School of Medicine

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Medical Crises in Older People

Clinical Interventions Using Comprehensive Geriatric Assessment

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"a multi-dimensional, interdisciplinary, diagnostic process to determine the medical, psychological and functional capabilities of a frail older person in order to develop a co-ordinated and integrated plan for treatment and long term follow up"

Stuck et al Lancet 1994

Perspective

Comprehensive geriatric assessment – a guide for the non-specialist

T. J. Welsh*, A. L. Gordon and J. R. Gladman

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Issue

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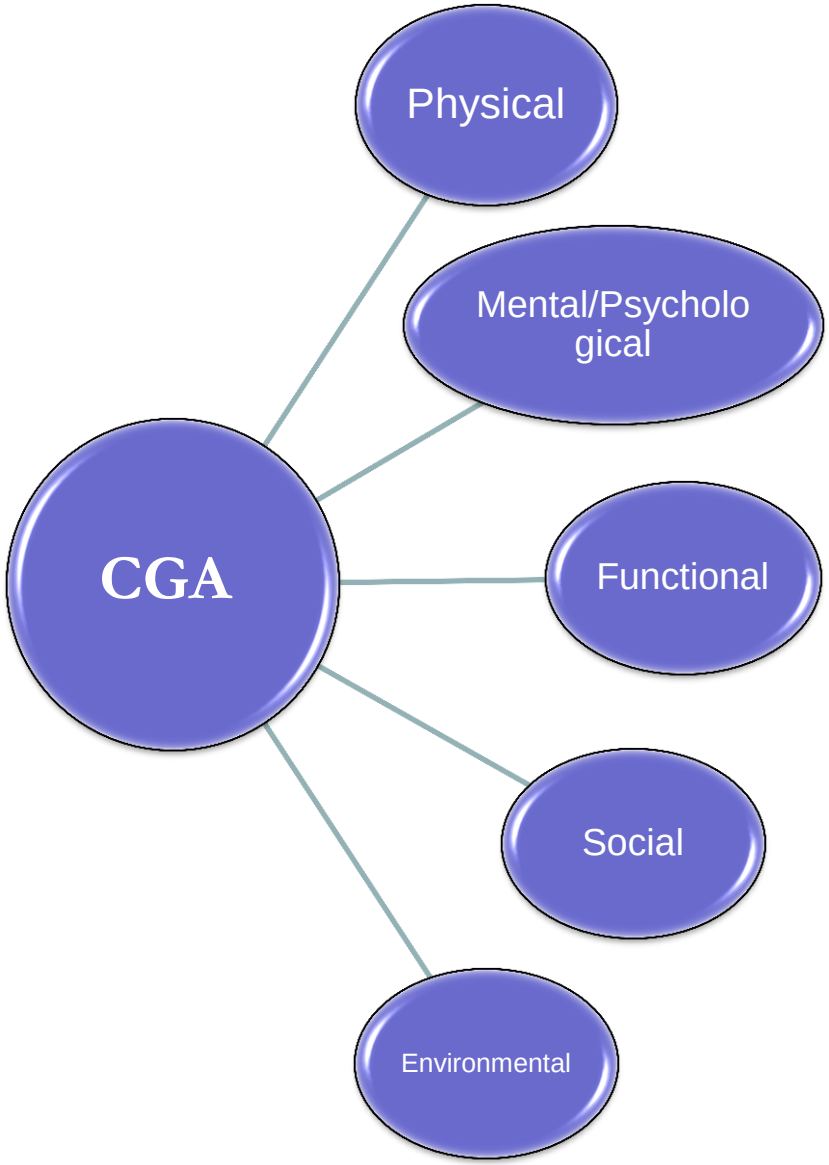
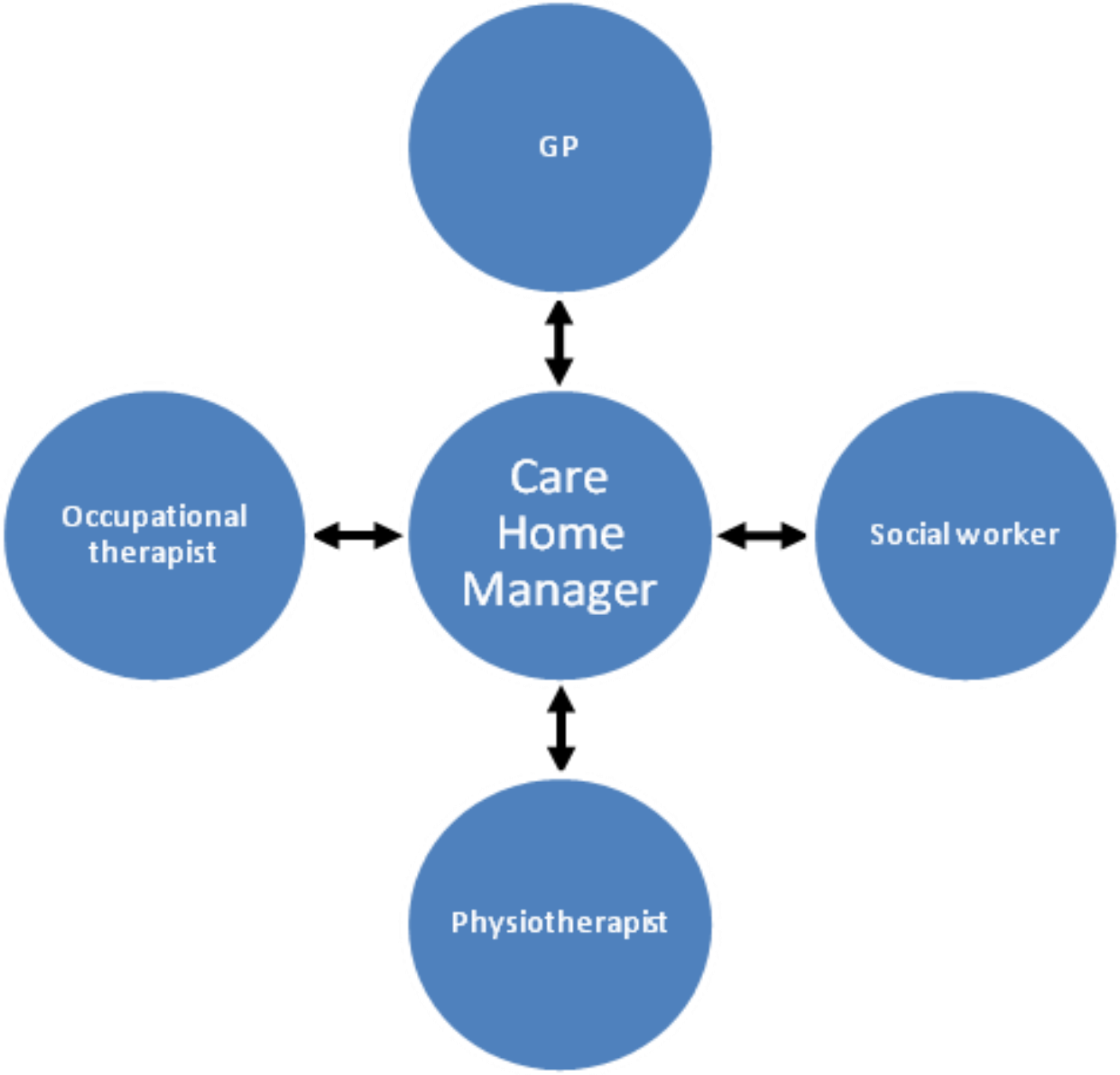

Physical
Mental/Psychological
CGA
Functional
Social
Environmental


Assessment
Stratified problem list
Bespoke Management Plan
Goals

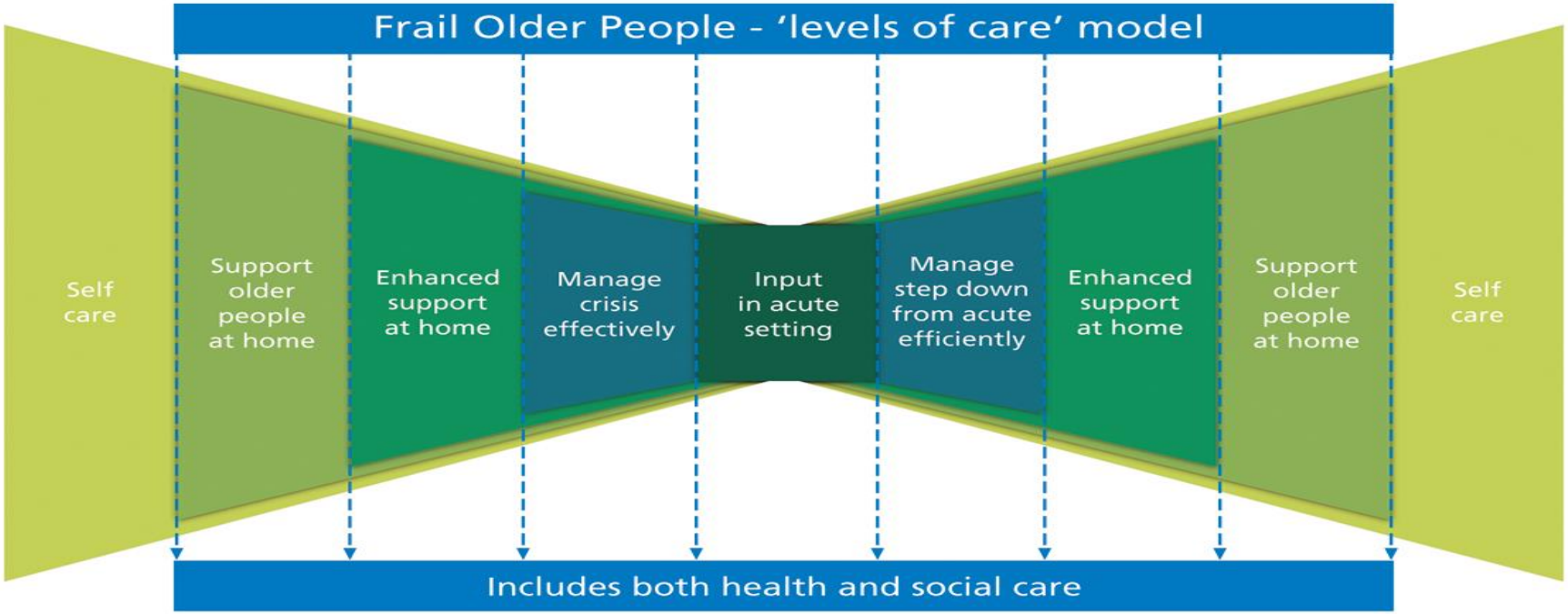

GP
Occupational therapist
Care Home Manager
Social worker
Physiotherapist

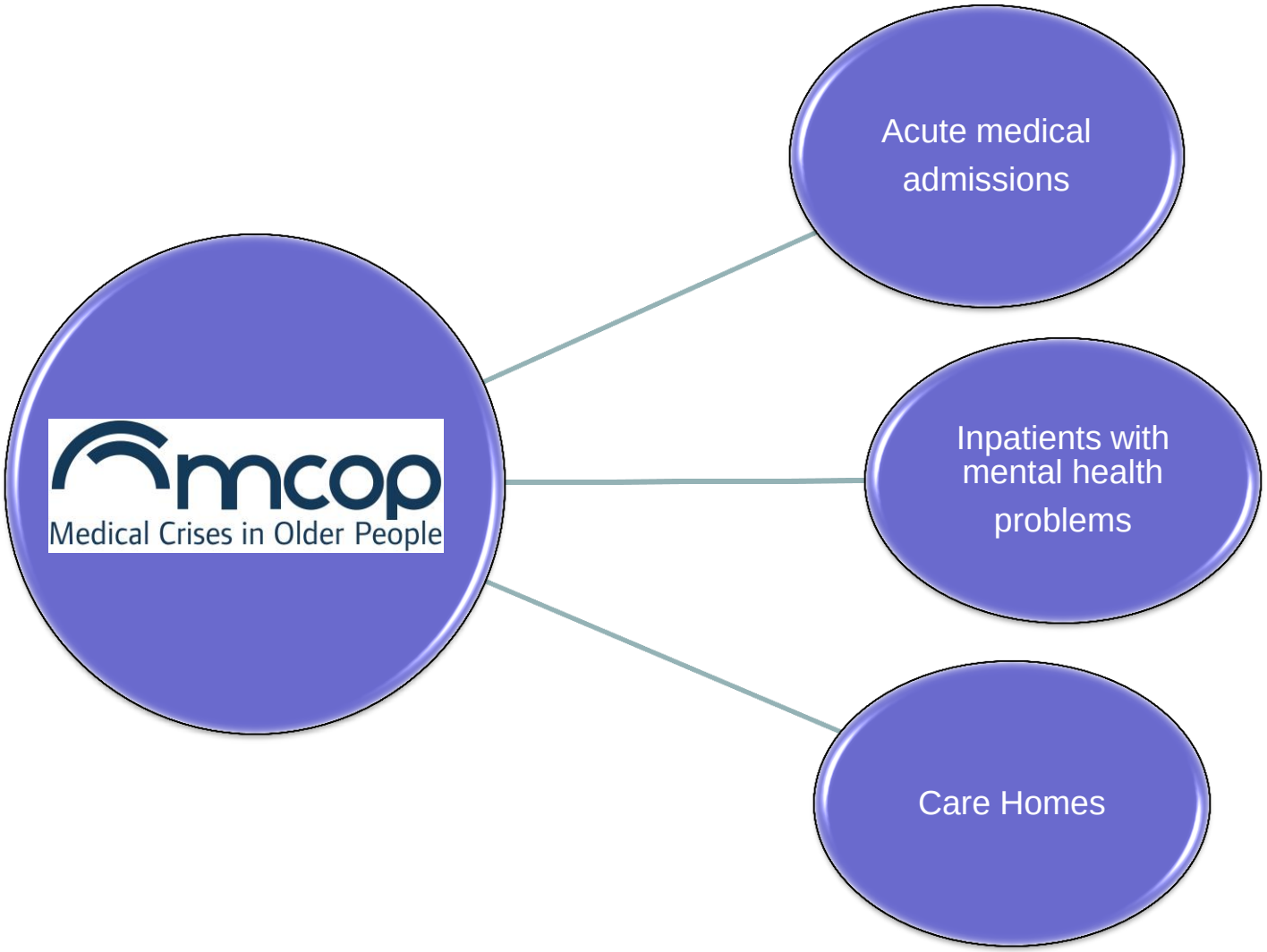
What is the evidence base for this concept?

Type	Mortality	Living at home	Readmission	Physical function	Cognitive function
Institutional	**0.78 (0.62-0.97)**	**1.19 (1.01-1.39)**	0.85 (0.70-1.03)	1.22 (0.84-1.78)	1.79 (0.73-1.46)
Non-institutional	0.91 (0.77-1.07)	**1.26 (1.10-1.44)**	0.89 (0.78-1.01)	0.99 (0.77-1.27)	1.03 (0.73-1.46)
Combined	**0.86 (0.75-0.98)**	**1.26 (1.10-1.44)**	**0.88 (0.79-0.98)**	1.06 (0.86-1.30)	**1.41 (1.12-1.77)**

Stuck AE, Siu AL, Wieland GD, Rubenstein LZ, Adams J: Comprehensive geriatric assessment: a meta-analysis of controlled trials. Lancet 1993, 342:1032–1036

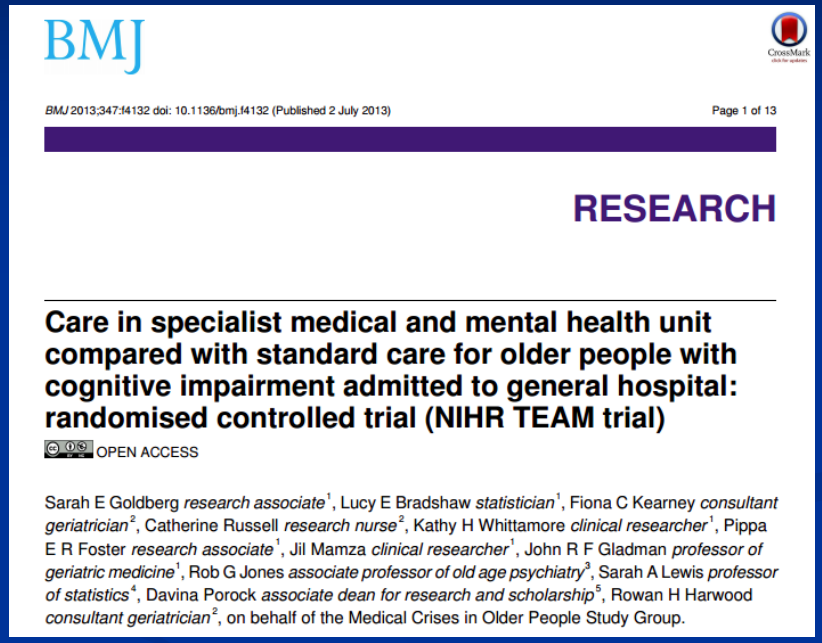
The research and practice dilemma




mcop
Medical Crises in Older People
Acute medical admissions
Inpatients with mental health problems
Care Homes

TEAM Study

- 2 hospitals
- Presenting to AMU
- >70 years old
- ISAR > 2/6
- Capacity +/- consultee



BMJ

BMJ 2013;347:f4132 doi: 10.1136/bmj.f4132 (Published 2 July 2013)

RESEARCH

Care in specialist medical and mental health unit compared with standard care for older people with cognitive impairment admitted to general hospital: randomised controlled trial (NIHR TEAM trial)

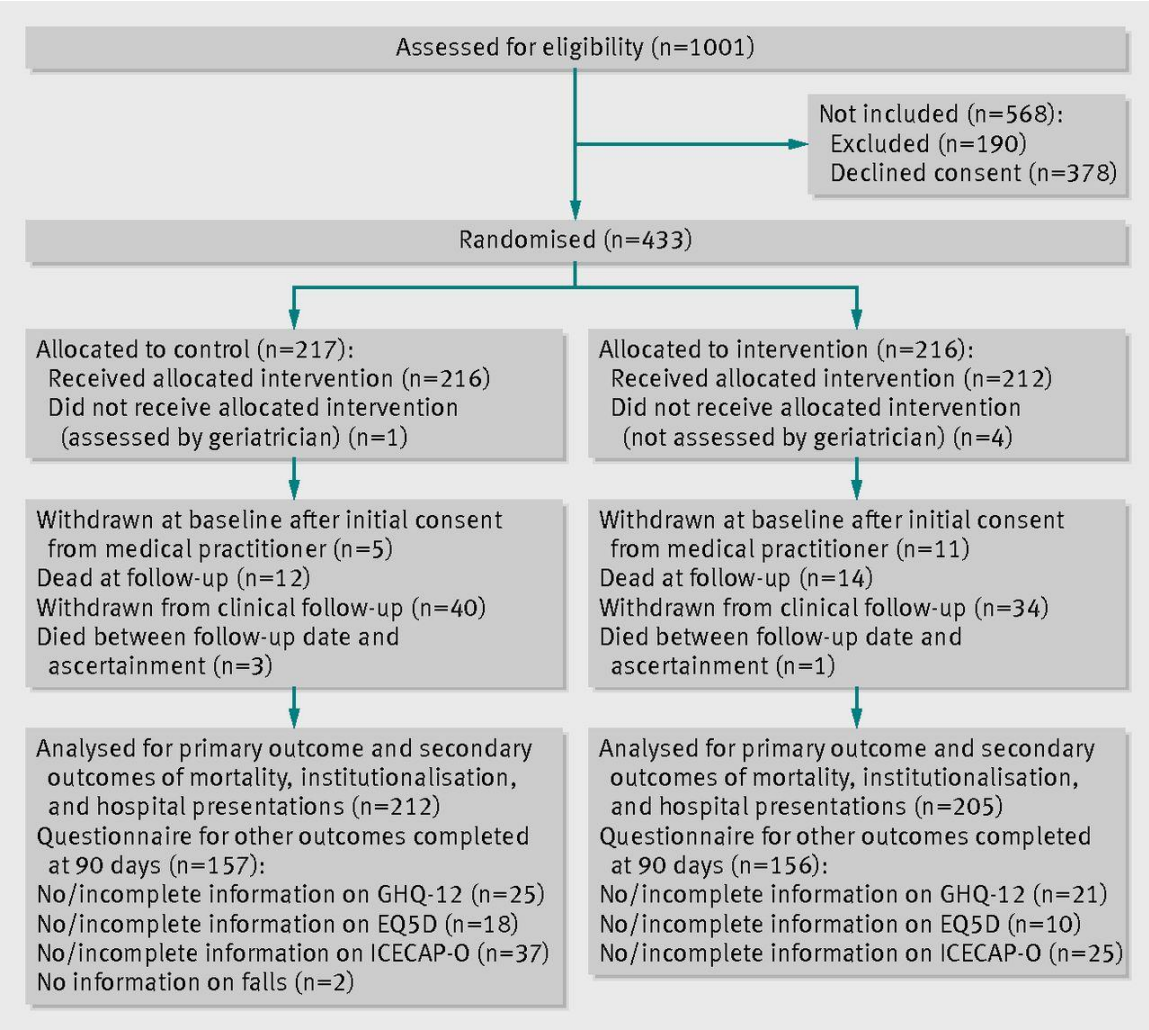
OPEN ACCESS

Sarah E Goldberg *research associate*[1], Lucy E Bradshaw *statistician*[1], Fiona C Kearney *consultant geriatrician*[2], Catherine Russell *research nurse*[2], Kathy H Whittamore *clinical researcher*[1], Pippa E R Foster *research associate*[1], Jil Mamza *clinical researcher*[1], John R F Gladman *professor of geriatric medicine*[1], Rob G Jones *associate professor of old age psychiatry*[3], Sarah A Lewis *professor of statistics*[4], Davina Porock *associate dean for research and scholarship*[5], Rowan H Harwood *consultant geriatrician*[2], on behalf of the Medical Crises in Older People Study Group.

- Permuted block randomization to account for centre
- Single blind

Study centre:			
Nottingham	136 (63)	136 (63)	272 (63)
Leicester	81 (37)	80 (37)	161 (37)
Mean (SD) age	82.8 (7.0)	83.1 (6.7)	83.0 (6.8)
Female sex	141 (65)	133 (62)	274 (63)
White ethnicity	206 (95)	211 (98)	417 (96)
Residence at recruitment:			
Alone	90 (41)	85 (39)	175 (40)
With someone	67 (31)	75 (35)	142 (33)
Care home	60 (28)	56 (26)	116 (27)
Mental capacity to consent at recruitment	131 (60)	133 (62)	264 (61)
Median (IQR) ISAR score	3 (3-4)	3 (2-4)	3 (3-4)
Median (IQR) Charlson comorbidity score	1 (0-2)	1 (1-2)	1 (1-2)
Median (IQR) No of drugs	7 (5-9)	7 (5-9)	7 (5-9)
Presented with fall	65 (30)	68 (31)	133 (31)
Presented with reduced mobility	35 (16)	15 (7)	50 (12)
Presented with cognitive impairment/confusion	26 (12)	42 (19)	68 (16)
Prior dementia diagnosis	59 (27)	56 (26)	115 (27)
Cognitive function—median (IQR) MMSE	23 (12-26)	23 (11.5-27)	23 (12-26)
Psychological wellbeing—median (IQR) GHQ12	11.5 (8-15); (n=166)	12 (8-16); (n=162)	12 (8-15); (n=328)

Fig 2 Flow chart of study.



Judi Edmans et al. BMJ 2013;347:bmj.f5874

Interventions

Admission to hospital 13 (6)

Change to drug treatment 120 (60)

Advance care planning 42 (21)

Liaison with other medical practitioners 155 (77)

Health advice to patient 66 (33)

Interventions

Referral for:

- Specialist nursing services 28 (14)
- Rehabilitation services 58 (29)
- Social care 9 (4)
- Other community services 4 (2)

Interventions

Request for:

- Further medical investigation 57 (28)
- Further medical treatment 7 (3)
- Additional medical follow-up 52 (26)

Table 3 Outcomes at 90 days

Outcome	Control (n=217)	Intervention (n=216)	Intervention effect adjusted for centre
No (%) included in analysis at 90 days	212 (98)	205 (95)	—
Mean (SD) days at home	80.2 (21.5)	79.7 (21.3)	−0.5 (−4.6 to 3.6); P=0.31
No (%) died (HR)	12 (6)	14 (7)	1.22 (0.57 to 2.65); P=0.61
No (%) institutionalisation (OR)	4/156 (3)	5/153 (3)	1.31 (0.34 to 4.97); P=0.69
Mean (SD) hospital presentations (RR)	0.94 (1.58)	1.20 (2.14)	1.32 (1.01 to 1.74); P=0.05
No (%) Barthel ADL ≥17 (OR)	67/157 (43)	75/156 (48)	1.25 (0.72 to 2.17); P=0.42
Geometric mean GHQ12 (ANCOVA)	12.4 (n=132)	12.0 (n=135)	0.96 (0.87 to 1.06); P=0.44
Mean (SD) EQ-5D (ANCOVA)	0.45 (0.32); (n=139)	0.45 (0.32); (n=146)	−0.01 (−0.08 to 0.06); P=0.80
No (%) ICECAP-O ≥0.81 (OR)	54/120 (45)	72/131 (55)	1.38 (0.80 to 2.40); P=0.25
No (%) self reported fall during follow-up (OR)	66/155 (43)	64/156 (41)	0.94 (0.60 to 1.48); P=0.79

ADL=activities of daily living; ANCOVA=analysis of covariance; GHQ12=General Health Questionnaire 12; HR=hazard ratio; ICECAP-O= ICEpop CAPability measure for older people; OR=odds ratio; RR=rate ratio.

TEAM Study

- 1 hospital
- Presenting to AMU
- >65 years old
- "Confused"
- No pressing need for ICU

BMJ

BMJ 2013;347:f4132 doi: 10.1136/bmj.f4132 (Published 2 July 2013)

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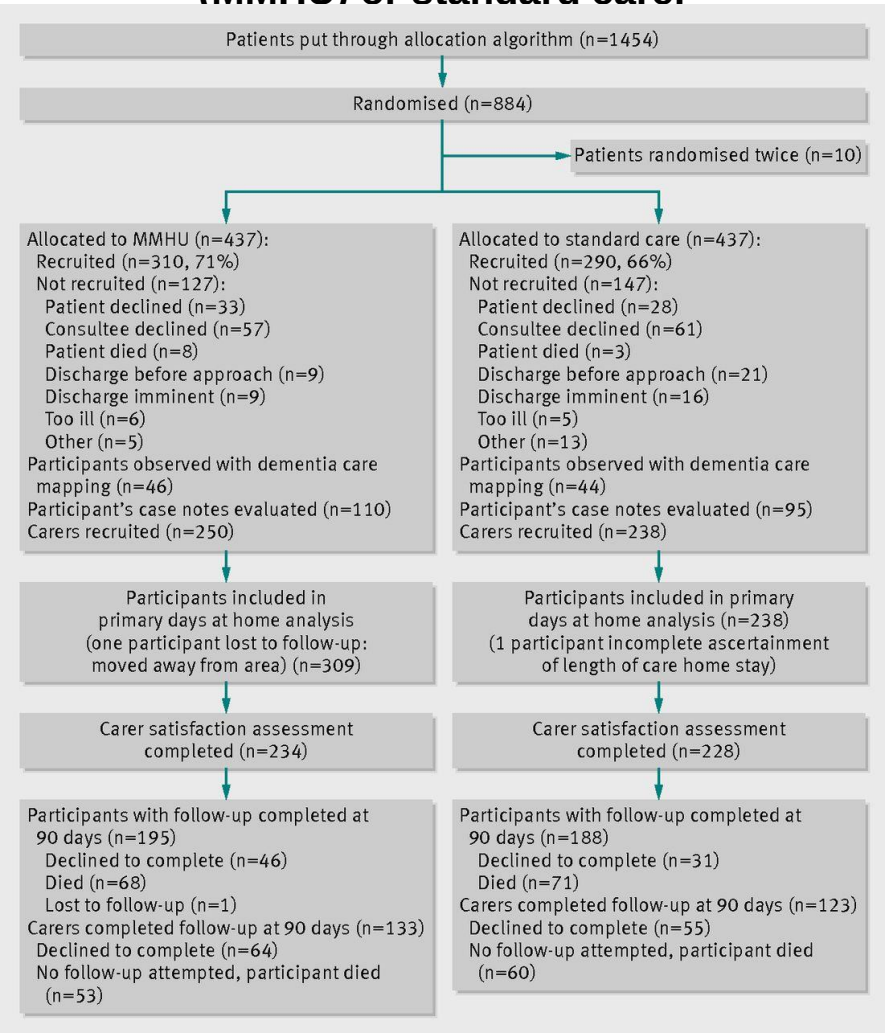
- Permuted block randomization to account for previous residence in care home
- Single blind

Table 1 Baseline characteristics in older patients with cognitive impairment admitted to hospital according to randomisation to specialist medical and mental health unit (MMHU) or standard care. Figures are numbers (percentage) of patients unless stated otherwise

Measure (with total score, if applicable)	MMHU (n=310)	Standard care (n=290)	P value
Proportion of randomly allocated patients recruited	71%	66%	—
Median (IQR) age (years)	85 (80-88)	85 (80-89)	0.80
Female	170 (55)	142 (49)	0.15
Care home resident	88 (28)	60 (21)	0.03
Living alone	119 (38)	133 (46)	0.06
Median (IQR) cognition/30 (MMSE)	14 (6-20)	13 (6-19)	0.10
Median (IQR) delirium severity/46 (DRS score)	19 (11-27)	20 (14-27)	0.03
Categorical delirium (DRS >17.75)	164 (53)	181 (62)	0.02
Median (IQR) behavioural and psychological symptoms/144 (NPI)	26 (13-42)	25 (14-40)	0.99
Delusions	144 (59)	134 (57)	0.75
Hallucinations	91 (37)	94 (40)	0.50
Agitation	169 (69)	151 (64)	0.34
Depression	147 (60)	130 (55)	0.18

Fig 1 Flow of patients and carers in study of care of patients with cognitive impairment admitted to hospital according to randomisation to specialist medical and mental health unit (MMHU) or standard care.



Sarah E Goldberg et al. BMJ 2013;347:bmj.f4132

Interventions

	P value
Formal cognitive testing*	<0.001
Presence/absence delirium recorded	0.2
Collateral cognitive history	<0.001
Collateral functional history	<0.001
Occupational therapy assessment	<0.001
Speech and language therapy assessment	<0.001
Psychiatrist assessment	<0.001
Personal profile completed†	<0.001
Dementia care plan	<0.001
Clear medical diagnosis	0.003
Evidence of drug review	<0.001
Antipsychotic drug use	0.2
One-to-one care used	0.2
Progress discussed with family	0.03
Community mental health referral	0.04
Intermediate care rehabilitation	0.07

Table 3 Outcomes at 90 days

Outcome	Control (n=217)	Intervention (n=216)	Intervention effect adjusted for centre
No (%) included in analysis at 90 days	212 (98)	205 (95)	—
Mean (SD) days at home	80.2 (21.5)	79.7 (21.3)	−0.5 (−4.6 to 3.6); P=0.31
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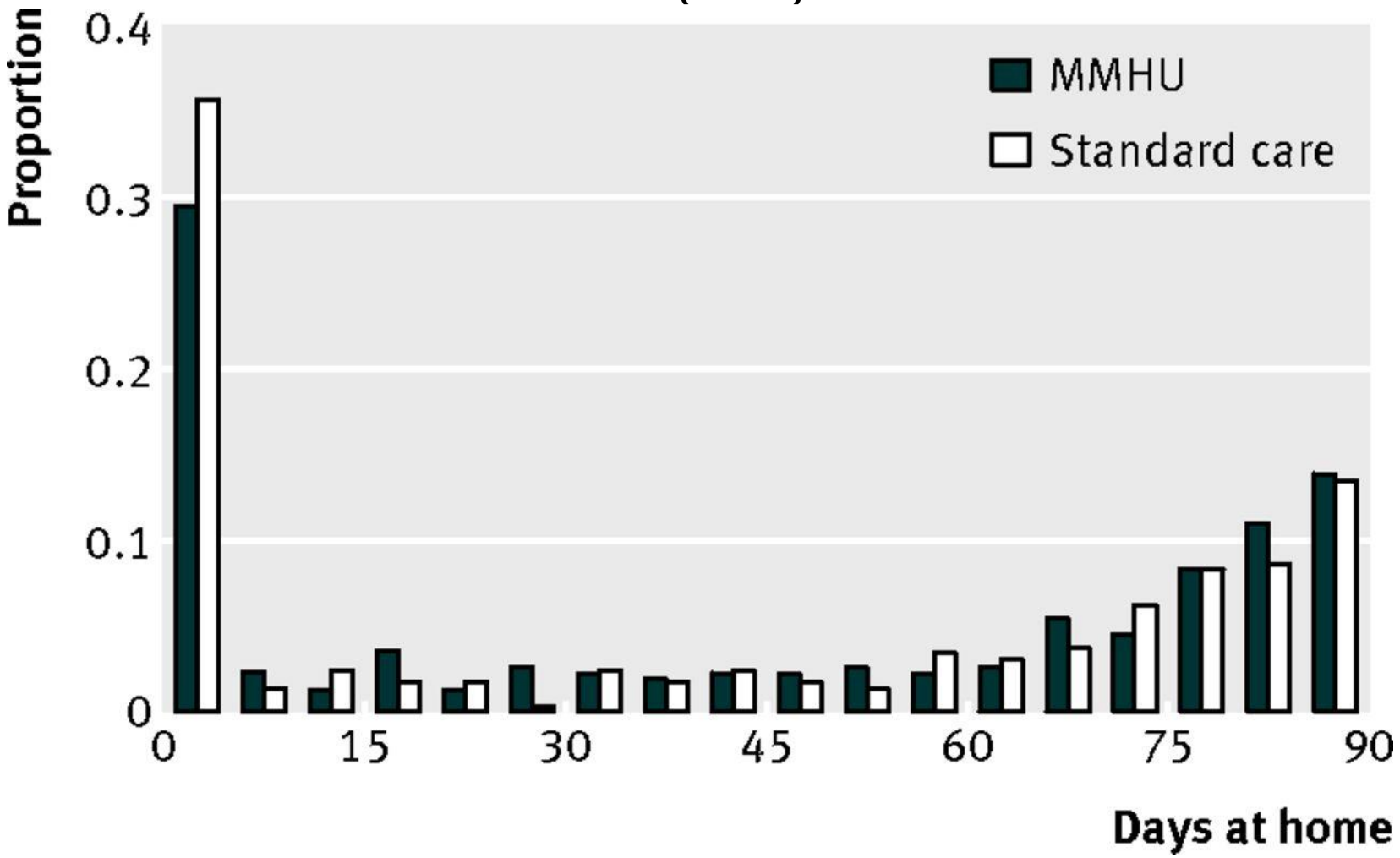
ADL=activities of daily living; ANCOVA=analysis of covariance; GHQ12=General Health Questionnaire 12; HR=hazard ratio; ICECAP-O= ICEpop CAPability measure for older people; OR=odds ratio; RR=rate ratio.

Fig 2 Distribution of days at home after hospital admission in study of care of patients with cognitive impairment admitted to hospital according to randomisation to specialist medical and mental health unit (MMHU) or standard care.



Sarah E Goldberg et al. BMJ 2013;347:bmj.f4132

Secondary Outcome Measures

	MMHU (n=46)	Standard care (n=44)	Difference in medians (95% CI)	P value
Positive mood or engagement	79	68	11 (2 to 20)	0.03
Negative mood or disengaged	11	20	−9 (−13 to −2)	0.05
Active state	82	74	8 (−2 to 16)	0.10
Social interaction	47	39	8 (−3 to 19)	0.06
Personal enhancers	4 (1-8)	1 (0-3)	3 (1 to 5)	<0.001
Personal detractors	4 (2-7)	5.5 (3-10.5)	−1.5 (−5 to 1)	0.08
Visitors present	38	23	15 (−28 to 44)	0.8
Any electronic or distressed noise	79	92	−13 (−17 to −7)	<0.001
Disruptive vocalisation audible	21	6	15 (1 to 23)	0.04
Electronic alarms sounding	59	74	−15 (−21 to −9)	<0.001

Secondary Outcome Measures

- MMHU patients more satisfied with:
  - Overall care
  - Feeding and nutrition
  - Being treated with dignity
  - Confusion needs met
  - Discharge arrangements
  - Carer better prepared for discharge

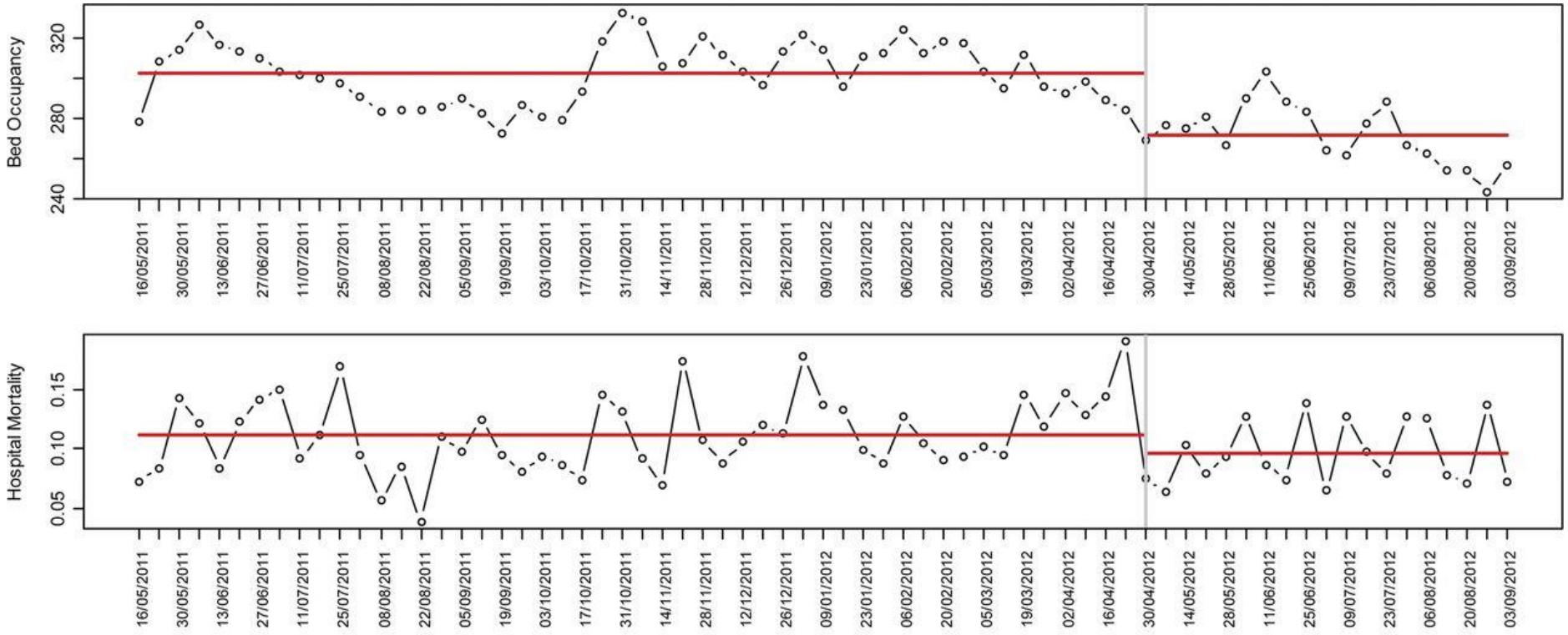
National award for Nottingham's Medical and Mental Health Unit

MP praises Nottingham's mental health unit during Parliamentary debate

Channel 4 News

SCOTTISH MENTAL HEALTH ARTS & FILM FESTIVAL

WE ARE GETTING READY FOR THE 2015 FESTIVAL



Silvester K M et al. Age Ageing 2013;ageing.aft170

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Age and Ageing 2014; **43:** 109–114
doi: 10.1093/ageing/aft087
Published electronically 23 July 2013

A controlled evaluation of comprehensive geriatric assessment in the emergency department: the 'Emergency Frailty Unit'

Simon Paul Conroy[1], Kharwar Ansari[2], Mark Williams[2], Emily Laithwaite[3], Ben Teasdale[2], Jeremey Dawson[4], Suzanne Mason[4], Jay Banerjee[2]

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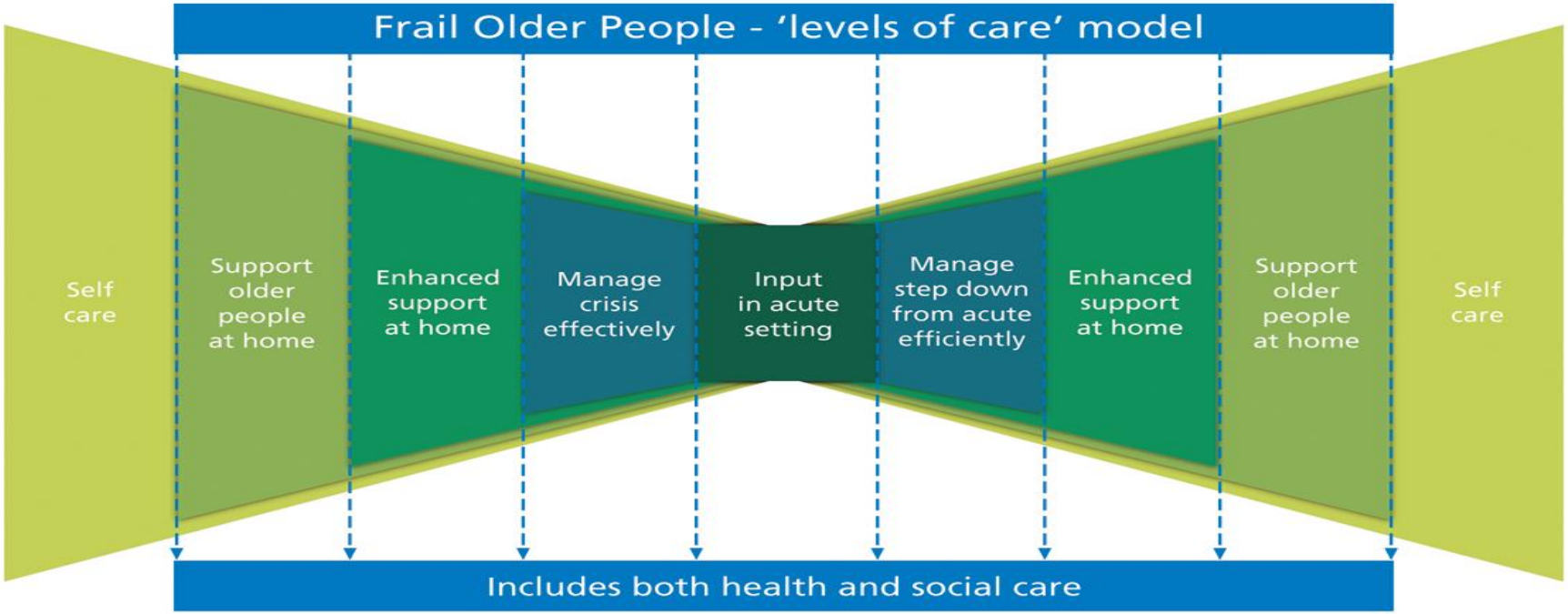
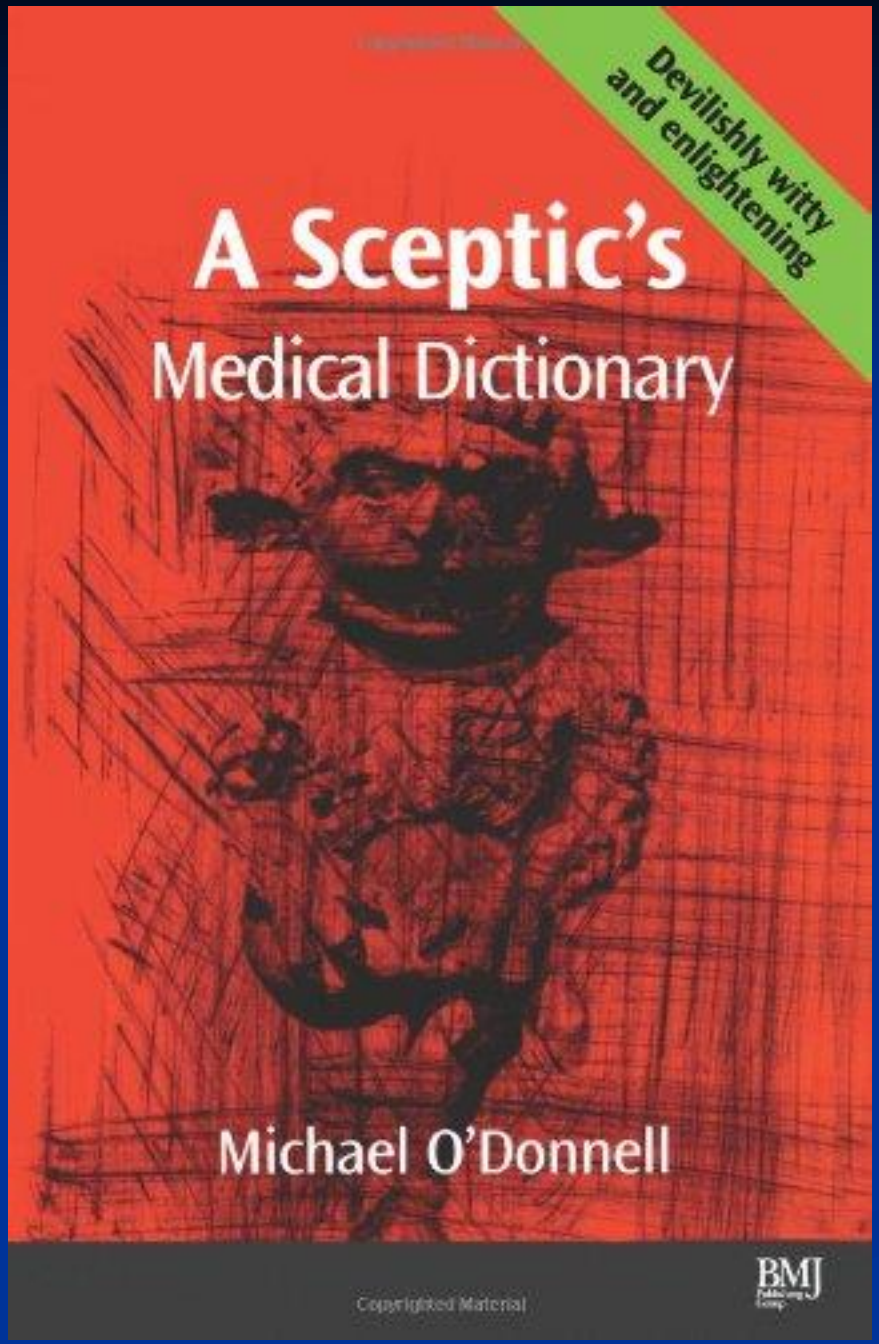
“attendances to the emergency department increased in older people over the study period, whereas the emergency department conversion rate fell from 69.6 to 61.2% in people aged 85+, and readmission rates in this group fell from 26.0% at 90 days to 19.9%”

The research and practice dilemma





"The inverse absurdity rule"

Conclusions

- CGA does something.
- Implementation is difficult.
- Controls are confounded.

- Further evaluation needed in specific contexts.

- But understanding how to implement it might be the question in most settings.