

**20-22 SETTEMBRE 2023**

**BARI | VILLA ROMANAZZI CARDUCCI**

**7° Forum  
Mediterraneo  
2023 in Sanità®**



*IL PIANO NAZIONALE DEMENZE  
L'ESPERIENZA DELLA REGIONE  
PUGLIA*



*Emergenza nelle Demenze*



**Rosa Capozzo, MD**  
UOC Neurologia-Stroke Unit,  
Osp. "Di Venere", ASL BA,  
Direttore G. Rinaldi

*21 Settembre 2023  
Giornata mondiale Alzheimer  
Villa Romanazzi Carducci - BARI*

### **Emergency&Dementia...**

- ✓ In the UK, around 944000 people living with dementia, this is estimated to increase to more than 1.6million by 2050;  
[Alzheimer's Research UK. Dementia Statistics Hub: prevalence projections in the UK,2022]
- ✓ An increase in the number of people living with dementia is reflected in emergency hospital admissions.
- ✓ In England, there was a rise of 35% in emergency admissions for people with dementia during 2017–2018, compared with 2012–2013;
- ✓ More than half of the people with diagnosis of dementia in 2017–2018 were admitted to hospital as an emergency at least once in that year.  
[Alzheimer's Society. Analysis of NHS England's hospital episode Statistics Dataset 2012/13 to 2017/18. 2020]

**PLOS ONE**

RESEARCH ARTICLE

Retrospective study of more than 5 million emergency admissions to hospitals in England: Epidemiology and outcomes for people with dementia

David Reeves<sup>1,2\*</sup>, Fiona Holland<sup>1,2</sup>, Hazel Morbey<sup>3</sup>, Mark Hann<sup>1,2</sup>, Faraz Ahmed<sup>3</sup>, Linda Davies<sup>1</sup>, John Keady<sup>4,5</sup>, Iracema Leroi<sup>6</sup>, Siobhan Reilly<sup>7</sup>

**Numbers of patients and spells increased year-on-year for person with dementia (PwD)**

|                             | Males            |                   |         |         |         |         | Females |         |         |         |         |         |
|-----------------------------|------------------|-------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
|                             | 2010/11          |                   | 2012/13 |         | 2016/17 |         | 2010/11 |         | 2012/13 |         | 2016/17 |         |
|                             | PwD <sup>b</sup> | PwoD <sup>c</sup> | PwD     | PwoD    | PwD     | PwoD    | PwD     | PwoD    | PwD     | PwoD    | PwD     | PwoD    |
| <b>Patients</b>             |                  |                   |         |         |         |         |         |         |         |         |         |         |
| Number of patients          | 49,473           | 452,865           | 62,248  | 480,923 | 84,856  | 555,358 | 92,656  | 532,866 | 108,740 | 549,229 | 131,589 | 613,663 |
| % within the FY             | 9.8              | 90.2              | 11.5    | 88.5    | 13.3    | 86.7    | 14.8    | 85.2    | 16.5    | 83.5    | 17.7    | 82.3    |
| <b>Emergency admissions</b> |                  |                   |         |         |         |         |         |         |         |         |         |         |
| Number of spells            | 87,924           | 659,615           | 111,846 | 706,090 | 157,222 | 846,310 | 153,131 | 756,483 | 182,956 | 786,434 | 225,262 | 906,833 |
| % within the FY             | 11.8             | 88.2              | 13.7    | 86.3    | 15.7    | 84.3    | 16.8    | 83.2    | 18.9    | 81.1    | 19.9    | 80.1    |

**Descriptive statistics for the hospital spells**

|                             | Males   |      |         |      | Females |      |         |      |
|-----------------------------|---------|------|---------|------|---------|------|---------|------|
|                             | PwD     |      | PwoD    |      | PwD     |      | PwoD    |      |
|                             | n       | %    | n       | %    | n       | %    | n       | %    |
| Total number of spells      | 157,222 | 15.7 | 846,310 | 84.3 | 225,262 | 19.9 | 906,833 | 80.1 |
| <b>Patient demographics</b> |         |      |         |      |         |      |         |      |
| <b>Age on admission</b>     |         |      |         |      |         |      |         |      |
| 65-69                       | 7,678   | 4.9  | 169,864 | 20.1 | 5,639   | 2.5  | 146,453 | 16.1 |
| 70-74                       | 14,383  | 9.1  | 173,295 | 20.5 | 12,251  | 5.4  | 155,706 | 17.2 |
| 75-79                       | 26,287  | 16.7 | 169,595 | 20   | 26,633  | 11.8 | 167,804 | 18.5 |
| 80-84                       | 39,959  | 25.4 | 157,220 | 18.6 | 48,444  | 21.5 | 173,062 | 19.1 |
| 85-89                       | 41,290  | 26.3 | 112,019 | 13.2 | 65,877  | 29.2 | 149,195 | 16.5 |
| 90plus                      | 27,625  | 17.6 | 64,317  | 7.6  | 66,418  | 29.5 | 114,613 | 12.6 |
| Mean (SD)                   | 82.8    | 7.1  | 77.4    | 7.9  | 85.3    | 7.0  | 79.2    | 8.4  |

| <b>Spell characteristics</b>          |         |      |         |      |         |      |         |      |
|---------------------------------------|---------|------|---------|------|---------|------|---------|------|
| <b>Month of admission</b>             |         |      |         |      |         |      |         |      |
| March-May                             | 37,213  | 23.7 | 203,777 | 24.1 | 52,927  | 23.5 | 216,490 | 23.9 |
| June-August                           | 40,444  | 25.7 | 212,012 | 25.1 | 57,540  | 25.5 | 226,831 | 25.0 |
| September-November                    | 39,609  | 25.2 | 210,016 | 24.8 | 56,596  | 25.1 | 225,064 | 24.8 |
| December-February                     | 39,956  | 25.4 | 220,505 | 26.1 | 58,199  | 25.8 | 238,448 | 26.3 |
| <b>Weekend admission (Sat or Sun)</b> |         |      |         |      |         |      |         |      |
| Yes                                   | 42,850  | 27.3 | 198,640 | 23.5 | 63,061  | 28.0 | 217,259 | 24.0 |
| No                                    | 114,372 | 72.7 | 647,670 | 76.5 | 162,201 | 72.0 | 689,574 | 76.0 |

**PLOS ONE**

RESEARCH ARTICLE

Retrospective study of more than 5 million emergency admissions to hospitals in England: Epidemiology and outcomes for people with dementia

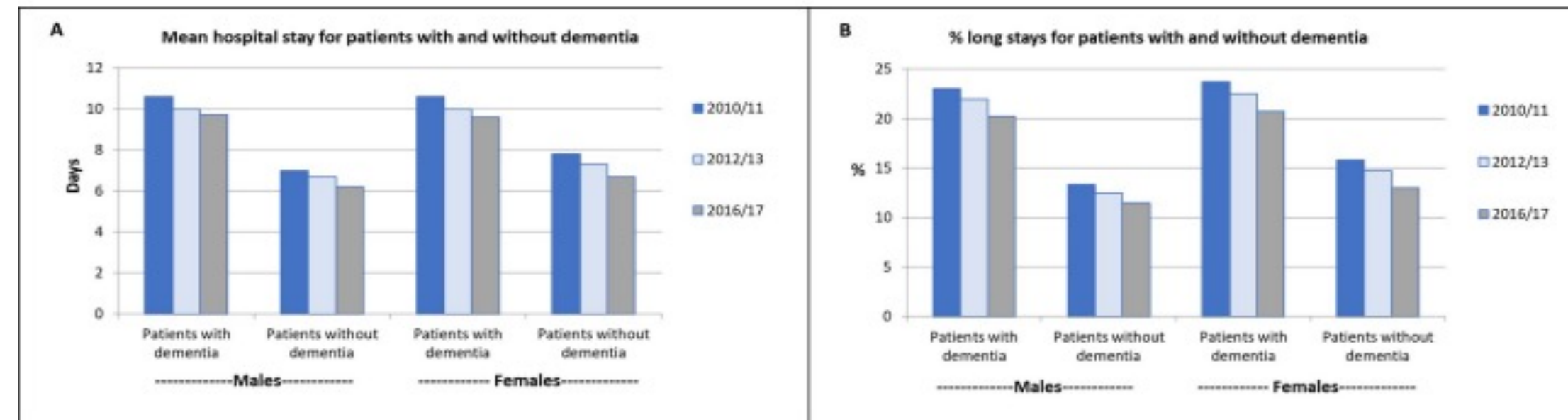
David Reeves<sup>1,2\*</sup>, Fiona Holland<sup>1,2</sup>, Hazel Morbey<sup>3</sup>, Mark Hann<sup>1,2</sup>, Faraz Ahmed<sup>4</sup>, Linda Davies<sup>1</sup>, John Keedy<sup>4,5</sup>, Iracema Lerof<sup>6</sup>, Siobhan Reilly<sup>7</sup>

PLOS ONE

RESEARCH ARTICLE  
Retrospective study of more than 5 million emergency admissions to hospitals in England: Epidemiology and outcomes for people with dementia

David Reeves<sup>1,2\*</sup>, Fiona Holland<sup>1,2</sup>, Hazel Marley<sup>3</sup>, Mark Hens<sup>4</sup>, Faraz Ahmed<sup>5</sup>, Linda Davies<sup>6</sup>, John Keady<sup>7</sup>, Inmaculada Lopez<sup>8</sup>, Stephen Reilly<sup>9</sup>

### Hospital outcomes for patients with dementia



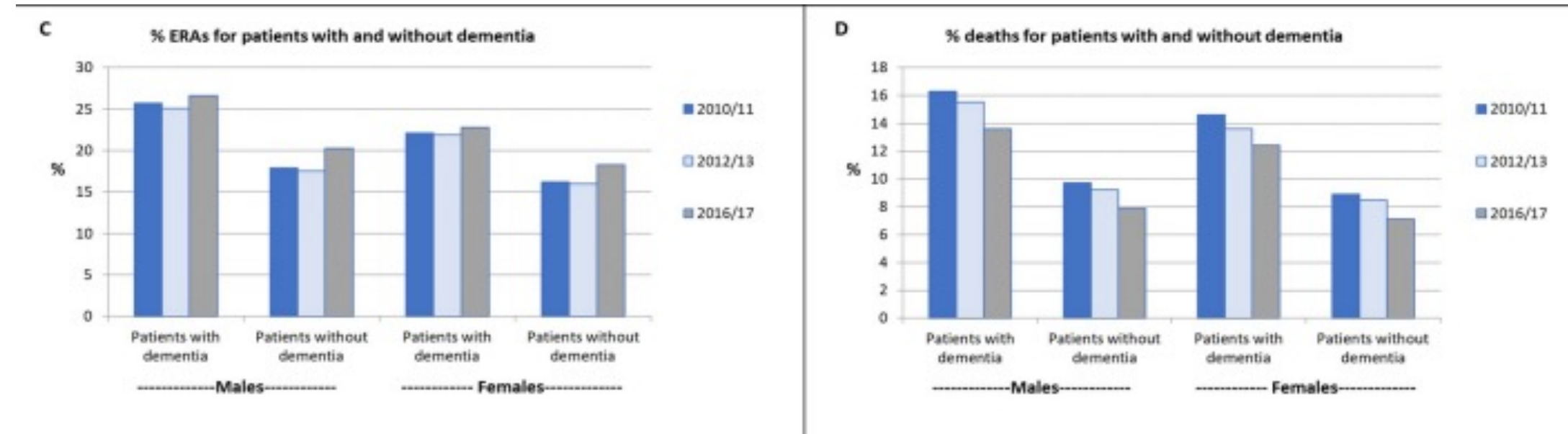
- Male PwD experienced spells 50% to 55% longer on average than male PwoD in all Fys
- Mean spells for female PwD were 36% to 37% longer in 2010 and 2012, but 43% longer in 2016

PLOS ONE

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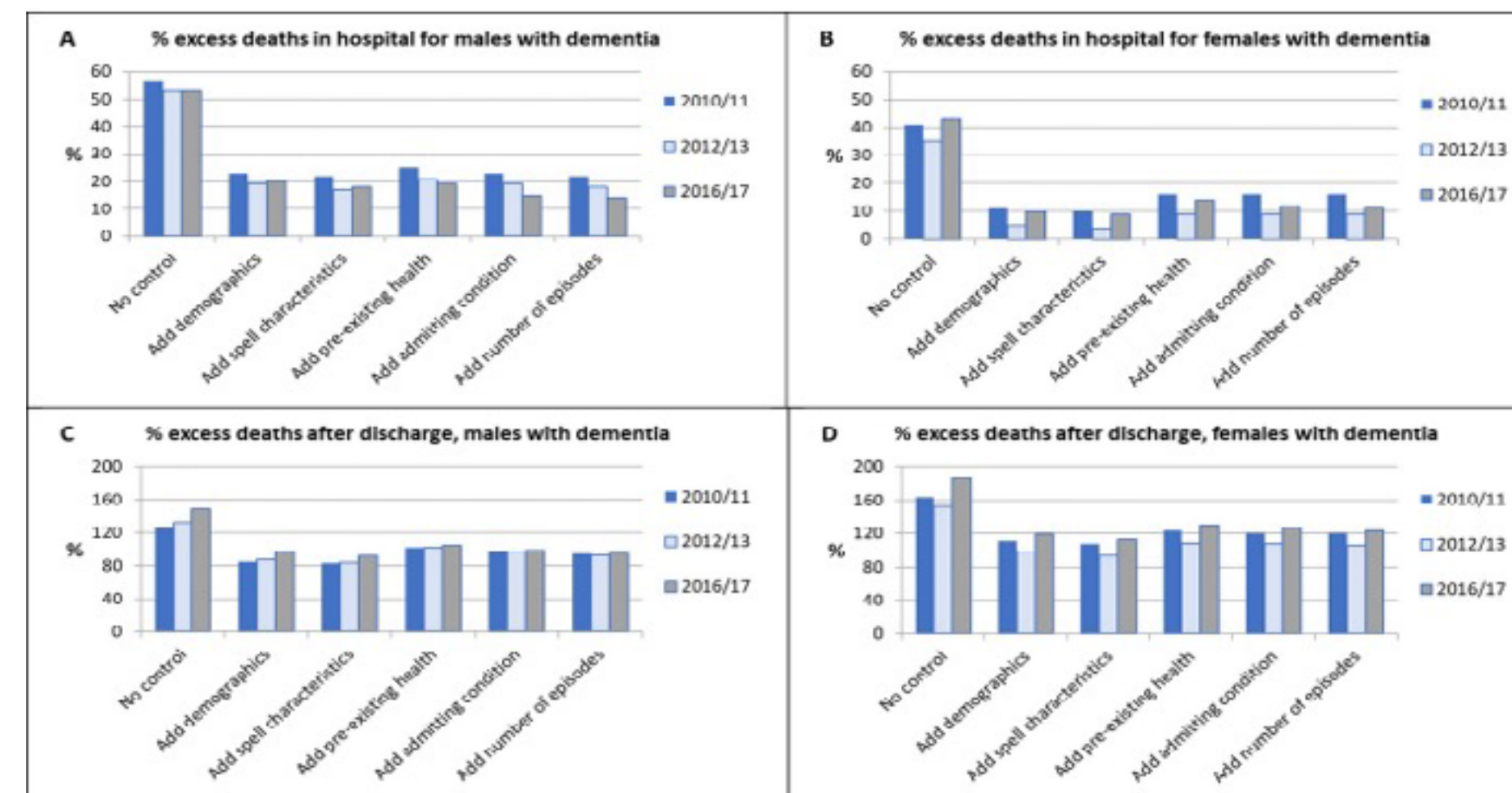
### Hospital outcomes for patients with dementia



**PwD of both sexes experienced longer Long of Stay and higher rates of re-admission(ERAs) and mortality across the six year period**

**Hospital outcomes for patients with dementia**

D. Reeves et al. PLOS ONE 2023



**Amongst person discharged, excess rates of deaths for PwD were much higher, at 94% and 123% for males and females respectively after full covariate adjustment**

**Implications for policy and practice...**

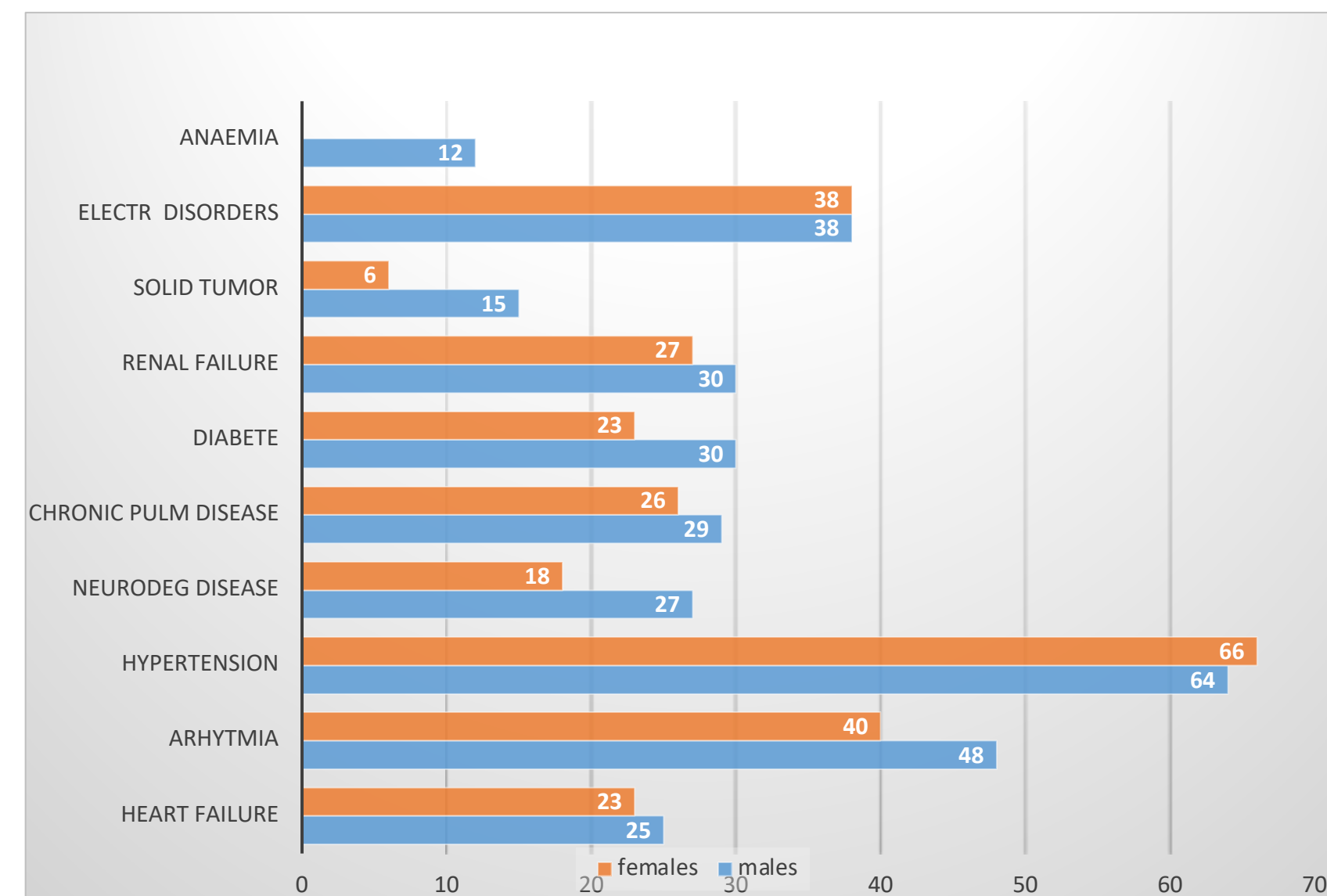
- ❖ **The much higher % of post-discharge mortality amongst PwD may reflect individuals in the terminal stages of dementia being discharged to die at home once their terminal condition becomes apparent;**
- ❖ **Ensuring that hospital staff training includes recognition of the terminal phase of dementia and end-of-life care could help facilitate this;**
- ❖ **Another contributing factor might be a negative impact of dementia on recovery post-discharge, for example due to reduced ability to self-care, implying a need for greater post-discharge support from community services.**



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David Reeves<sup>1,2,3</sup>, Fiona Holland<sup>1,2</sup>, Hazel Morley<sup>1</sup>, Mark Mann<sup>1,2</sup>, Feroz Ahmed<sup>1</sup>, Linda Davies<sup>1</sup>, John Keedy<sup>1,2</sup>, Jacoma Laro<sup>1</sup>, Siobhan Kelly<sup>1</sup>

### Pre-existing Health Conditions



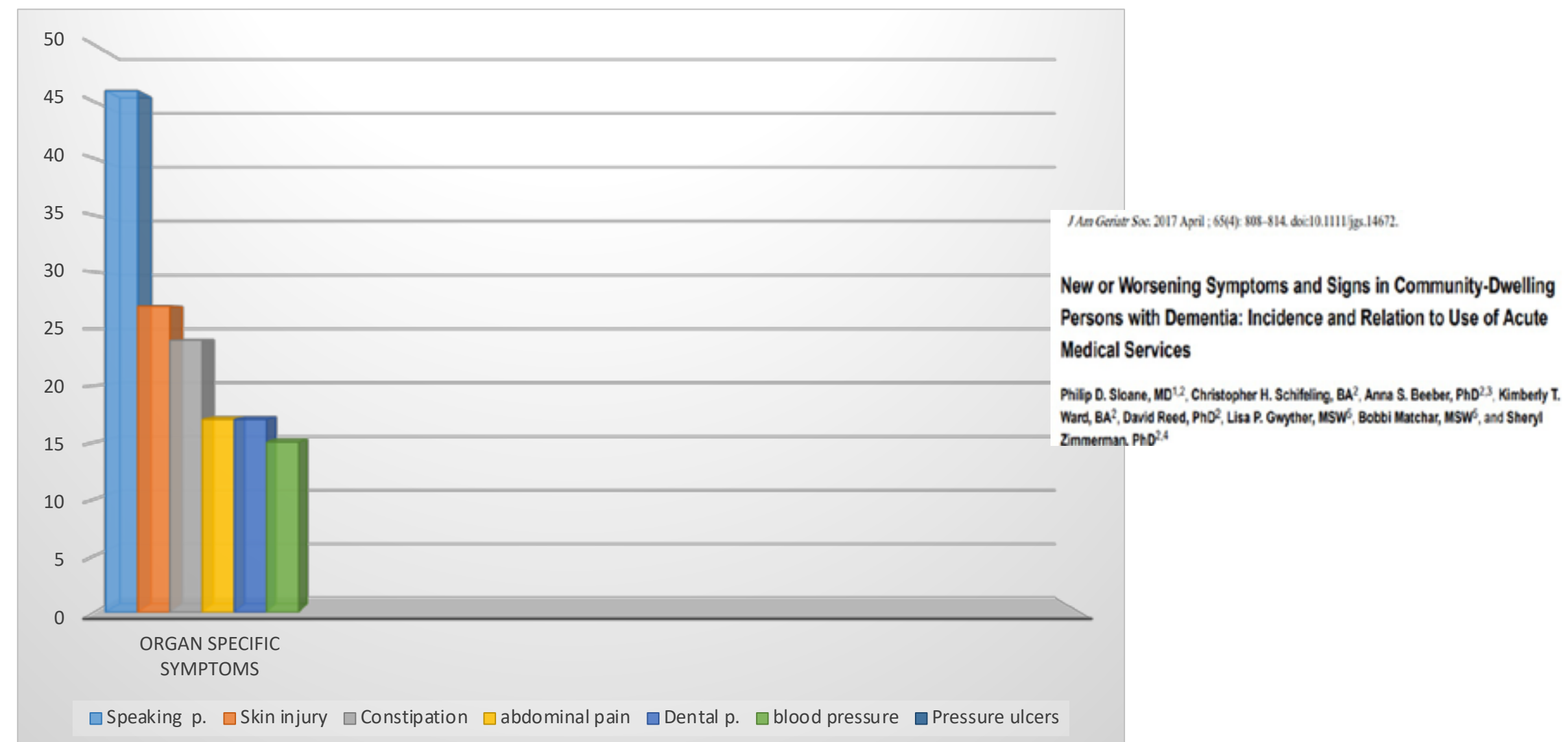
| Characteristics of the Person with Dementia     | N (%) or Mean (range) |
|---|-----------------------|
| Age, mean (SD)                                  | 78 (42-99)            |
| Gender, female                                  | 85 (63%)              |
| Length of time since diagnosis:                 |                       |
| < 3 years                                       | 57 (42%)              |
| 3 - 4 years                                     | 32 (24%)              |
| ≥5 years  | 46 (34%)              |
| Cognitive impairment (CPS): <sup>a</sup>        |                       |
| mild  | 10 (7%)               |
| moderate  | 82 (60%)              |
| severe  | 44 (33%)              |
| Physical health as rated by caregiver:          |                       |
| very good or excellent                          | 49 (36%)              |
| good  | 41 (30%)              |
| poor or fair                                    | 46 (34%)              |
| Needs hands on assistance/total assistance for: |                       |
| Bathing   | 71 (52%)              |
| Dressing  | 72 (53%)              |
| Toileting                                       | 49 (36%)              |
| Transferring                                    | 45 (33%)              |
| Continence                                      | 61 (45%)              |
| Eating  | 23 (17%)              |
| Medication administration                       | 126 (93%)             |

*J Am Geriatr Soc.* 2017 April ; 65(4): 808-814. doi:10.1111/jgs.14672.

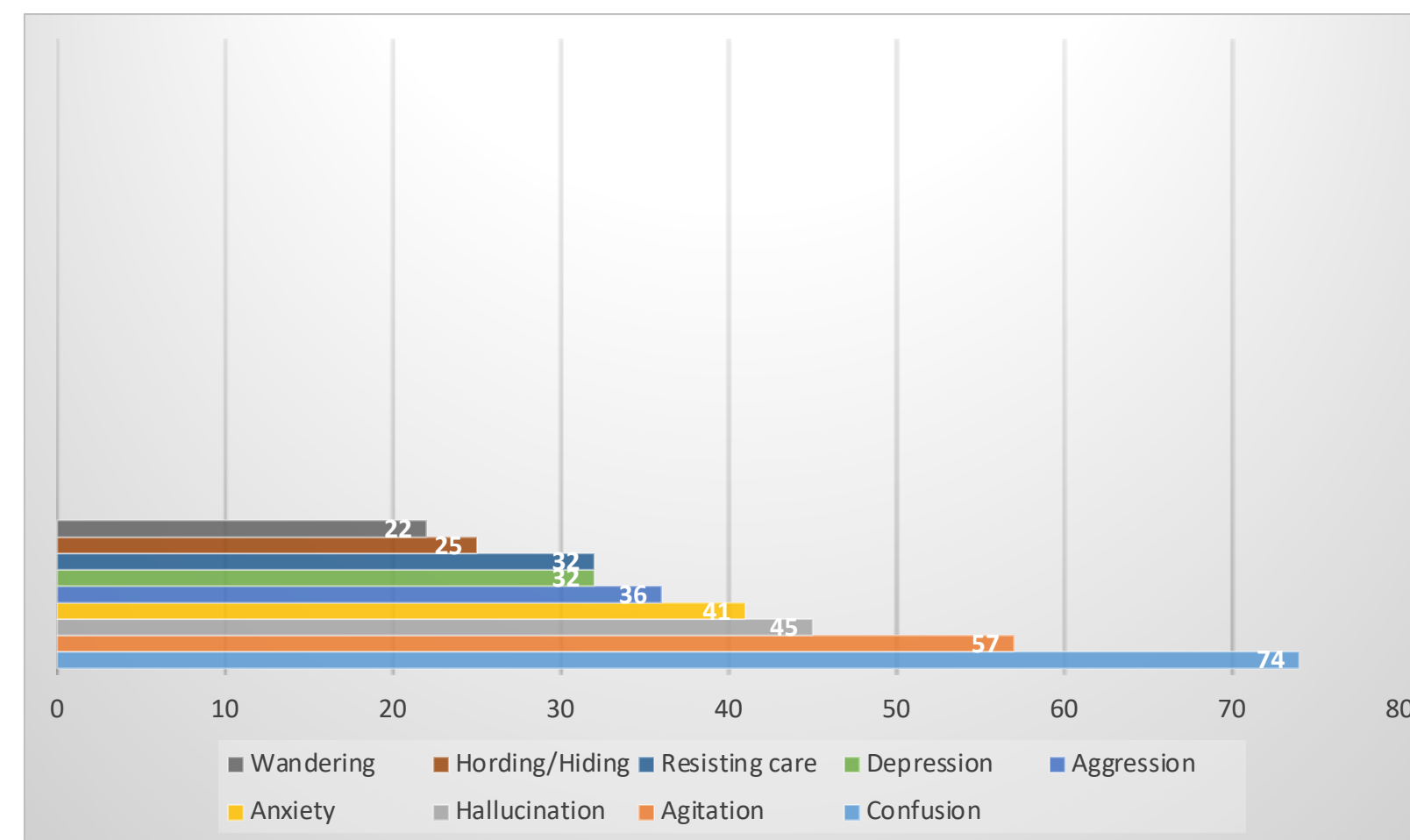
**New or Worsening Symptoms and Signs in Community-Dwelling Persons with Dementia: Incidence and Relation to Use of Acute Medical Services**

Philip D. Sloane, MD<sup>1,2</sup>, Christopher H. Schifeling, BA<sup>2</sup>, Anna S. Beeber, PhD<sup>2,3</sup>, Kimberly T. Ward, BA<sup>2</sup>, David Reed, PhD<sup>2</sup>, Lisa P. Gwyther, MSW<sup>5</sup>, Bobbi Matchar, MSW<sup>5</sup>, and Sheryl Zimmerman, PhD<sup>2,4</sup>

### Organ-Specific Symptoms/Signs



### Behavioural Symptoms

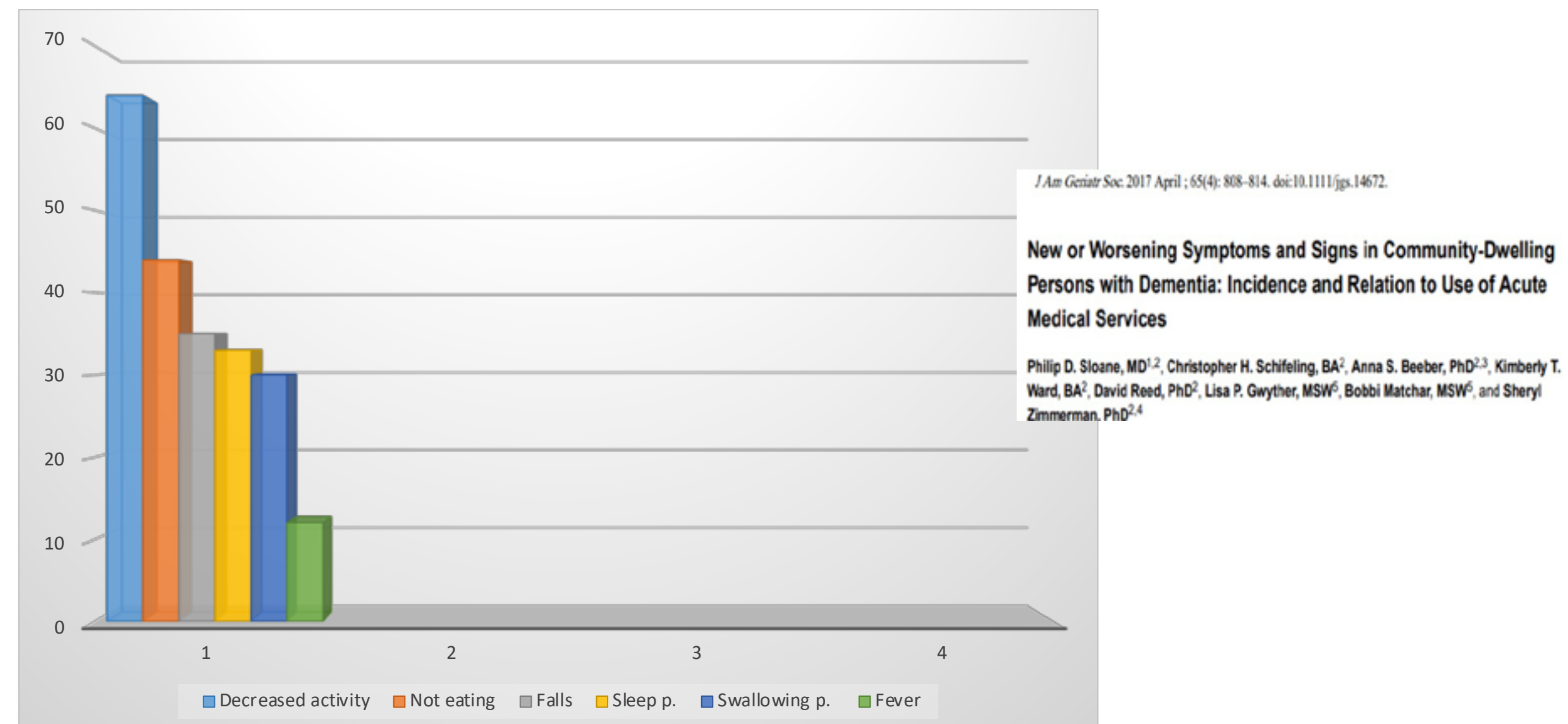


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#### New or Worsening Symptoms and Signs in Community-Dwelling Persons with Dementia: Incidence and Relation to Use of Acute Medical Services

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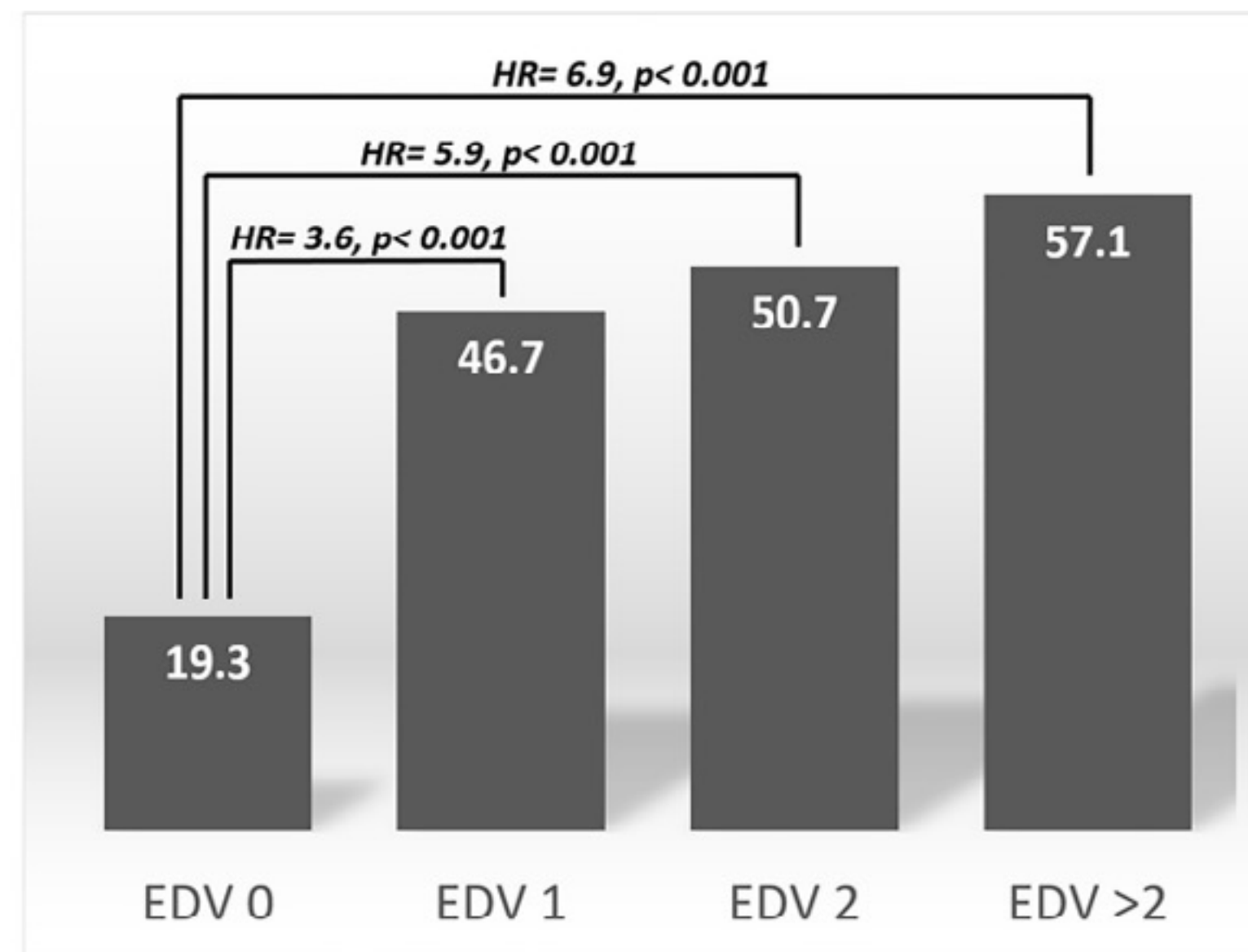
### Non specific Symptoms/Signs



Emergency visits highly predicts conversion to dementia

Percentage frequency  
of conversion according  
to emergency  
department visits  
(EDV).

512 participants  
339 (66.2%) non-converters  
173 (33.8%) converters



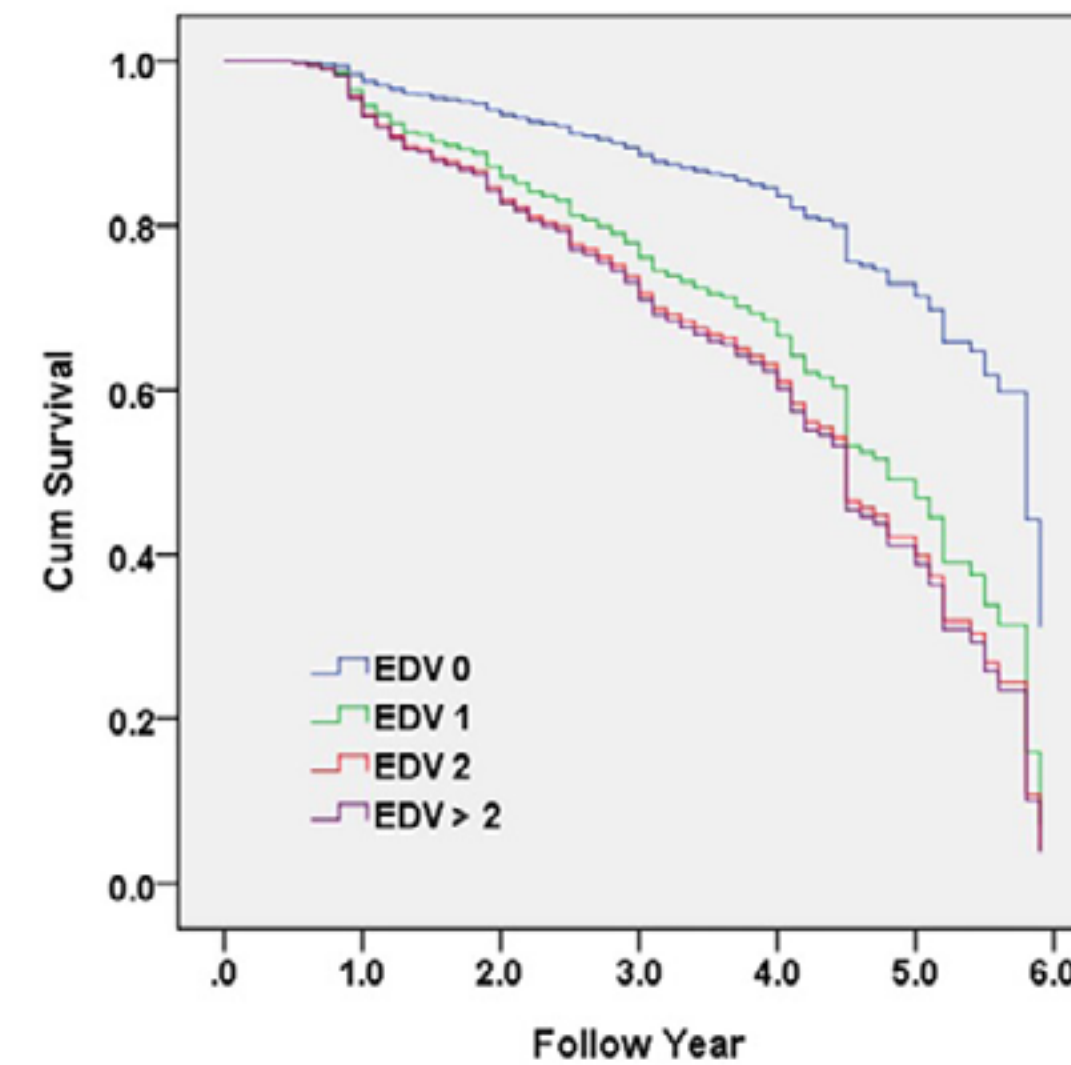
C.M. Chung1PLOS ONE, June 24, 2022

PLOS ONE

RESEARCH ARTICLE

Emergency department visits among people with predementia highly predicts conversion to dementia

Chia-Min Chung<sup>1</sup>, Po-Chi Chan<sup>2</sup>, Cheng-Yu Wei<sup>3</sup>, Guang-Wei Hung<sup>4</sup>, Ray-Chang Tzeng<sup>5</sup>, Pai-Yi Chiu<sup>2,4\*</sup>



People who need to visit the ER may have more precipitating risk factors or comorbidities, leading to a faster decline in mental function

## **The convergence of stroke and dementia**

Vladimir Hachinski, Arq Neuropsiquiatr. 2018

Compared with cognitively normal subjects:

- **the adjusted risk for incident stroke was 1.3 (95% confidence interval [CI], 0.9 to 1.9) in patients with Cognitive Impairment (No Dementia) and 2.3 (95% CI, 1.7 to 3.2) in patients with dementia.**

Over the age of 65 years:

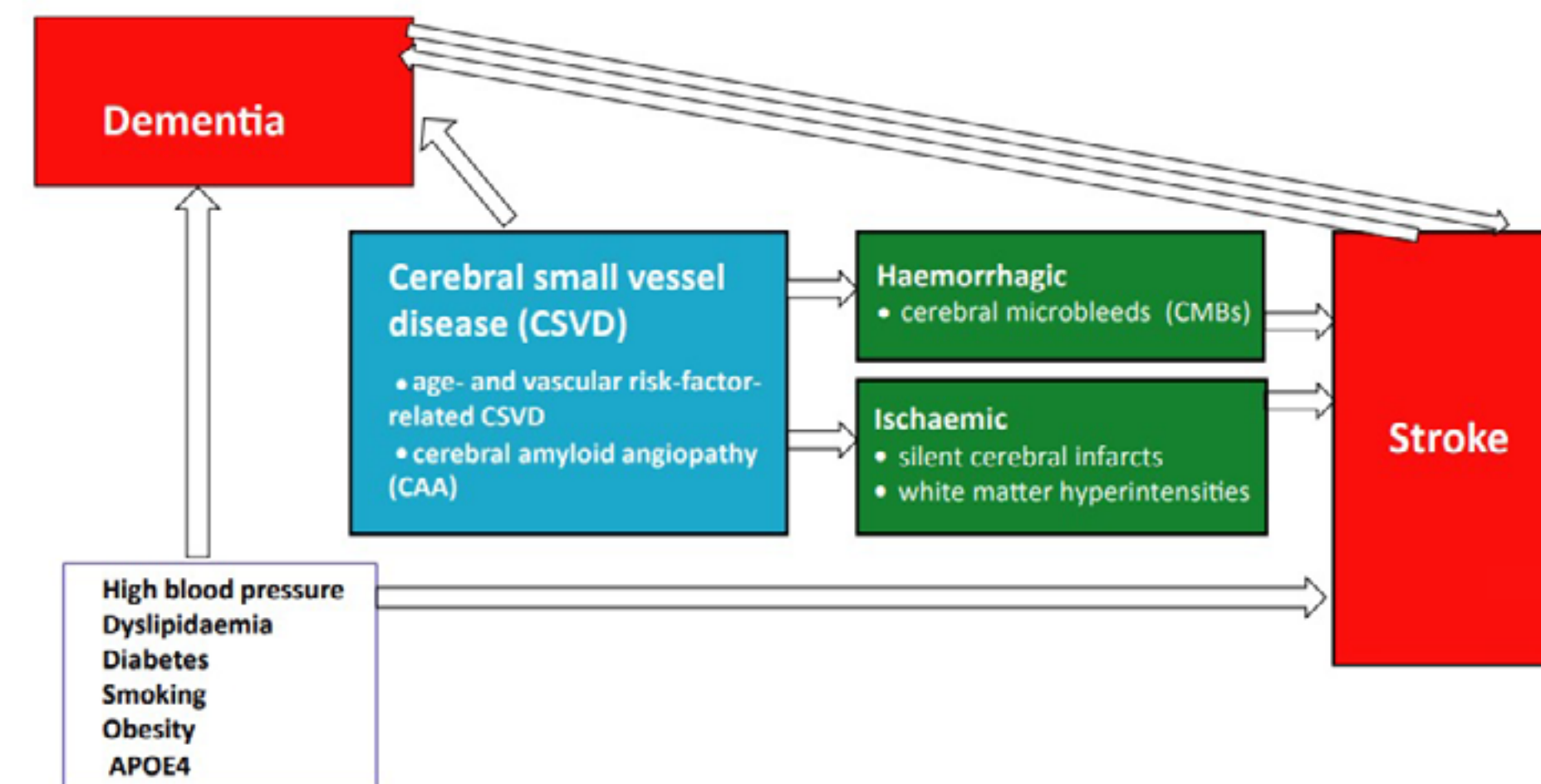
- **64% of individuals suffering a stroke will have some cognitive impairment**
- **among individuals who have cognitive impairment 1/4 of them have suffered a stroke**

Stroke is more common as dementia advances;

compared to dementia-free subjects, stroke was almost 3 times more likely in those with mild dementia, rising to 7 times more likely in those with severe dementia



The association between stroke and dementia: underlying mechanisms



Journal of Internal Medicine, 2017

### Management of acute ischaemic stroke in patients with dementia

- ❖ Thrombolysis is approved within 4.5 h after the onset of stroke symptoms in patients of any age, although the AHA/ASA recommends stricter inclusion criteria for patients in the 3- to 4.5-h time window, excluding patients >80 years;
- ❖ EMA does not recommend the use of tPA in patients over 80 years of age, although the use is accepted in the European stroke guidelines;
- ❖ Safety and Efficacy of Thrombolysis are not established in ptz with Dementia; Dementia is not mentioned in the AHA/ASA or FDA exclusion criteria.
- ❖ The most recent AHA/ASA review on criteria for IV tPA use states that patients with pre-existing dementia may benefit from IV alteplase,

A. Subic et al. e Journal of Internal Medicine 2017

Stroke

**AHA SCIENTIFIC STATEMENTS**

Endovascular Treatment and Thrombolysis for Acute Ischemic Stroke in Patients With Premorbid Disability or Dementia: A Scientific Statement From the American Heart Association/American Stroke Association

The American Academy of Neurology affirms the value of this statement as an educational tool for neurologists.  
The American Association of Neurological Surgeons/Congress of Neurological Surgeons Cerebrovascular Section affirms the educational benefit of this document.  
Endorsed by the Society of Neurointerventional Surgery

- ❖ The only major EVT trial that permitted the enrollment of patients with prestroke disability was MR CLEAN (Multicenter Randomized Clinical Trial of Endovascular Treatment for Acute Ischemic Stroke in the Netherlands), which included 45 patients with a prestroke mRS score  $\geq 2$  (but these patients were not analyzed separately) ;
- ❖ Poor data comparing treated patients with prestroke disability/dementia with untreated patients (versus patients without prestroke disability/dementia);
- ✓ NO consistent evidence to support that prestroke dementia/disability may be associated with increased risk of symptomatic intracerebral hemorrhage associated with reperfusion therapies;
- ✓ NO convincing evidence for a loss of treatment benefit with reperfusion therapies in these populations.

### Theoretical framework for the extrapolation of stroke interventions to patients with dementia

Interventions for which there is reason to believe that effects might be different in patients with dementia

**Possible greater risk of lower compliance/collaboration:**

Accuracy of medical history and time of symptom onset.

Collaboration during medical procedures: quality of neuroimaging, reliability of neurological examination.

Compliance with acute treatment and care

Compliance with secondary prevention measures such as lifestyle interventions, medications.

Warfarin control.

Compliance with and effectiveness of rehabilitation.

Follow-up after discharge.

**Possible futility of interventions:**

Dementia in severe/palliative stage.

Interventions for which there is reason to believe that risks might be different in patients with dementia

**Possible greater risk of ICH:**

Thrombolysis

Thrombectomy

Anticoagulation for atrial fibrillation

**Possible greater risk of delirium:**

General hospitalization



Stroke unit

**Possible greater risk of falls:**

Thrombolysis

Anticoagulation for atrial fibrillation

## BMJ Open How do emergency department staff respond to behaviour that challenges displayed by people living with dementia? A mixed-methods study

Laura Goodwin <sup>1</sup>, Cathy Liddiard,<sup>1</sup> Sera Manning,<sup>1</sup> Jonathan Richard Bengner,<sup>1</sup> Edward Carlton,<sup>2</sup> Richard Cheston,<sup>1</sup> Rebecca Hoskins,<sup>3</sup> Hazel Taylor,<sup>4</sup> Sarah Voss <sup>1</sup>

### Interview participant characteristics

| Characteristic                               | No (%) of respondents |
|--|-----------------------|
| Role   |                       |
| Doctor                                       | 4 (31)                |
| Nurse  | 8 (62)                |
| Other  | 1 (7)                 |
| Gender                                       |                       |
| Female                                       | 10 (77)               |
| Male   | 3 (23)                |
| Approximate experience working in ED (years) |                       |
| ≤3   | 4 (31)                |
| 4-6  | 5 (39)                |
| 7-9  | 2 (15)                |
| 10+  | 2 (15)                |

ED, emergency department.



## The 'perfect storm' of the Emergency Department

The most common types of behaviour:

- ✓ 'confusion' (45/46; 98%)
- ✓ 'wandering' (43/46; 94%)
- ✓ 'agitation' (43/46; 94%)
- ✓ 'verbal aggression' (42/46; 91%)

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*“The most frequent experience that happens with a patient with dementia is that they come into the emergency department and they wander, and unfortunately we don't have a dedicated member of staff to stay with them...you feel that they are in danger”.*

*“I don't think there's any areas that are 100% safe. I know you can't be with dementia but it's quite risky in ED. But then they're only supposed to be there for four hours and then go onto a ward. But that obviously doesn't always happen with, you know, lack of beds”*

**Behaviour that Challenges(BtC) is preventable with the right resources**

- ✓ One-to-one care from staff or a carer (18/44, 41%)
- ✓ Rapid assessment of the patient (10/44, 23%)
- ✓ The provision of a distraction (7/44, 16%)
- ✓ A quieter environment (7/44, 16%)

*“It’s the endless resources isn’t it, that we don’t have?  
If there were a team of Dementia Nurses in the hospital  
that you know, that could just come and sit with the  
patients, engage them, in looking at that magazine,  
listening to that music, you know, or whatever it is,  
if it’s just sitting and chatting with them”*

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**Estimated medical cost per person with dementia**

| Medical Care (Inpatient care)   | Estonia<br>n = 225 | Finland<br>n = 268 | France<br>n = 186 | Germany<br>n = 190 | Netherlands<br>n = 269 | Spain<br>n = 240 | Sweden<br>n = 207 | UK<br>n = 115  | All countries<br>n = 1700 |
|---|--------------------|--------------------|-------------------|--------------------|------------------------|------------------|-------------------|----------------|---------------------------|
| Estimated n of people with dementia with EDA episodes (estimated EDA episodes/year)       | 48 (56)            | 124 (164)          | 56 (68)           | 84 (108)           | 72 (144)               | 136 (200)        | 36 (108)          | 76 (96)        | 632 (944)                 |
| Cost (NH)   | 6.31               | 62.89              | 122.78            | 121.75             | 51.77                  | 52.51            | 35.77             | 127.96         | 67.30                     |
| Cost (HC)   | 20.87              | 183.41             | 68.30             | 105.96             | 135.17                 | 115.19           | 169.51            | 164.21         | 117.48                    |
| <b>Total cost of EDA</b>  | <b>15.69</b>       | <b>133.49</b>      | <b>78.55</b>      | <b>114.19</b>      | <b>102.93</b>          | <b>92.99</b>     | <b>119.76</b>     | <b>146.87</b>  | <b>98.41</b>              |
| Estimated n of people with dementia with HA episodes (estimated HA days/year)             | 72 (816)           | 148 (2656)         | 176 (1832)        | 140 (1072)         | 44 (204)               | 56 (1012)        | 56 (1308)         | 72 (1000)      | 764 (9900)                |
| Cost (NH)   | 215.86             | 1092.88            | 1326.99           | 1464.11            | 353.11                 | 397.94           | 2005.59           | 1229.82        | 978.89                    |
| Cost (HC)   | 459.23             | 5340.47            | 3632.84           | 2429.68            | 153.14                 | 1372.76          | 3028.60           | 1619.27        | 2280.48                   |
| <b>Total cost of HA</b>   | <b>372.70</b>      | <b>3581.21</b>     | <b>3198.94</b>    | <b>1926.57</b>     | <b>238.17</b>          | <b>1059.53</b>   | <b>2648.13</b>    | <b>1433.01</b> | <b>1785.87</b>            |
| Estimated n of people with dementia with hospital episodes (EDA episodes and HA episodes) | 120                | 272                | 232               | 224                | 116                    | 192              | 92                | 148            | 1396                      |
| Cost (NH)   | 222.17             | 1155.77            | 1449.77           | 1585.86            | 424.83                 | 540.84           | 2041.56           | 1357.78        | 1046.19                   |
| Cost (HC)   | 480.10             | 5523.87            | 3701.13           | 2535.65            | 288.31                 | 1487.96          | 3198.11           | 1783.48        | 2397.96                   |
| <b>Total cost of hospital episodes</b>  | <b>388.39</b>      | <b>3714.70</b>     | <b>3277.49</b>    | <b>2040.76</b>     | <b>341.09</b>          | <b>1152.52</b>   | <b>2767.89</b>    | <b>1579.89</b> | <b>1884.28</b>            |

The estimated medical cost per person with dementia/year related to EDA and HA was 1884.28 €, with 1046.19 € per person with dementia/year in Nursing Home group and 2397.96 € in Home Care group.

Afonso-Argilés et al. BMC Geriatrics 2020



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## Improvisation...

- ❖ < than 1/5 (4/23, 17%) of survey respondents had received dementia training that was specific to the ED context. None of the telephone interviewees reported having had any ED-specific dementia training
- ❖ a lack of ED-specific training and resources led to variation in the techniques used by staff to respond to and de-escalate BtC, which in turn led to ineffective management;
- ❖ staff were left to improvise with the resources they had, often attempting to intervene once behaviours had already escalated substantially

“Everyone uses their own sort of techniques. Noone’s really said you can or can’t do this, but you just have to improvise with what you’ve got and it’s difficult when you haven’t got a lot to help you”

*Key messages....*

- ❖ Admission to the emergency departments, is one of the events that people with dementia may experience throughout the course of the disease, irrespectively of whether they live at their own home or at NH;
- ❖ Multiple negative health outcomes have been associated with the admission to hospital people with dementia including high risk of delirium, fall-related injuries , nosocomial infections, and an elevated risk of mortality;
- ❖ A detailed description of the costs of hospital admission among people with dementia may be helpful for the planning of the provisions of care.

*Key messages....*

- ❖ **Medical costs associated with hospital admission were higher in the HC setting, due to the higher frequency of HA and EDA found among people with dementia living at home;**
- ❖ **The establishment of an individualized care plan for those people with dementia with polypharmacy in nursing homes, and those with involuntary weight loss, accidental falls, polypharmacy and higher caregiver burden in the home care setting, might help preventing unnecessary hospital admissions and saving associated costs;**
- ❖ **The care of patients with dementia raises medical, organizational and ethical issues;**
- ❖ **The organization of long-term-care is still a challenge but indispensable!!**



*W. UTERMOLHEN*

*corrisponding at  
rosa.capozzo@asl.ba.it*

### **Delitti in materia di violazione del diritto d'autore (Art. 25-novies, D.Lgs. n. 231/2001) [articolo aggiunto dalla L. n. 99/2009]**

- Messa a disposizione del pubblico, in un sistema di reti telematiche, mediante connessioni di qualsiasi genere, di un'opera dell'ingegno protetta, o di parte di essa (art. 171, legge n.633/1941 comma 1 lett. a) bis)
- Reati di cui al punto precedente commessi su opere altrui non destinate alla pubblicazione qualora ne risulti offeso l'onore o la reputazione (art. 171, legge n.633/1941 comma 3)
- Abusiva duplicazione, per trarne profitto, di programmi per elaboratore; importazione, distribuzione, vendita o detenzione a scopo commerciale o imprenditoriale o concessione in locazione di programmi contenuti in supporti non contrassegnati dalla SIAE; predisposizione di mezzi per rimuovere o eludere i dispositivi di protezione di programmi per elaboratori (art. 171-bis legge n.633/1941 comma 1)
- Riproduzione, trasferimento su altro supporto, distribuzione, comunicazione, presentazione o dimostrazione in pubblico, del contenuto di una banca dati; estrazione o reimpiego della banca dati; distribuzione, vendita o concessione in locazione di banche di dati (art. 171-bis legge n.633/1941 comma 2)
- Abusiva duplicazione, riproduzione, trasmissione o diffusione in pubblico con qualsiasi procedimento, in tutto o in parte, di opere dell'ingegno destinate al circuito televisivo, cinematografico, della vendita o del noleggio di dischi, nastri o supporti analoghi o ogni altro supporto contenente fonogrammi o videogrammi di opere musicali, cinematografiche o audiovisive assimilate o sequenze di immagini in movimento; opere letterarie, drammatiche, scientifiche o didattiche, musicali o drammatico musicali, multimediali, anche se inserite in opere collettive o composite o banche dati; riproduzione, duplicazione, trasmissione o diffusione abusiva, vendita o commercio, cessione a qualsiasi titolo o importazione abusiva di oltre cinquanta copie o esemplari di opere tutelate dal diritto d'autore e da diritti connessi; immissione in un sistema di reti telematiche, mediante connessioni di qualsiasi genere, di un'opera dell'ingegno protetta dal diritto d'autore, o parte di essa (art. 171-ter legge n.633/1941)
- Mancata comunicazione alla SIAE dei dati di identificazione dei supporti non soggetti al contrassegno o falsa dichiarazione (art. 171-septies legge n.633/1941)
- Fraudolenta produzione, vendita, importazione, promozione, installazione, modifica, utilizzo per uso pubblico e privato di apparati o parti di apparati atti alla decodificazione di trasmissioni audiovisive ad accesso condizionato effettuate via etere, via satellite, via cavo, in forma sia analogica sia digitale (art. 171-octies legge n.633/1941).

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