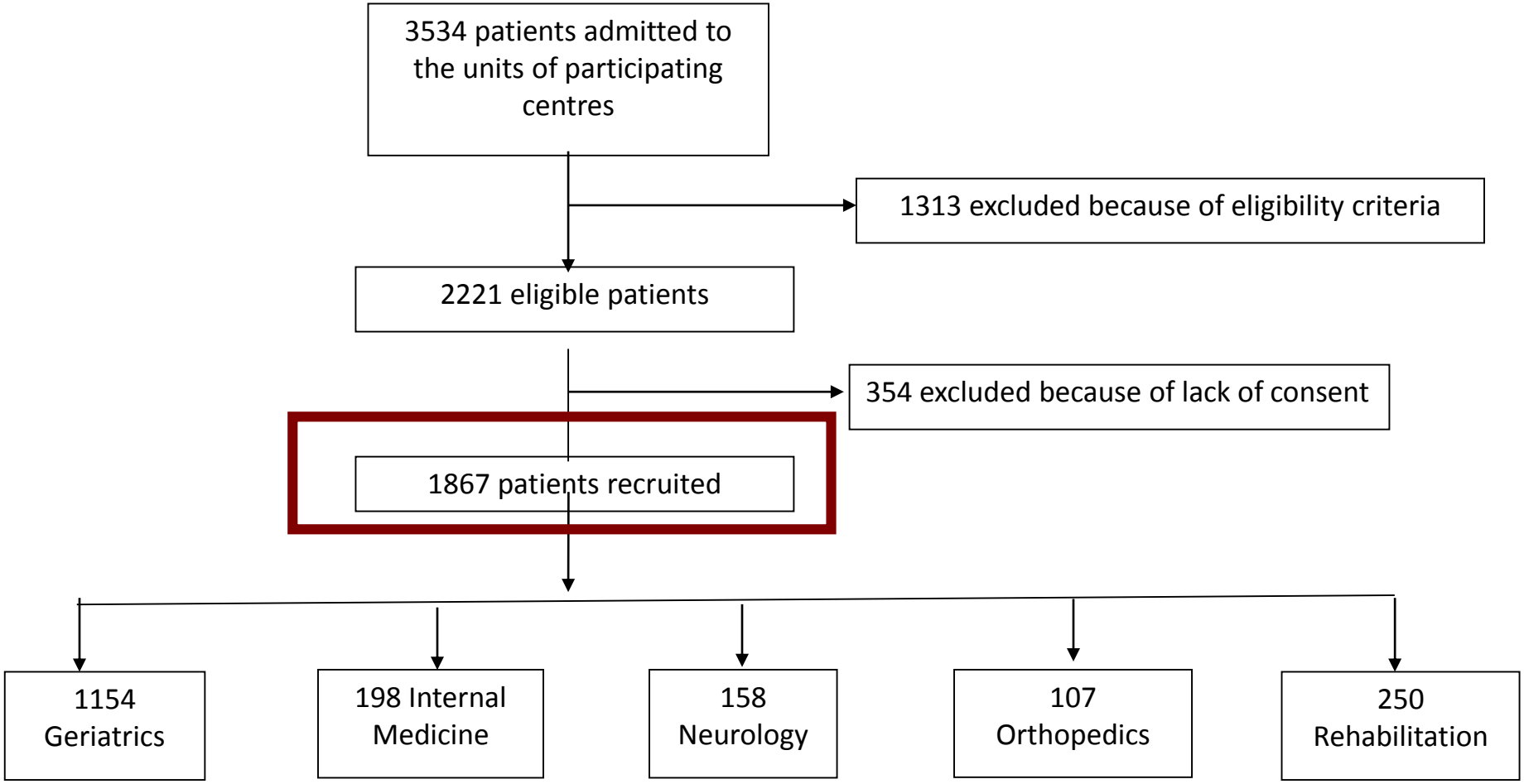
SOCIETÀ ITALIANA DI GERONTOLOGIA E GERIATRIA

SIGOT

SINdem Associazione Autonoma Aderente alla SIN per le Demenze

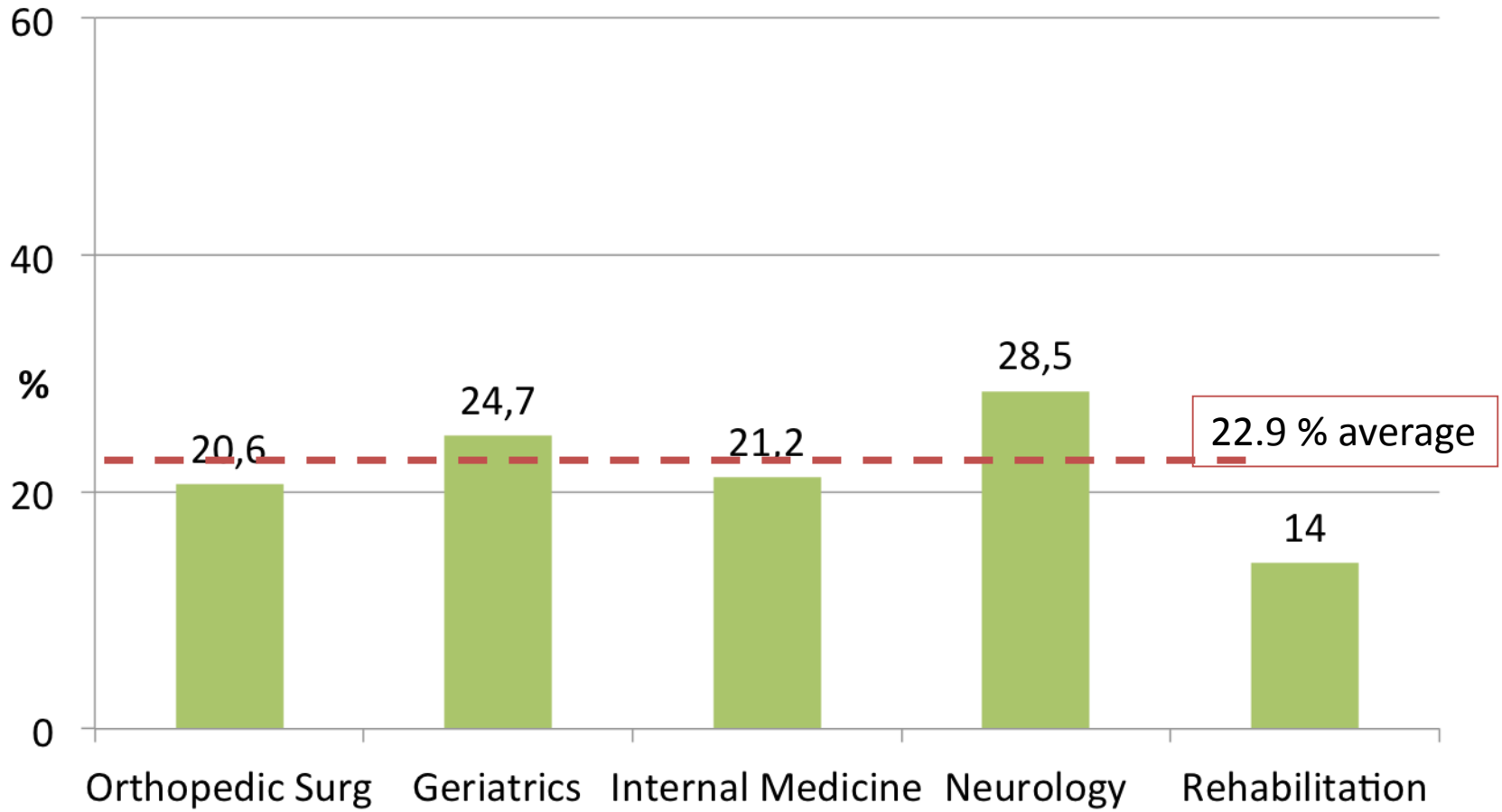
Bellelli *et al. BMC Medicine* (2016) 14:106
DOI 10.1186/s12916-016-0649-8

Disposition of the patients in the study



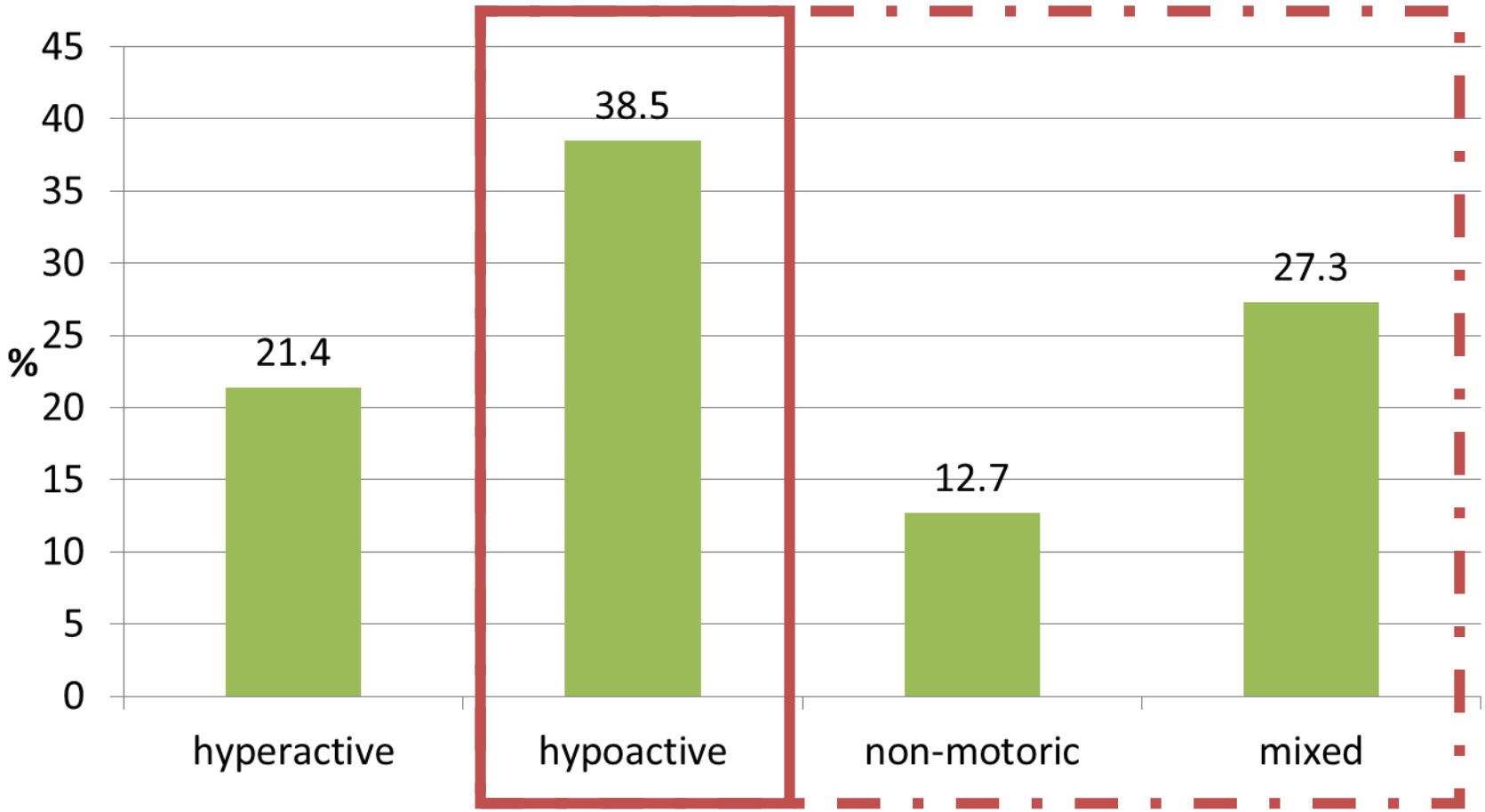
Bellelli *et al. BMC Medicine* (2016) 14:106
DOI 10.1186/s12916-016-0649-8

Figure 2- Proportion of patients with delirium according to the acute hospital ward's type



Bellelli G et al, BMC Medicine, Jul 18;14:106. 2016

Delirium Motor Subtype scale scores (275 patients with 4AT score ≥4)

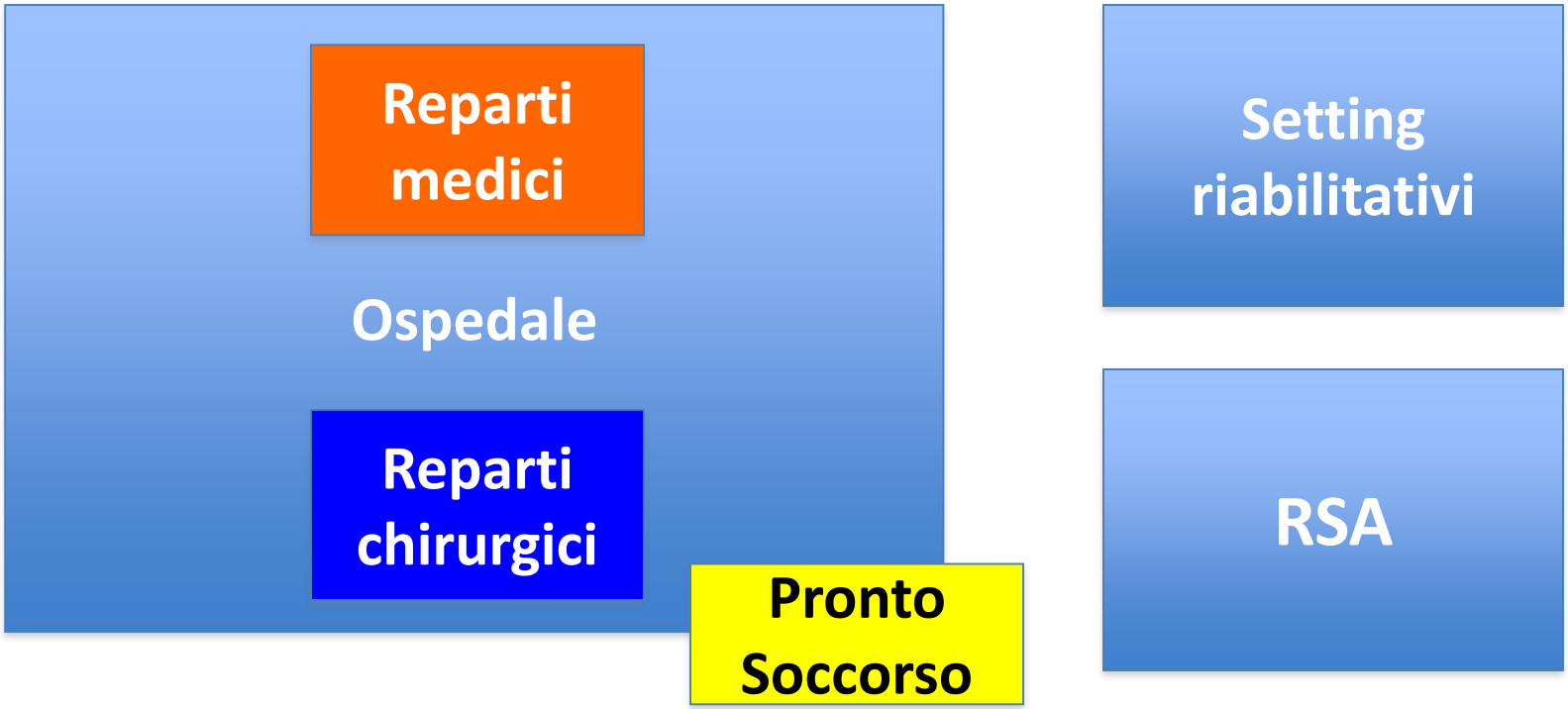


Bellelli G et al, BMC Medicine, 2016

Delirium Day 2016

Delirium Day: Obiettivi

- **Rilevalare la prevalenza nazionale di delirium nei pazienti ultrasessantacinquenni ricoverati in ospedale o RSA**



Criteri inclusione/esclusione

- Tutti i pazienti con età > 65 anni, ricoverati presso i centri partecipanti dalle 00:00 alle 23:59 del giorno indice (28 Settembre 2016) e consenzienti sono stati considerati potenzialmente eleggibili
- Criteri di esclusione: coma, afasia.

Cerchiare la risposta

[1] ALLERTA

Riguarda pazienti che possono essere considerati in stato soporoso (per esempio pazienti per il quale sia difficile svegliarsi e/o che sono evidentemente soporosi durante questo test) oppure agitati/iperattivi. Osservare il paziente. Se dorme, provare a svegliarlo, parlandogli, o con un leggero tocco sulla spalla. Chiedere ai pazienti di dichiarare il proprio nome e l'indirizzo della propria abitazione per valutare il livello di collaborazione.

Normale (completamente attento, ma non agitato durante tutta la valutazione)	0
Moderata sonnolenza per meno di 10 secondi dopo il risveglio, poi normale	0
Livello di attenzione evidentemente anomalo	4

[2] AMT4

Età, data di nascita, luogo (nome dell'ospedale e dell'edificio), anno corrente

Nessun errore	0
1 errore	1

2

[3] ATTENZ

Chiedere al paz
Per aiutare la c

Mesi dell'anno

4 o più: possibile delirium +/- deterioramento cognitivo (necessarie informazioni più dettagliate);
1-3: possibile deterioramento cognitivo (altri test necessari);
0: improbabile delirium o deterioramento cognitivo (ma delirium può essere presente se il punto 4 è incompleto)

[4] ACUTO CAMBIAMENTO O DECORSO FLUTTUANTE

Dimostrazione di un evidente cambiamento o di un andamento fluttuante nei seguenti domini: attenzione, comprensione o altre funzioni menta
(ad esempio ossessioni e/o allucinazioni) che sono comparse nelle ultime 2 settimane e che sono ancora presenti nelle ultime 24 ore

No	0
Si	4

4 o più: possibile delirium +/- deterioramento cognitivo
1-3: possibile deterioramento cognitivo
0: improbabile il delirium e/o deterioramento cognitivo (ma il delirium può essere presente se il punto 4 è incompleto)

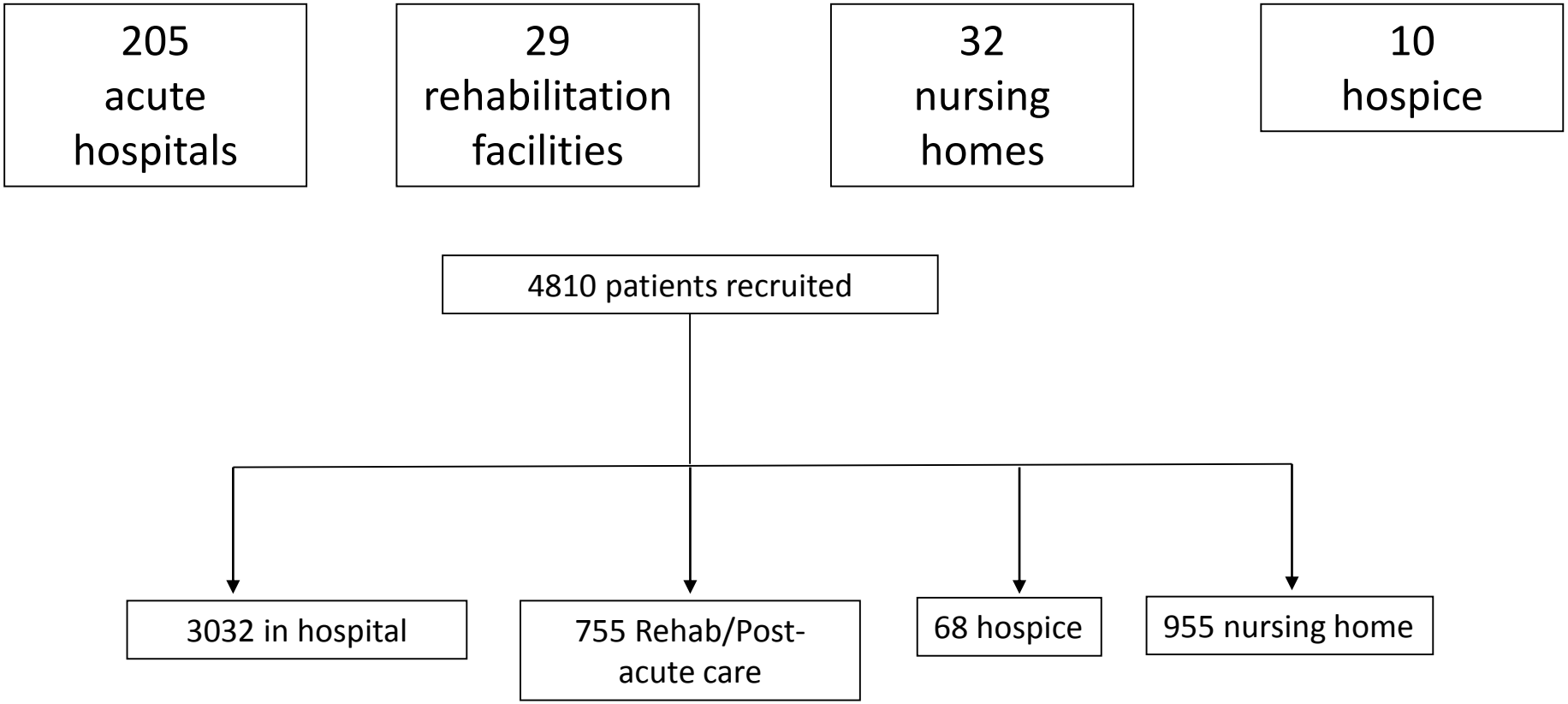
PUNTEGGIO 4AT ☐

4AT

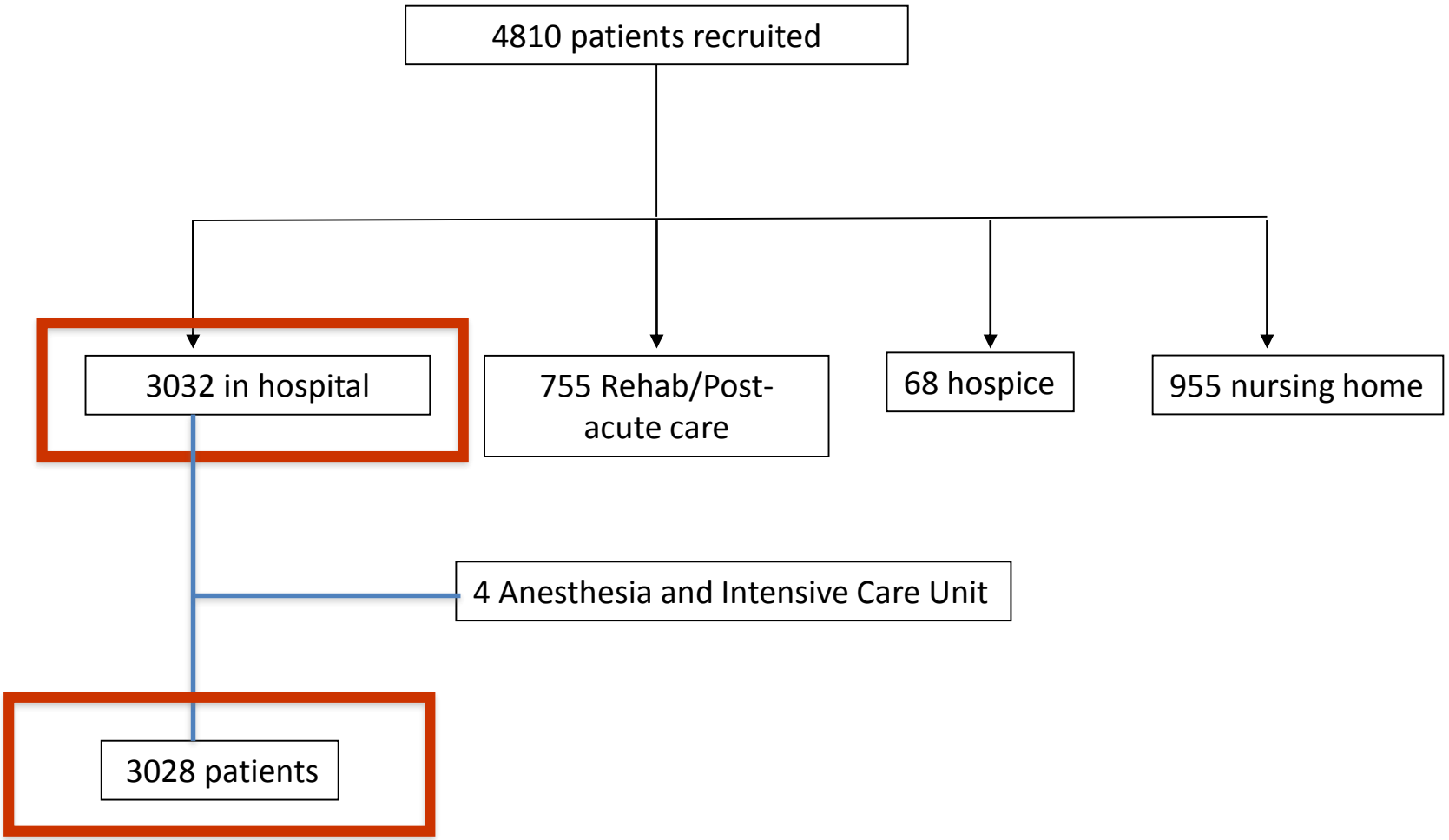
IL 4A Test: strumento di screening per il deficit cognitivo e il delirium

Bellelli G et al, Age Ageing 2014

Disposition of the centres and the patients in the study



Disposition of the patients in the study



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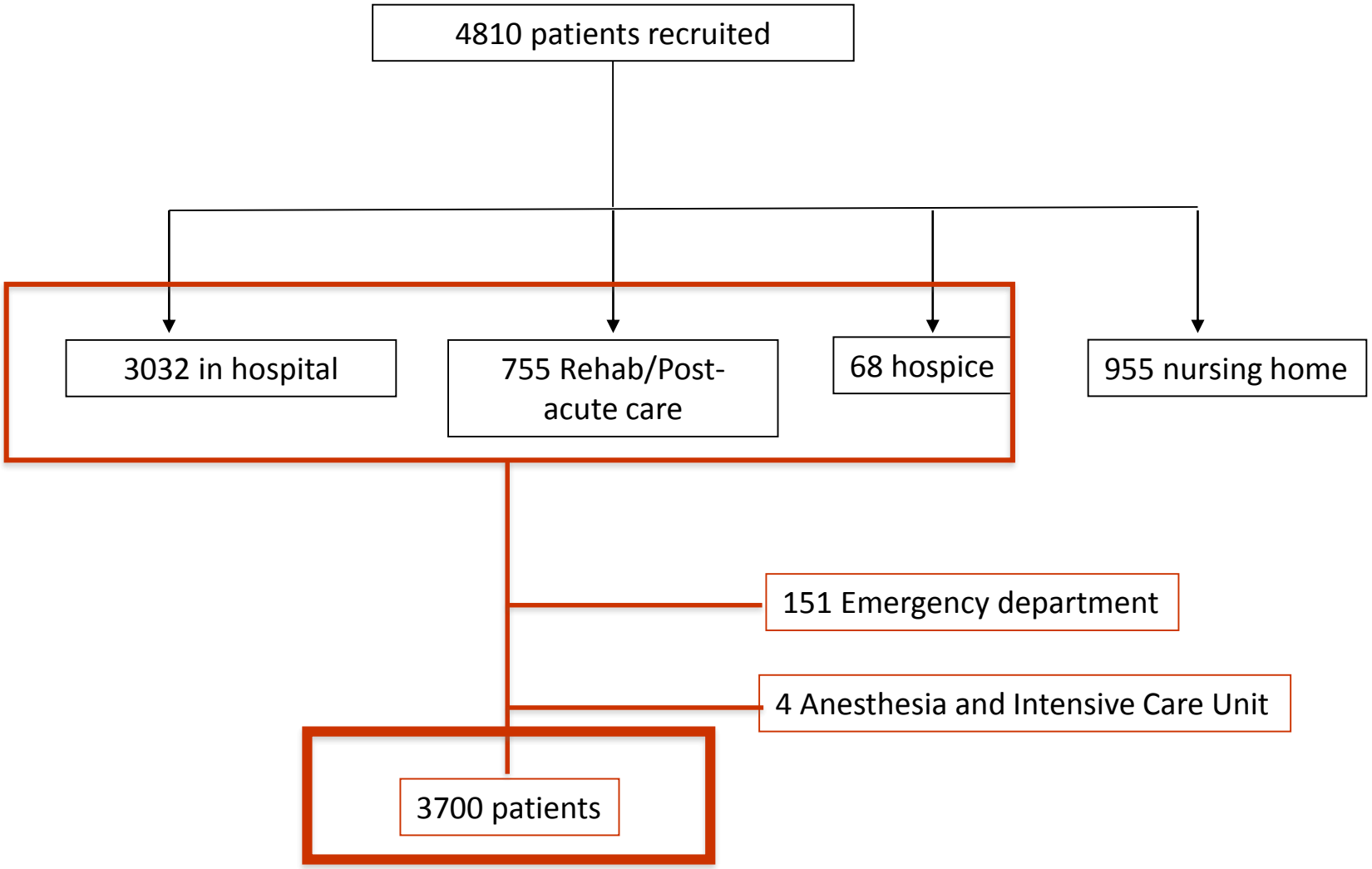

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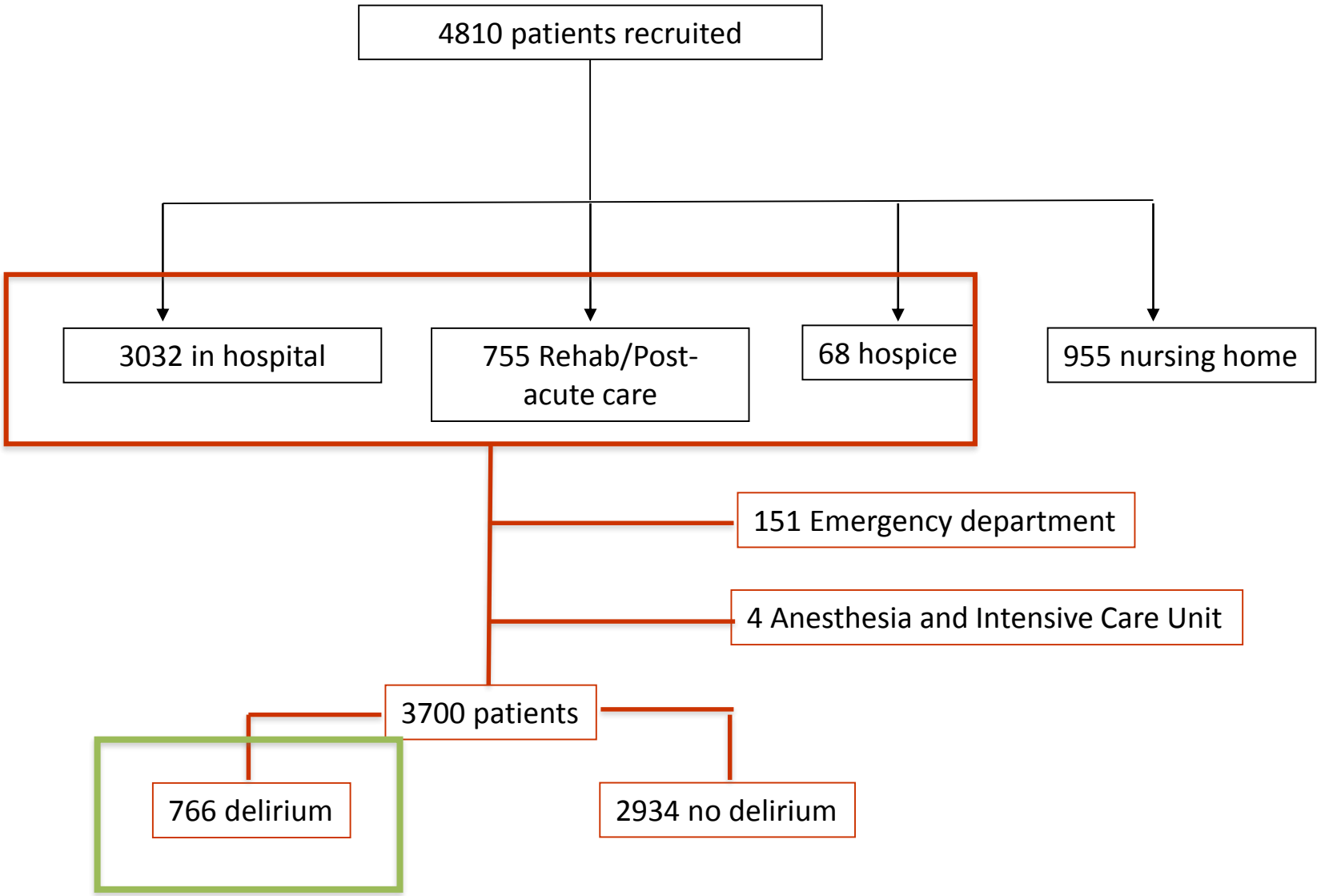

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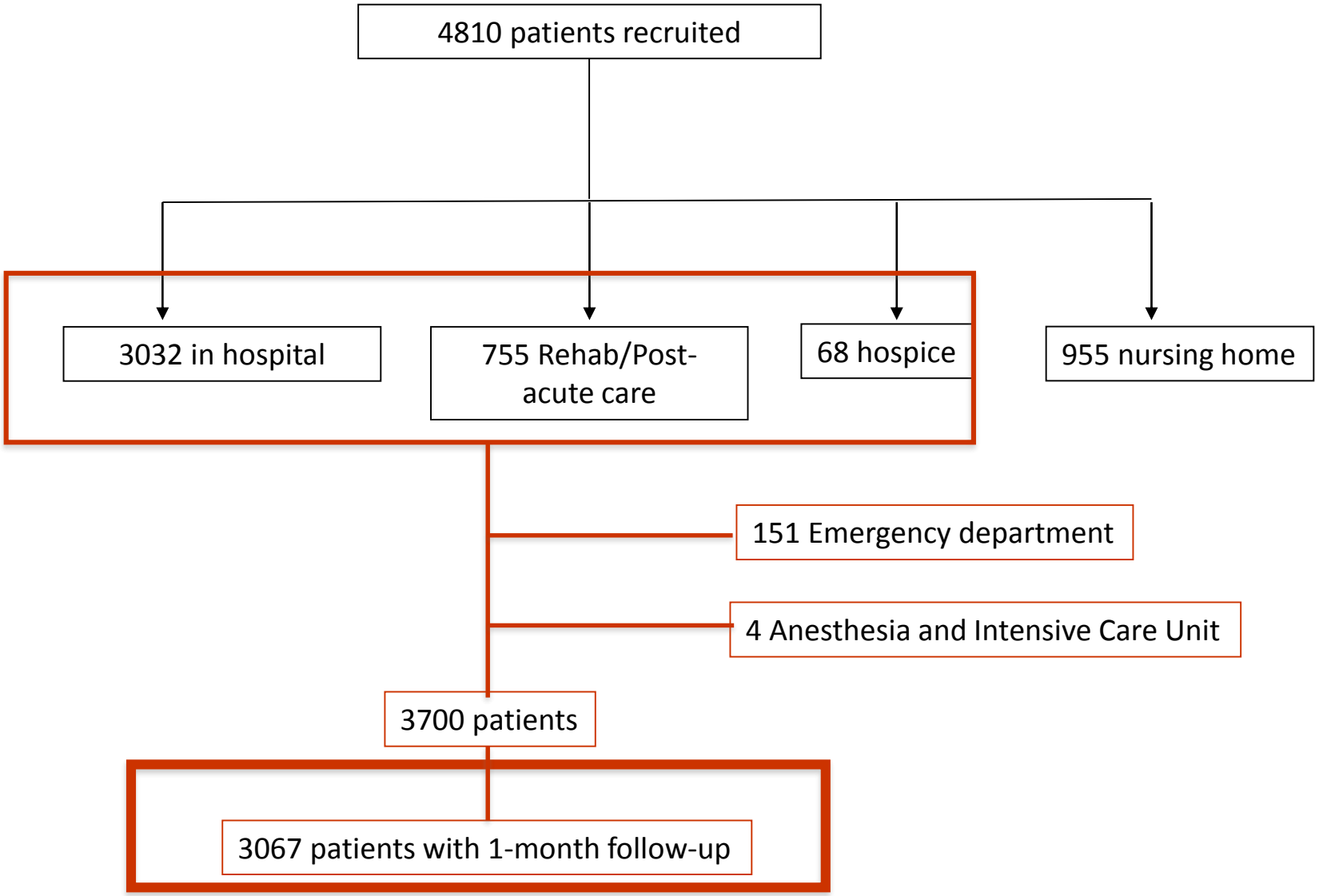

Delirium Day 2017

27/09/2017 Delirium Day

Per info scrivi a
deliriumday2017@gmail.com