63° CONGRESSO NAZIONALE SIGG
GLI ANZIANI:
LE RADICI DA PRESERVARE

La diagnosi di demenza in ospedale

Dr. Fabio Di Stefano

S.O.C. MEDICINA INTERNA VB
S.O.C. GERIATRIA ASL VCO

GLI ANZIANI:
LE RADICI DA PRESERVARE
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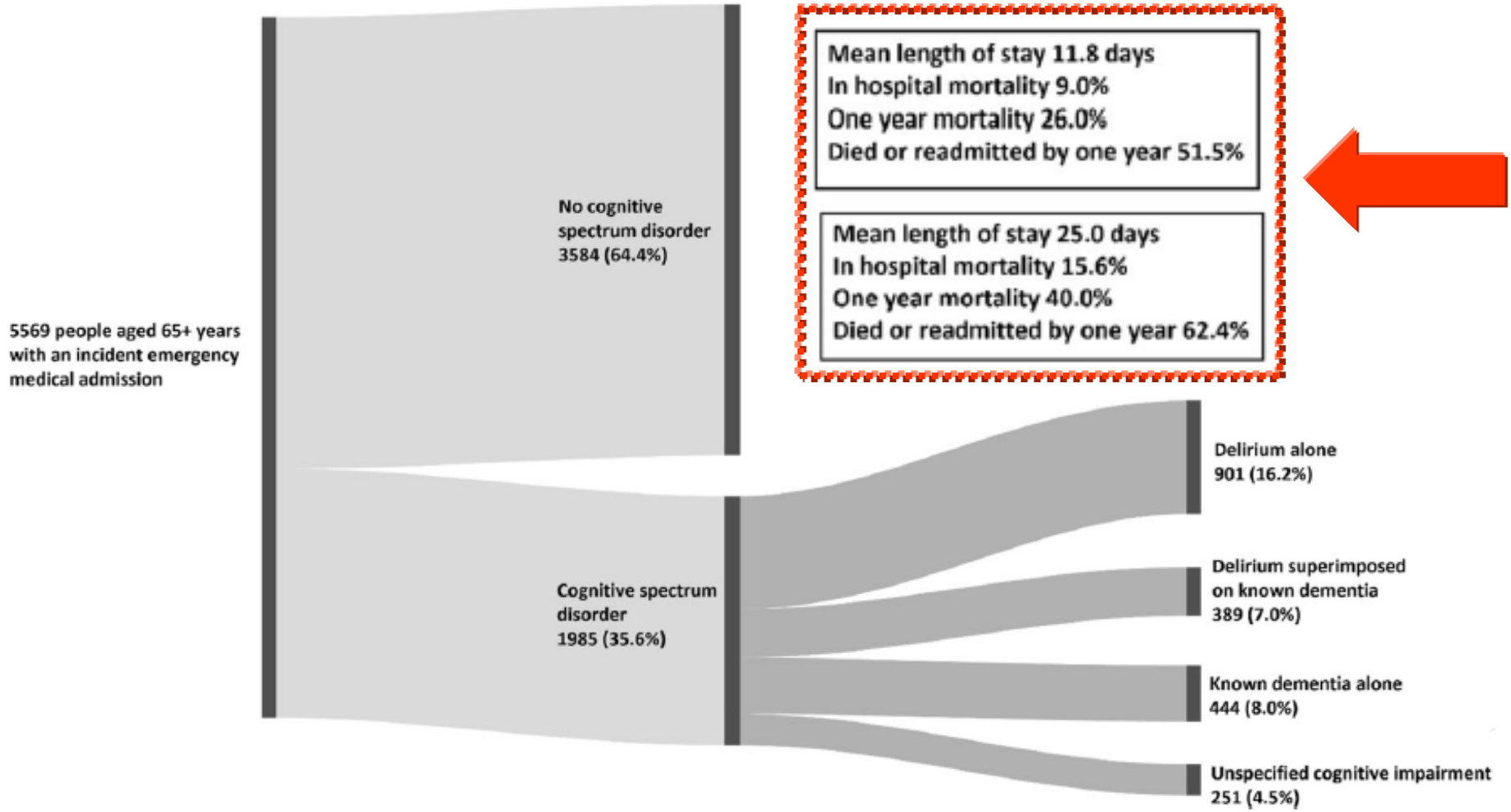
Epidemiology and outcomes of people with dementia, delirium, and unspecified cognitive impairment in the general hospital: prospective cohort study of 10,014 admissions

Reynish *et al. BMC Medicine* (2017) 15:140



Delirium, Dementia, and In-Hospital Mortality: The Results From the Italian Delirium Day 2016, A National Multicenter Study

J Gerontol A Biol Sci Med Sci, 2018, Vol. XX, No. XX, 1–7

- **The mean age was 81.17±7.7 years**.
- 893 patients (43.8%) had neither delirium, nor dementia nor cognitive impairment,
- 483 (23.7%) had cognitive impairment/no dementia,
- 230 (11.3%) dementia alone,
- 187 (9.2%) delirium alone and
- 244 (12.0%) DSD

Dementia in the acute hospital: prospective cohort study of prevalence and mortality

The British Journal of Psychiatry (2009) 195, 61–66.

Table 1 Cohort characteristics ($n = 617$)

Variables	
Gender, female: %	59.0
Age, years: %	
70–79	37.1
80–89	43.5
90+	19.5
Place of residence, %	
Private home	71.0
Sheltered housing	7.6
Residential home	6.8
Nursing home	14.7
Mini-Mental State Examination score, %	
24–30	52.1
16–23	22.8
0–15	25.1
DSM–IV criteria met for dementia, %	
No	57.6
Yes	42.4
Known diagnosis of dementia prior to index admission, %	21.1

Of the cohort, 42.4% had dementia (***only half - 21,1% - diagnosed prior to admission***).

In men aged 70–79, dementia revalence was 16.4%, rising to 48.8% of those over 90.

In women, 29.6% aged 70–79 had dementia, rising to 75.0% aged over 90.

The detection, diagnosis, and impact of cognitive impairment among inpatients aged 65 years and over in an Irish general hospital – a prospective observational study

International Psychogeriatrics: page 1 of 10 © International Psychogeriatric Association 2017

Mean age 78.1 years.

27.3% met criteria for dementia and 21% had mild cognitive impairment (MCI).

Only 41% of those with dementia and 10% of those with MCI had a previously documented impairment.

CLASSIC PAPER

Qual Saf Health Care 2003;**12**:58–64

The hazards of hospitalization*

E M Schimmel

*This is a reprint of a paper that appeared in *Annals of Internal Medicine*, 1964, Volume 60, pages 100–110.

The Hazards of Hospitalization

ELIHU M. SCHIMMEL, M.D., *West Haven, Connecticut*

Annals of Internal Medicine ELIHU M. SCHIMMEL Volume 60, No. 1 January 1964

AGE

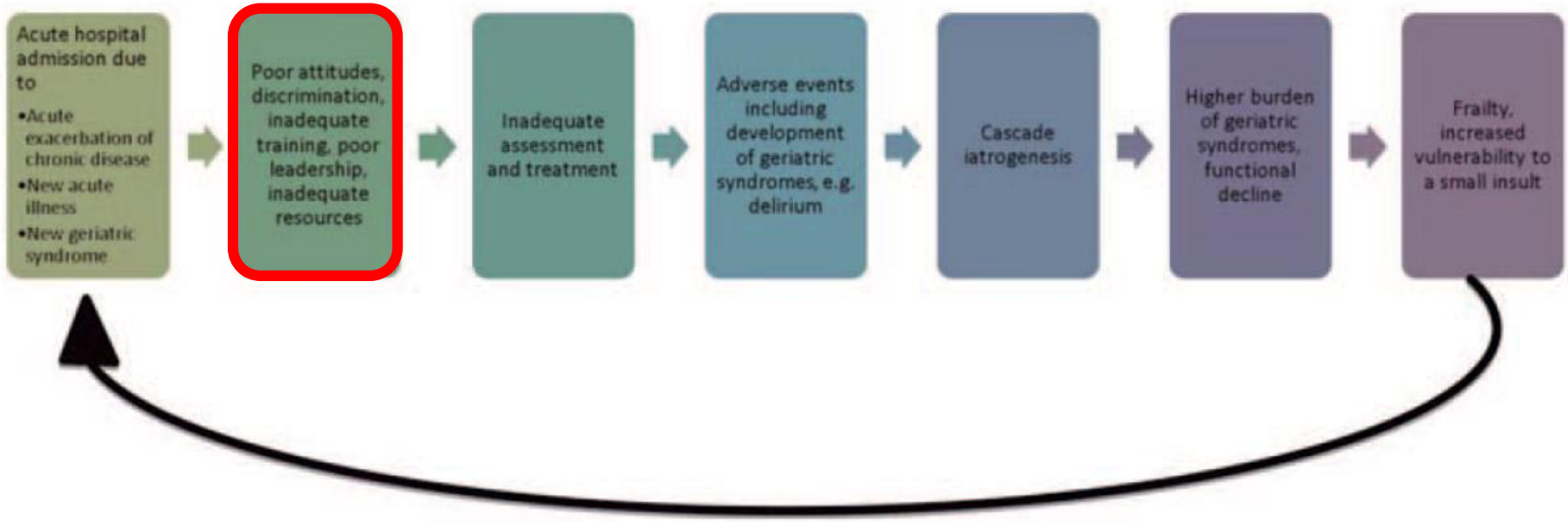
The mean age of the 198 patients involved in these episodes, 53 years, was identical to the mean age of the 1,014 patients admitted to the medical service during the 8-month study. The mean age of the patients in the two categories cited below was significantly ($P < .05$) greater than that of the remaining patients encountering adverse episodes. One of these categories was patients with reactions to therapeutic procedures in whom the mean age was 62 years; the other was those with miscellaneous hospital hazards, who averaged 65 years.

How can we keep patients with dementia safe in our acute hospitals? A review of challenges and solutions

The Royal Society of Medicine 2013

Journal of the Royal Society of Medicine; 106(9) 355–361

Figure 1 The harmful pathway of adverse events in patients with dementia admitted to hospital.



Cognitive impairment creates its own barriers to safety; patients with dementia are not able to be as involved in their care as those who are cognitively intact, for example, in questioning staff about hand-washing in the prevention of hospital acquired infection.

There should be the same attention to preventing delirium in an older patient with dementia as there is for preventing a wound infection in a young surgical patient.

GOV.UK

DH Department of Health

Living well with dementia:
A **National Dementia Strategy**

Improved quality of care in general hospitals

The case for change

11. Up to 70% of acute hospital beds are currently occupied by older people[37] and up to a half of these may be people with cognitive impairment, including those with dementia and delirium.[38] The majority of these patients are not known to specialist mental health services, and are undiagnosed. General hospitals are particularly challenging environments for people with memory and communication problems, with cluttered ward layouts, poor signage and other hazards. People with dementia in general hospitals have worse outcomes in terms of length of stay, mortality and institutionalisation.

12. There is a lack of leadership and ownership of dementia in most general hospitals. There are also marked deficits in the knowledge and skills of general hospital staff who care for people with dementia. Often, insufficient information is sought from relatives and carers. This means that person-centred care is not delivered and it can lead to under-recognition of delirium and dementia.

Accuracy of general hospital dementia diagnoses in England: Sensitivity, specificity, and predictors of diagnostic accuracy 2008–2016

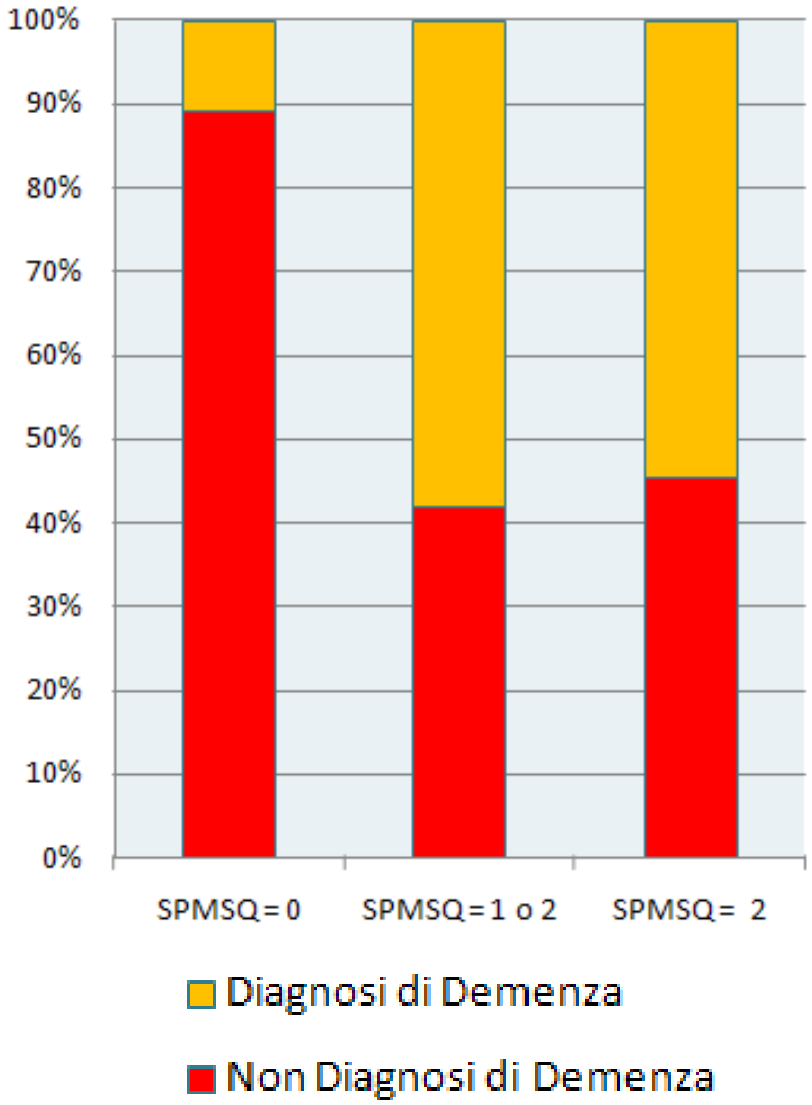
Alzheimer's & Dementia 14 (2018) 933-943

Table 2
Sensitivity and specificity of general hospital diagnoses of dementia 2006–2016 for each individual patient and for each individual admission

Sensitivity/specificity assessment	Number of true positives/total with dementia Sensitivity (95% CI)	Number of true negatives/total without dementia Specificity (95% CI)
For each patient	6429 / 8246 78.0% (77.1, 78.9)	12,094 / 13,141 92.0% (91.6, 92.5)
For each admission	18,769 / 37,329 50.3% (49.8, 50.8)	99,302 / 101,126 98.2% (98.1, 98.3)
For each nonelective admission	17,023 / 26,894 63.3% (62.7, 63.9)*	46,973 / 48,650 96.6% (96.4, 96.7)†

Dimissioni ospedaliere protette: NON 'diagnosi' in dimissione in anziani con deficit cognitivo

SPMSQ	Decadimento cognitivo	N° pazienti
0 (0-4)	Assente o Lieve	206
1 o 2	Moderato o Severo	207
2 (8-10)	Severo	125



Anno 2009 – Dati Personali

Cameron launches challenge to end "national crisis" of poor dementia care

BMJ 2012;344:e2347 doi: 10.1136/bmj.e2347 (Published 27 March 2012)

David Cameron said it was a national scandal that dementia was so poorly managed. "The level of diagnosis, understanding, and awareness of dementia is shockingly low. It is as though we've been in collective denial," he said on 26 March at a conference organised by the Alzheimer's Society.

His "dementia challenge" includes screening all those aged 65 to 74 for early signs of dementia as part of routine health checks for older people to detect cardiovascular disease, kidney disease, and diabetes. From April hospitals in England will be financially rewarded for checking people over 75 years admitted as emergencies and referring those who need care to a psychiatrist.

Improving inpatient care for older adults: Implementing Dementia Commissioning for Quality and Innovation (CQUIN)

Commissioning for Quality and Innovation (CQUIN) is an NHS **payment** framework launched by the Department of Health in 2009

BMJ Quality Improvement Reports 2017;**6**:u212202.w4875. doi:10.1136/bmjquality.u212202.w4875

The CQUIN targets, known as indicators, are as follows:[3]

Indicator 1: Dementia case finding

Indicator 2: Diagnostic assessment for dementia

Indicator 3: Referral for specialist diagnosis

If the outcome of the assessment suggests dementia or inconclusive, appropriate follow-up should be arranged. This could include feedback to the GP or referral to specialist services.

Improving inpatient care for older adults: Implementing Dementia Commissioning for Quality and Innovation (CQUIN)

BMJ Quality Improvement Reports 2017;**6**:u212202.w4875. doi:10.1136/bmjquality.u212202.w4875

The number of patients having delirium and dementia assessments, in accordance with the CQUIN, increased slowly from 27% to over >90%. We demonstrated that our interventions produced sustained improvement
This promotes quality of care older adults

JAMA Internal Medicine | Original Investigation

Association Between Patient Cognitive and Functional Status and Medicare Total Annual Cost of Care
Implications for Value-Based Payment

JAMA Intern Med. 2018;178(11):1489-1497.
Published online September 17, 2018.

Table 2. The Association of Patient Cognitive and Functional Status With TACC in the Medicare Fee-for-Service Patient Population

Characteristic	TACC, Cost Point Estimate (95% CI), $US[a]
Total patient-years, No.	
Unweighted	76 927
Weighted[b]	213 904 324
CMS-HCC risk adjustment	
HCC risk score	8553 (8016 to 9090)
HCC risk score squared	500 (371 to 629)
ESRD status	25 390 (23 128 to 27 652)
Neuropsychological conditions	
Depression	2470 (2200 to 2739)
Alzheimer/dementia	2922 (2399 to 3445)
Functional status	
ADLS with difficulty or cannot do	
0	0 [Reference]
1-2	83 (−199 to 365)
3-6	3121 (2633 to 3609)
IADLs with difficulty or cannot do	
0	0 [Reference]
1-2	93 (−138 to 323)
3-6	895 (452 to 1337)

Association Between Neuropsychological Conditions, Functional Status, and Spending

After applying the CMS-HCC risk adjustment, depression and **dementia were still associated with** $2740 (95% CI, $2200-$2739) and **$2922** (95% CI, $2399-$3445) **higher mean TACCs** (Total Annual Cost of Care), respectively.

Difficulty with **3 or more ADLs** was associated with a **$3121** (95% CI, $2633-$3609) **higher TACC**, and difficulty with **3 or more IADLs** was associated with an **$895** (95% CI, $452-$1337) **higher TACC**.

Assessing outpatient clinicians for the TACC of treated Medicare patients ***without considering other patient factors may inappropriately penalize safety-net clinicians who care for vulnerable patients***.

Association of dementia with early rehospitalization among Medicare beneficiaries

Archives of Gerontology and Geriatrics 59 (2014) 162–168

Table 2
Probability of readmission within 30 days of index hospitalization.

	Crude readmission rate	Model 1			Model 2		
		Odds ratio[a]	95% CI	*p*	Odds ratio[b]	95% CI	*p*
Diagnosis							
Dementia	23.4%	1.18	(1.08, 1.29)	<0.001	1.21	(1.10, 1.33)	<0.001

Hospitalizations of ***beneficiaries with a dementia diagnosis were more likely to be followed by a readmission within thirty days*** (adjusted odds ratio (AOR) 1.18; 95% CI, 1.08, 1.29), compared to hospitalizations of those of without dementia.
Controlling for discharge site of care did not attenuate the association (AOR 1.21; 95% CI, 1.10, 1.33).

HEALTH CARE REFORM

Value-Based Payments and Inaccurate Risk Adjustment—Who Is Harmed?

JAMA Internal Medicine November 2018 Volume 178, Number 11

Risk adjustment can influence how organizations develop clinician networks, invest in service lines, plan locations, and treat patients. Under value-based payment models, avoidance of treating high-risk populations may be an appealing option for physician organizations, hospitals, or payers concerned that they will need to expend more resources for certain patients than they will receive to care for them. This phenomenon is known by many names, including *adverse selection*, *cherry picking*, *cream skimming*, and *patient dumping*, and has been found in a variety of contexts related to quality reporting or pay for performance. Adverse selection is a serious threat to successful value-based payment. Poorly executed risk adjustment is perhaps the biggest potential harm to high-risk patients, who may experience decreased access to high-quality clinicians as a result.

Limits of the 'Mini-Mental State' as a screening test for dementia and delirium among hospital patients

Psychological Medicine, 1982, **12**, 397–408

SYNOPSIS With a psychiatrist's standardized clinical diagnosis as the criterion, the 'Mini-Mental State' Examination (MMSE) was 87% sensitive and 82% specific in detecting dementia and delirium among hospital patients on a general medical ward. The false positive ratio was 39% and the false negative ratio was 5%. All false positives had less than 9 years of education; many were 60 years of age or older. Performance on specific MMSE items was related to education or age. These findings confirm the MMSE's value as a screen instrument for dementia and delirium when later, more intensive diagnostic enquiry is possible; they reinforce earlier suggestions that the MMSE alone cannot yield a diagnosis for these conditions.

The 6-Item Cognitive Impairment Test as a bedside screening for dementia in general hospital patients: results of the General Hospital Study (GHoSt)

Int J Geriatr Psychiatry 2017; **32**: 726–733

The 6CIT correlated well with independent measures of cognitive functioning, which is in line with previous findings (Tuijl *et al.*, 2012). The validity in detecting dementia was good, with the 10/11 cutoff performing slightly better than the 7/8 cutoff, which is plausible given that the latter cutoff is usually employed to detect mild degrees of cognitive impairment. With the 10/11 cutoff, 88% of cases with dementia and 95% of cases without dementia were correctly classified. The overall accuracy was 94%. In comparison, the 7/8 cutoff had lower specificity and a considerably smaller PPV, indicating increased rates of false positive classifications, which are less likely to occur with a higher cutoff.

Il 6 Item Cognitive Impairment Test (6CIT)

Domanda	Risposta	Punti
1. In che anno siamo?	Corretto	0
	Errato	4
2. In che mese siamo?	Corretto	0
	Errato	3
Date al paziente un indirizzo completo a 5 elementi da ricordare, p.es. "Claudio, Matassoni, Via Mulini, 29, Pescara"		
3. Che ore sono all'incirca? (margine 1 ora)	Corretto	0
	Errato	3
4. Conti a ritroso da 20-1	Corretto	0
	1 errore	2
	>1 errore	4
5. Dica i mesi dell'anno in ordine inverso	Corretto	0
	1 errore	2
	>1 errore	4
6. Ripeta l'indirizzo completo	Corretto	0
	1 errore	2
	2 errori	4
	3 errori	6
	4 errori	8
	Tutto errato	10

Screening for cognitive impairment in older general hospital patients: comparison of the Six-Item Cognitive Impairment Test with the Mini-Mental State Examination

Int J Geriatr Psychiatry 2012; **27**: 755–762.

Key points

- Screening for cognitive impairment in older hospitalized patients may be an important strategy to prevent complications of care.
- The Six-Item Cognitive Impairment Test (6CIT) is as accurate as the Mini-Mental State Examination (MMSE) in predicting cognitive impairment in older patients in the general hospital and has additional benefits: it takes less time to administer, it does not require the patient to read, write or draw, and it is not sensitive for educational level.

Validity and Reliability of the 6-Item Cognitive Impairment Test for Screening Cognitive Impairment: A Review

Dement Geriatr Cogn Disord 2016;42:42–49

The 6-CIT has been found to be short, simple, feasible and acceptable to staff, can be used in the visually impaired and is less educationally and culturally biased, which are all very important test characteristics when considering a test for use in the ED and on busy clinical wards, although ***it still remains unclear which cut-off is the most appropriate for detecting cognitive impairment or possible dementia.***

Screening for dementia in general hospital inpatients: a systematic review and meta-analysis of available instruments

Age and Ageing 2013; **42:** 689–695

The **Abbreviated Mental Test Score** (AMTS).

With a cut-off of <7, pooled analysis of the AMTS showed a sensitivity of 81%, a specificity of 84%.

Abbreviated Mental Test Score
(EACH QUESTION SCORES ONE POINT)

1. Age	☐
2. Time to nearest hour	☐
3. An address - for example 42 West Street NB. to be repeated by the patient at the end of the test	☐
4. Year	☐
5. Name of hospital, residential institution or home address (depending on where the patient is situated)	☐
6. Recognition of two persons - eg. doctor, nurse, home help etc.	☐
7. Date of birth	☐
8. Year Second World War started	☐
9. Name of present monarch	☐
10. Count backwards from 20 to 1	☐
Total score	☐

A SCORE OF LESS THAN SEVEN SUGGESTS DEMENTIA

Screening for dementia in general hospital inpatients: a systematic review and meta-analysis of available instruments

Age and Ageing 2013; **42:** 689–695

Conclusion

Many instruments are recommended for screening for dementia. A small number have been validated in general hospital inpatients.

the review is unable to recommend a single best instrument. There is a clear need for more robust evidence to best inform screening for dementia in hospital inpatients

Original Article

PALLIATIVE MEDICINE

Palliative Medicine
24(6) 561–565

DOI: 10.1177/0269216310371556
pmj.sagepub.com
SAGE

Single Question in Delirium (SQiD): testing its efficacy against psychiatrist interview, the Confusion Assessment Method and the Memorial Delirium Assessment Scale

The study instrument piloted was the ***Single Question in Delirium*** (**SQiD**). It consists of one question directed to the patient's friend or relative:

'***Do you feel that [patient's name] has been more confused lately?***'

Conclusion: The SQiD demonstrates potential as a simple clinical tool worthy or further investigation.

RESEARCH ARTICLE Hendry et al. BMC Geriatrics (2015) 15:17 BMC Geriatrics Open Access

Informant single screening questions for delirium and dementia in acute care – a cross-sectional test accuracy pilot study

Single screening questions for dementia:

"***How has your relative/friend's memory changed over the past 5 years*** (up to just before their current illness?)".

When compared to the IQCODE had a sensitivity of 83.3% and specificity of 93.1%.

These findings show promise for use of an informant single screening question tool as the first step in detection of dementia in older people in acute hospital care.

Single screening questions for cognitive impairment in older people: a systematic review

Age and Ageing 2015; **44:** 322–326

- Currently, there is insufficient evidence to support routine screening using a single-item approach.

- **Conclusion**: informant-based, *single-item screening questions* ***show promise for detecting cognitive impairment***.

Improving inpatient care for older adults: Implementing Dementia Commissioning for Quality and Innovation (CQUIN)

Commissioning for Quality and Innovation (CQUIN) is an NHS **payment** framework launched by the Department of Health in 2009

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If the outcome of the assessment suggests dementia or inconclusive, appropriate follow-up should be arranged. This could include feedback to the GP or referral to specialist services.

The use of the Digit Span Test in screening for cognitive impairment in acute medical inpatients

International Psychogeriatrics (2011), 23:10, 1569–1574

With regard to the **screening for major cognitive disorders** (dementia, delirium, and cognitive impairment NOS) **Digit Span Backward** demonstrates reasonable clinical utility.

Threshold analyses revealed that at the **optimal cut-off score is <3, for normalc control versus major cognitive disorders.**

Informant Questionnaire on Cognitive Decline in the Elderly (IQCODE) for the diagnosis of dementia within a secondary care setting (Review)

Cochrane Database of Systematic Reviews 2015, Issue 3. Art. No.: CD010772.

The IQCODE can be used to identify older adults in the general hospital setting who are at risk of dementia and require specialist assessment.

Diagnostic test accuracy of informant-based tools to diagnose dementia in older hospital patients with delirium: a prospective cohort study

Age and Ageing 2016; **45:** 505–511

- Delirium and dementia are common but undetected in older hospital admissions.
- Delirium precludes traditional performance-based cognitive assessment for dementia.

Conclusions

Both the IQCODE-SF and AD8 are sensitive and specific tools to detect dementia in older people presenting to hospital with delirium.

Validation of the 6-Item Cognitive Impairment Test and the 4AT test for combined delirium and dementia screening in older Emergency Department attendees

Age and Ageing 2018; **47:** 61–68

- We found that **4AT** scores of 0 or 1 effectively 'rule out' dementia.
- We found that **6-CIT** with cut-off 8/9 or 9/10 can also exclude dementia (NPV 0.95 and 0.94, respectively) but PPV is low. A 13/14 cut-off seems better in clinical practice to reduce unnecessary workload from formal assessment of false negative cases.

Undiagnosed long-term cognitive impairment in acutely hospitalised older medical patients with delirium: a prospective cohort study

Age and Ageing 2016; **45:** 493–499

At 3 months, 5/82 (6%) had persistent delirium, 14/82 (17%) were diagnosed with prior MCI, 47/82 (57%) were diagnosed with dementia and 16/82 (20%) had no evidence of prior cognitive impairment.

Conclusion: given that over 1/3 of older patients with delirium were found to have a previously undiagnosed cognitive impairment, the development and **evaluation of services to follow-up and manage patients with delirium are warranted**.

Cognitive Status of Older Adults on Admission to a Skilled Nursing Facility According to a Hospital Discharge Diagnosis of Dementia

JAMDA 18 (2017) 726–728

For beneficiaries with a discharge diagnosis of dementia **17.9% were classified as cognitively intact**, 25.8% were mildly impaired, and 56.3% were moderately or severely impaired on skilled nursing facility (SNF) admission.

These findings provide evidence that a hospital diagnosis of dementia might not always reflect cognitive status on admission to an SNF.

Screening for dementia and other causes of cognitive impairment in general hospital in-patients

Age and Ageing 2014; **43:** 166–168

In conclusion, though some tests do perform adequately in screening for dementia, we advocate caution in the use of single cognitive tests for dementia 'screening' in hospital. Rather, we encourage detection of individuals with cognitive impairment, then further assessment to identify the cause of this as appropriate. We argue for a change in attitude to identification of cognitive impairment in the general hospital from 'screening' to it being seen as part of normal systems examination. Further work is required to identify the most appropriate tests for different stages in the patient journey, but whatever test is used, evidence of impairment on simple tests must be interpreted in the light of contextual and other diagnostic information. This will allow clinicians to follow

Hospital-Diagnosed Dementia and Suicide: A Longitudinal Study Using Prospective, Nationwide Register Data

(Am J Geriatr Psychiatry 2008; 16:220–228)

The first months after having received a diagnosis of dementia seem to be particularly stressful for the patient. It is, however, important to acknowledge that suicides also occur well after initial diagnosis. We find that the risk of suicide associated with dementia remains significant after controlling for mood disorders.

Dementia in acute hospital inpatients: the role of the geriatrician

Age and Ageing 2012; **41:** 282–284

Because hospital patients with dementia are relatively more likely to have contact with a geriatrician, undiagnosed dementia is present in a large proportion of patients under their care in both acute and rehabilitation settings. Why then do geriatricians not routinely aim to detect previously undiagnosed dementia in their inpatients? Obstacles to dementia diagnosis in primary care are well recognised [15] but less is known about secondary care. Many clinicians, including geriatricians, hesitate to diagnose dementia [16] because of the possibility of an incorrect diagnosis causing unnecessary anxiety and social withdrawal, concerns about paternalism, stigma, medication side-effects, further strain on families and, perhaps, greater demands on services [15]. Others hesitate because of fears it will complicate the process of discharge and appropriate placement [17].

Dementia in acute hospital inpatients: the role of the geriatrician

Age and Ageing 2012; **41:** 282–284

TAKE HOME MESSAGES

Key points

- Dementia is underdiagnosed.
- Patients with dementia in hospital are highly vulnerable.
- Geriatricians are in a position to make a real difference to people with dementia.

Grazie per l'attenzione