



# Newcastle 85+ study

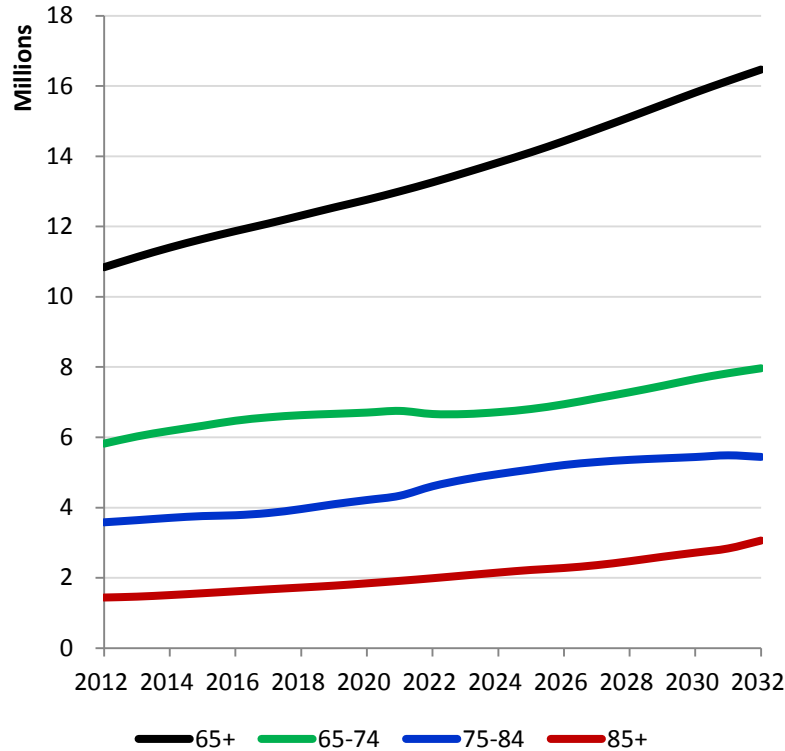
Determinants and burden of differing health trajectories in the very old

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A decade of research – School for Primary Care Research. 22nd November 2016



# Population projections



65+ increase of 52%

65 – 74 increase of 37%

75 – 84 increase of 52%

85+ increase of 113%





## AIM

To study the complex clinical, biological and psychological factors affecting the very old.



# Study design

- Community based
- Recruited people from Newcastle and North Tyneside Primary Care Trusts
- Single year birth cohort (all people born in 1921 who turned 85 years in 2006)
- Own home or institution, irrespective of health
- Baseline assessment in 2006 (phase 1)
- Followed up at
  - 18 months (phase 2)
  - 3 years (phase 3)
  - 5 years (phase 4)
  - 10 year follow up just commenced (phase 5)



*Collerton et al. BMC Geriatrics 2007*

# Data collection

- **Health assessment** - 3 modes of data collection:

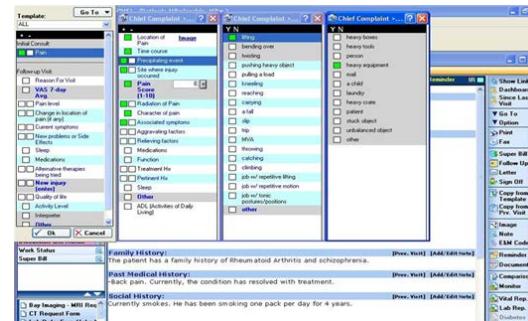
Interviews with validated questionnaires

Functional assessments

Bloods



- **Review of general practice records (GPRR)** participants



# Cohort recruitment

Newcastle and North Tyneside  
PCT General practices  
(53/64 participated)

*GPs declining similar to those agreeing on general practice outcomes*

Invited to participate (n=1459)

Contact made (n=1409)

Declined  
(n=358)

Recruited (n=1042)

*HA, HA+GPRR, GPRR, refusers compared: slightly more females in GPRR and refusers*

*HA+GPRR similar to Census*

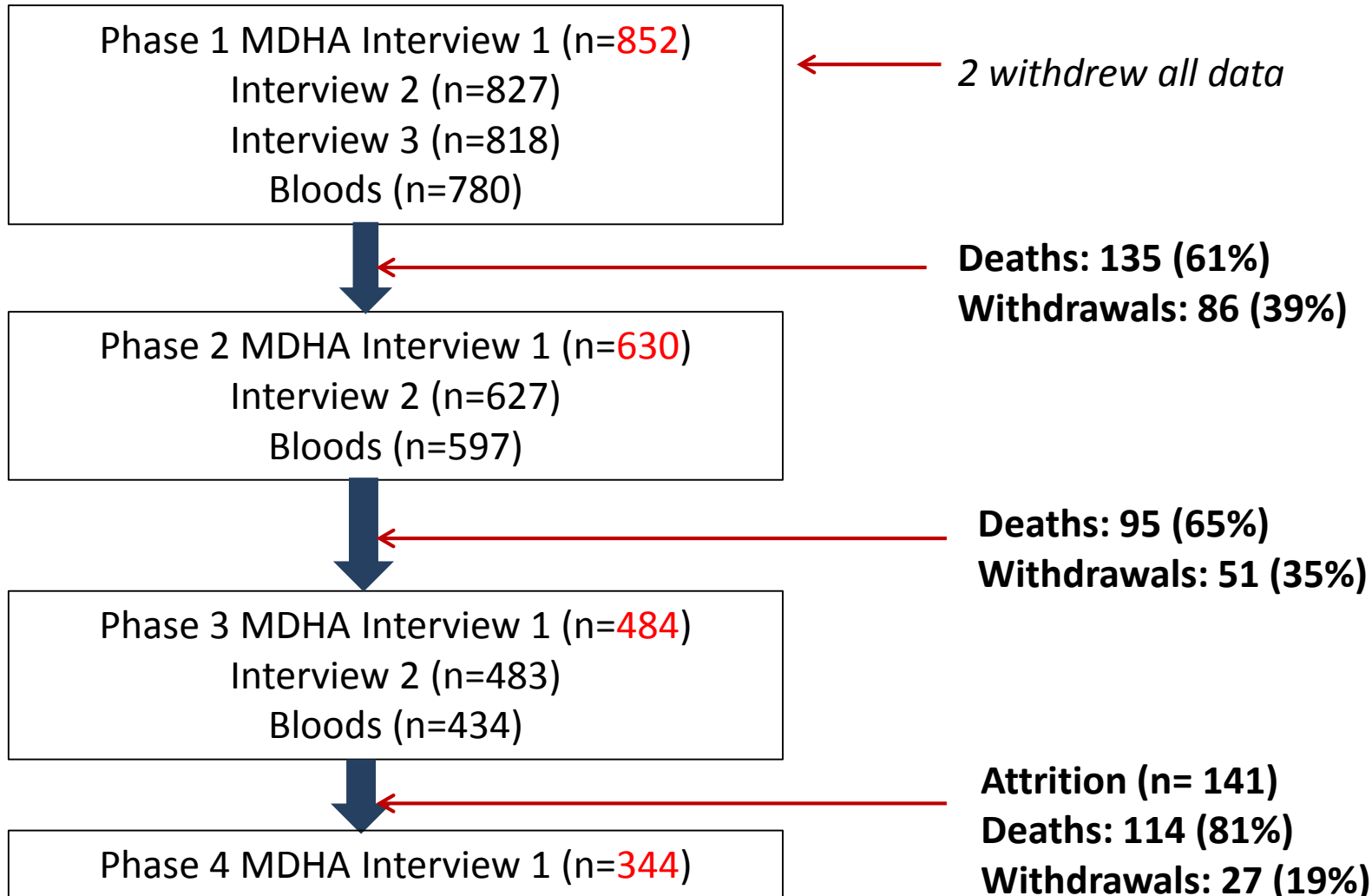
Withdrew  
all data  
(n=2)

HA assessment  
only (n=3)

HA+GPRR  
(n=849)

GPRR only  
(n=188)

# Cohort retention



# Demographics

	All	Men	Women
Widowed	59%	70%	42%
Married	30%	16%	52%
Living alone	61%	73%	42%
Institution	10%	12%	7%

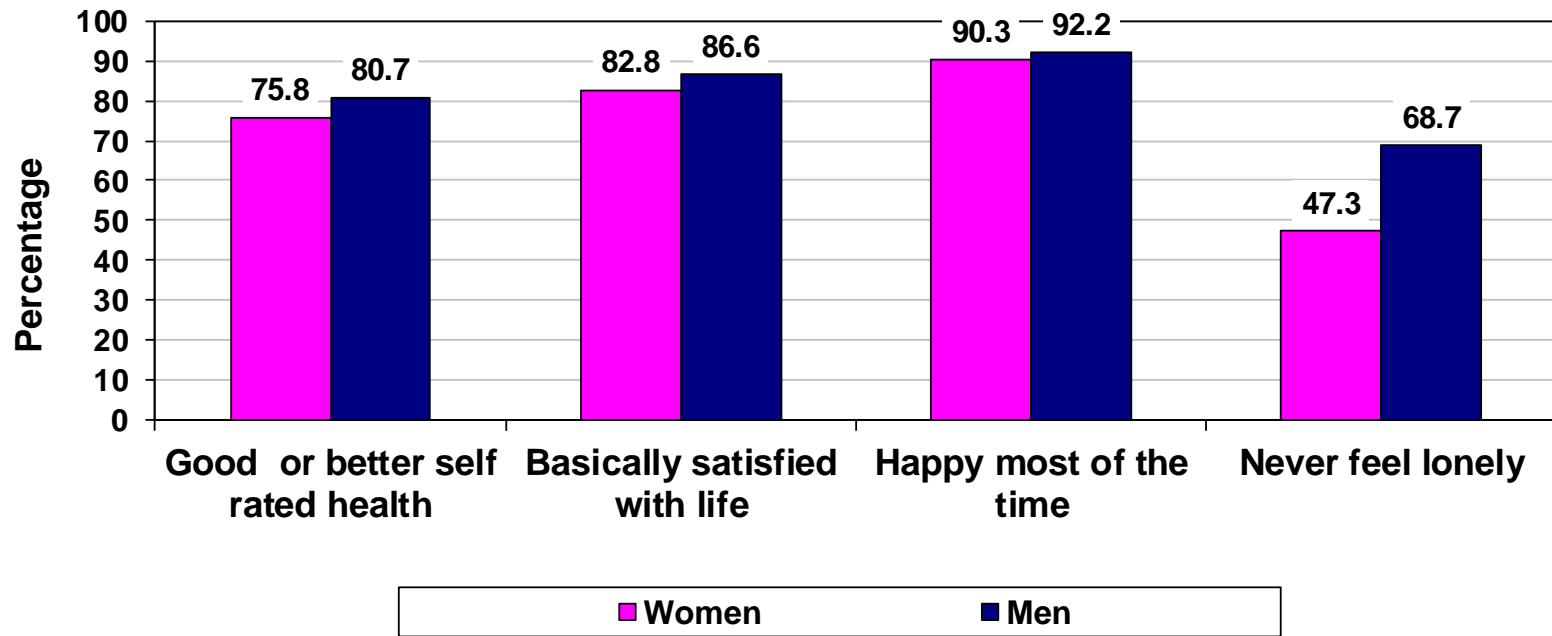


*Collerton et al. BMJ 2009*





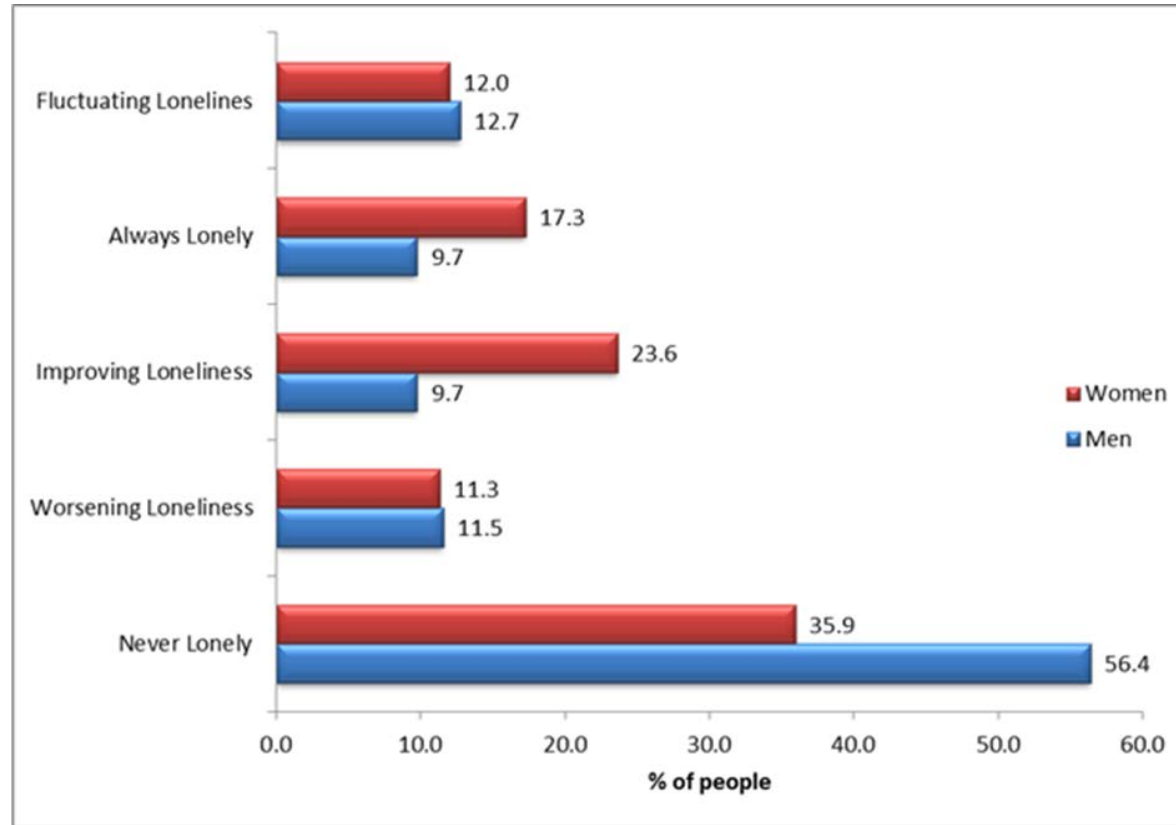
# Psychological Wellbeing



*Collerton et al BMJ 2009*

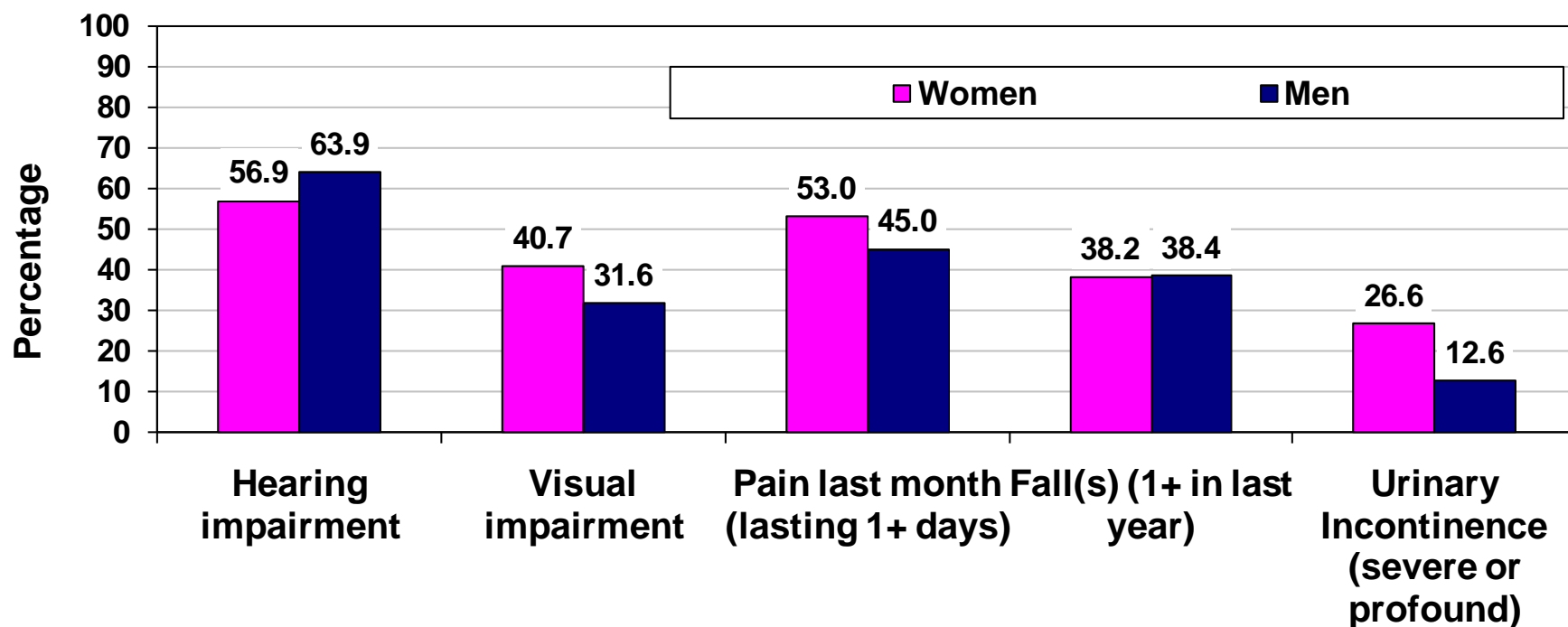


# Loneliness after 85 years of age



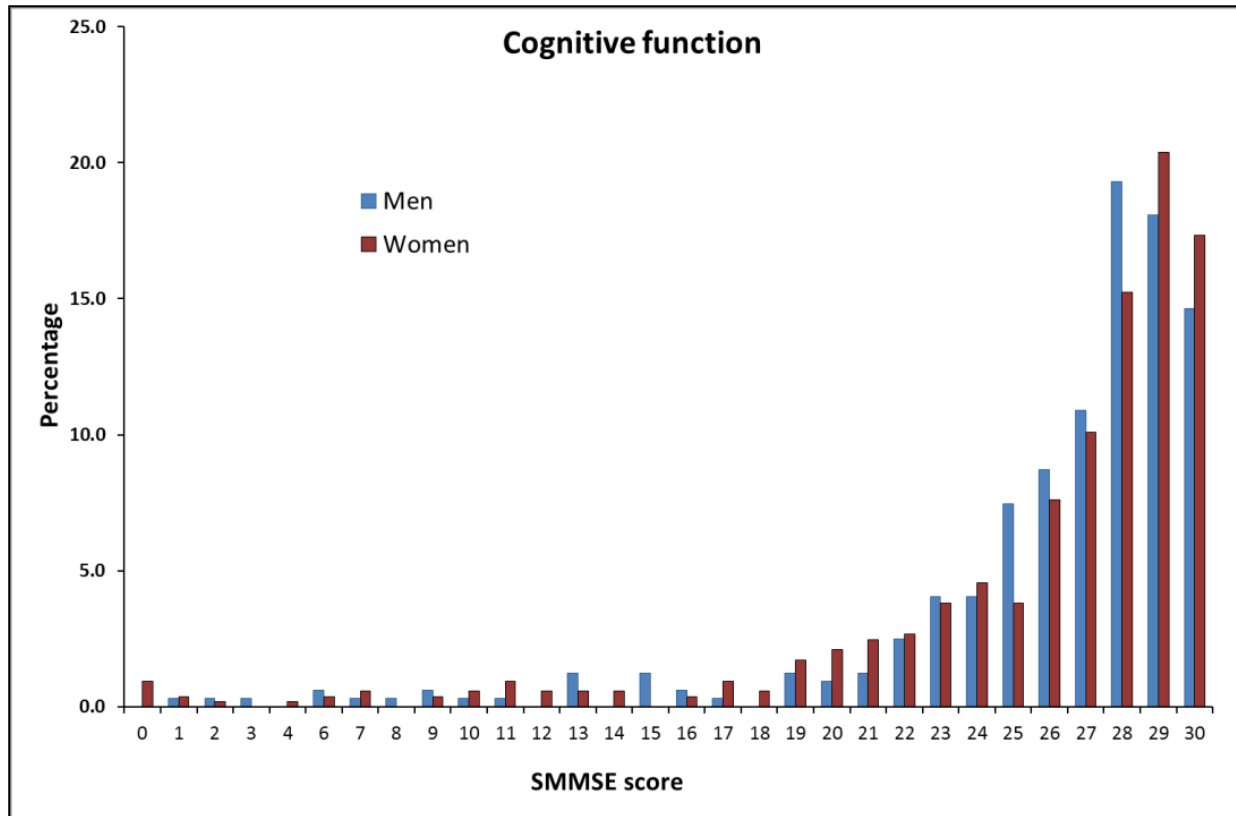
Brittain et al. Ageing and Society 2015

# Prevalence of geriatric conditions



*Collerton et al BMJ 2009*

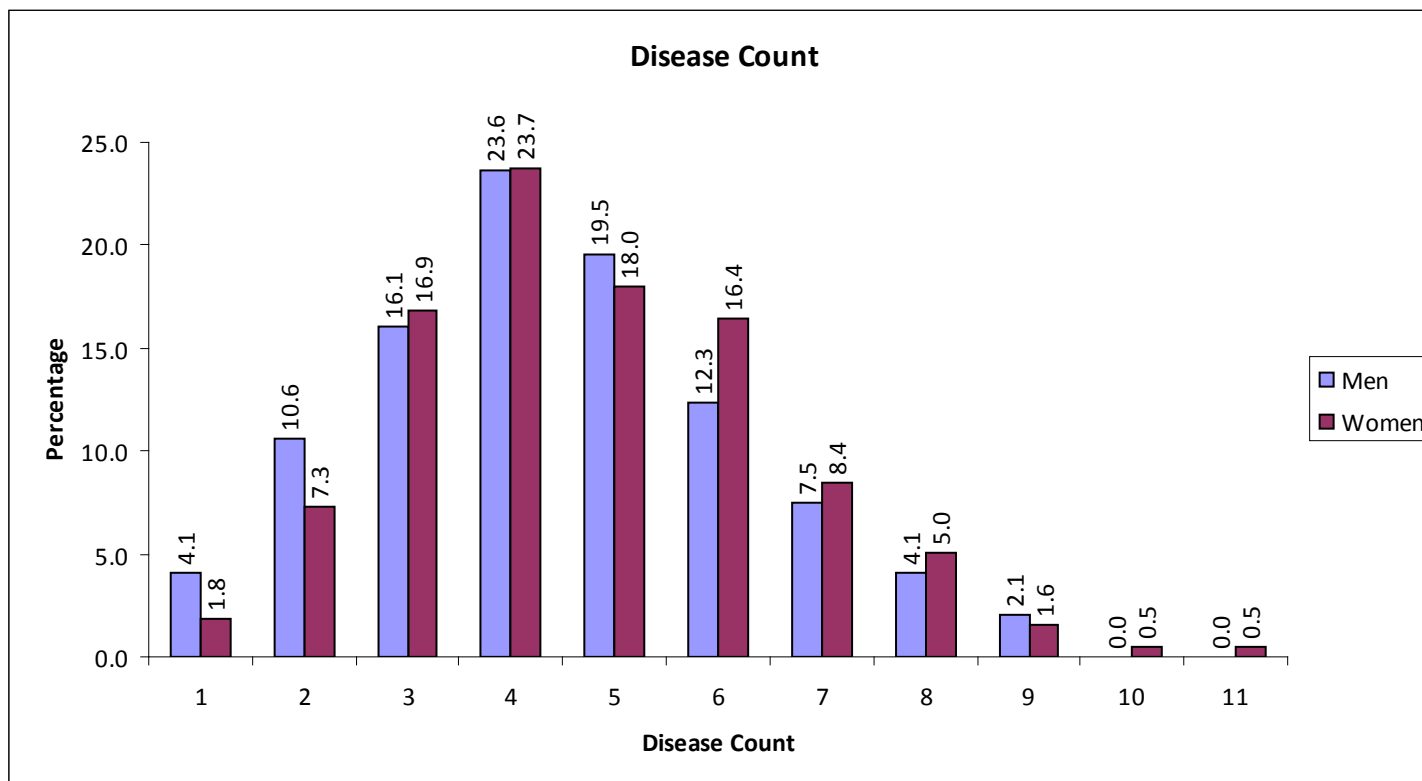
# Cognitive function



- 3% scored 10 or less
- 10% (81) scored 11-21
- 16% (137) scored 22-25
- 70% not impaired (26-30)
- 16% scored 30



# Disease prevalence



Median disease count : 4 (men), 5 (women)

6 or more diseases: 28% (men) and 32% (women)

*Collerton et al BMJ 2009*



# Multimorbidity

- Multimorbidity is common in very old people
- Single disease-based healthcare delivery
- 58% Hypertension
- 52% Osteoarthritis
- 47% Cataract
- 47% Atherosclerosis
- 17% COPD
- 13% Diabetes
- 8% Dementia



*Collerton et al BMJ 2009*

# Multimorbidity

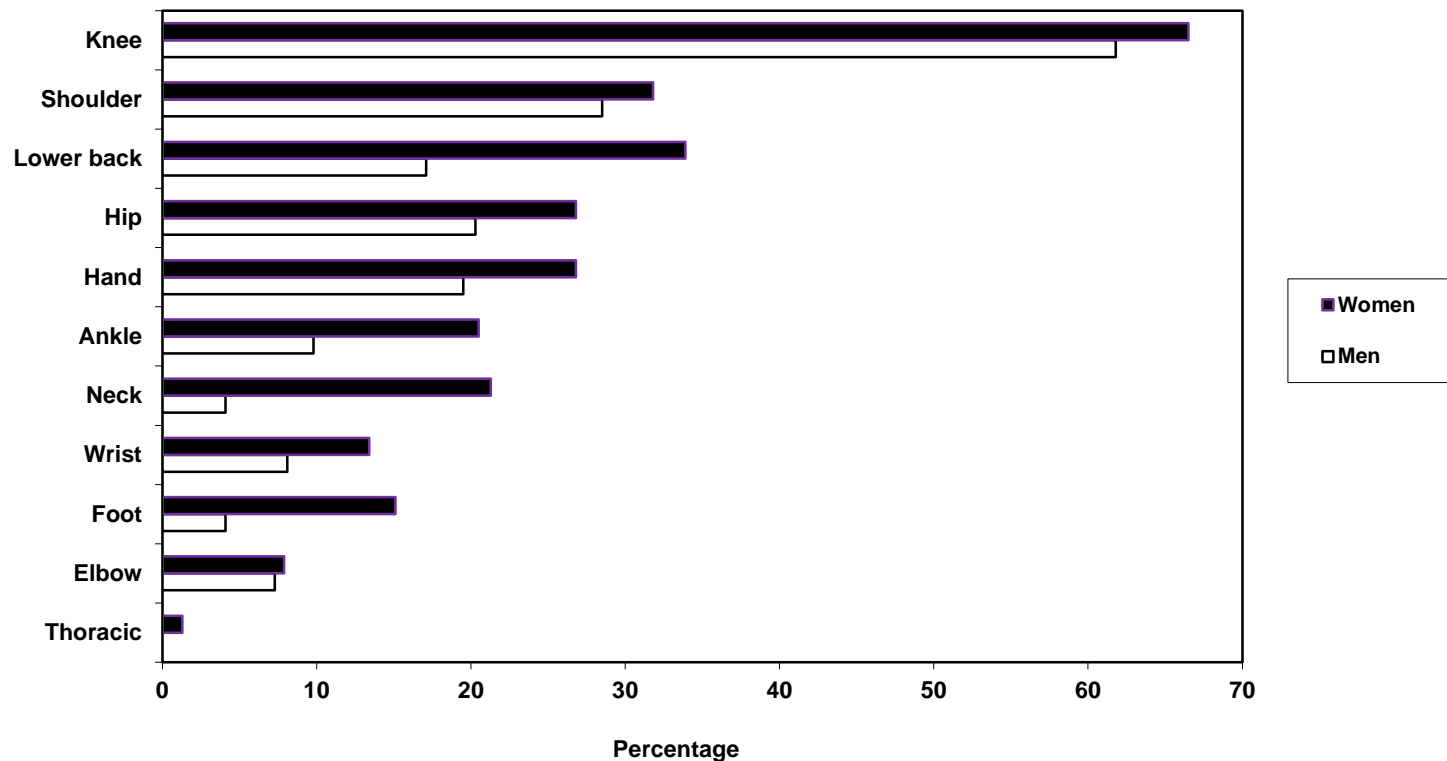
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**Joint pain** - 48% women experience joint pain on most days  
40% men experience joint pain on most days



Median number painful joints - Women 3 (IQR: 2 – 5),  
Men 2 (IQR: 1 – 3)





# Methods – assessment of disability

## **Mobility**

Are you able to up and down stairs/steps?

Are you able to get around the house?

Are you able to walk 400 yards

## **Basic activities of daily living**

Are you able to get in and out of bed?

Are you able to get and out of a chair?

Are you able to get on and off the toilet?

Are you able to dress and undress yourself?

Are you able to wash your face and hands?

Are you able to wash yourself all over?

Are you able to cut your own toenails?

Are you able to feed yourself?

## **Instrumental activities of daily living**

Are you able to cook a hot meal?

Are you able to shop for your groceries?

Are you able to do light housework?

Are you able to do heavy housework?

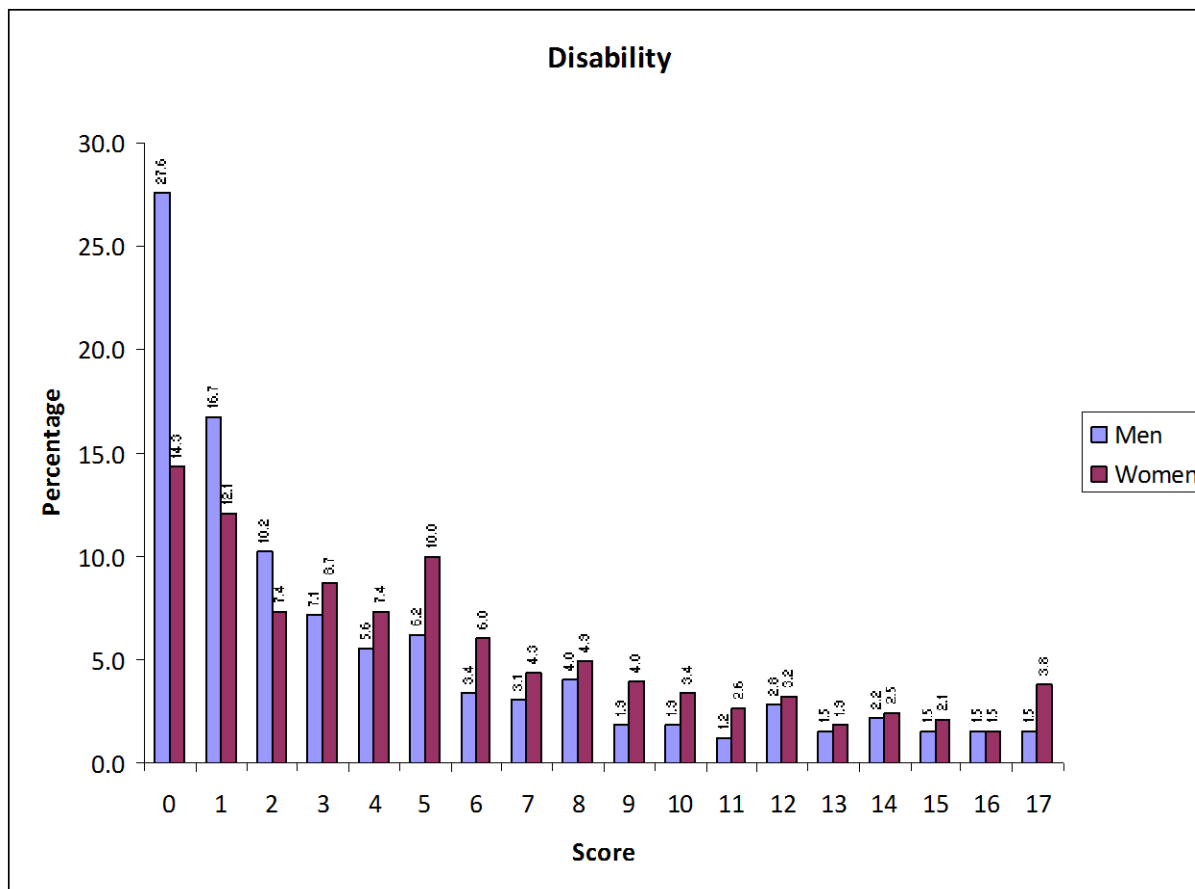
Are you able to manage money?

Are you able to manage your medications?

**17 Items (score)**

- No disability/difficultly
- Disability/performed with difficulty

# Disability

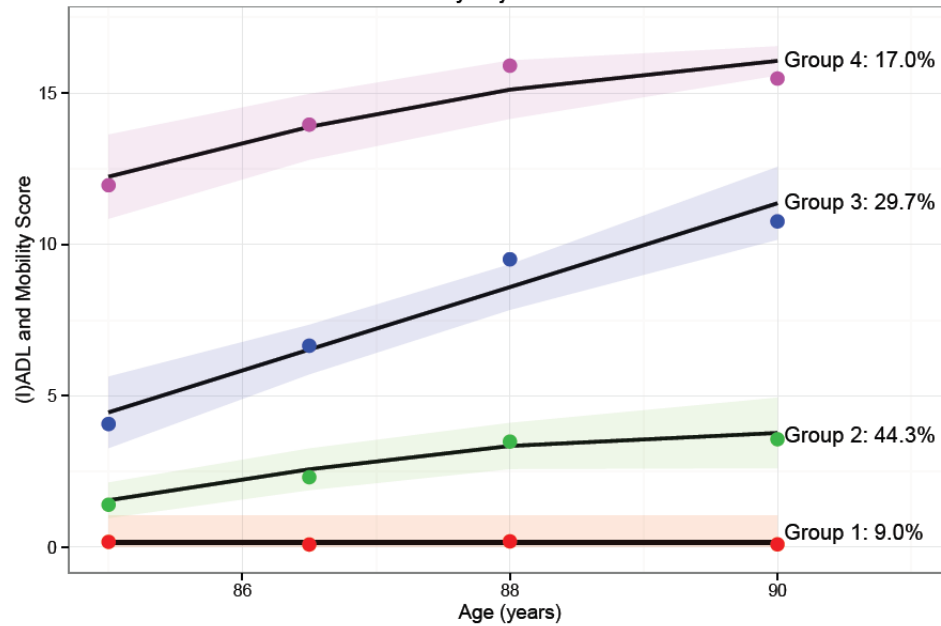


20% able to perform without difficulty all 17 activities of daily living (ADLs)

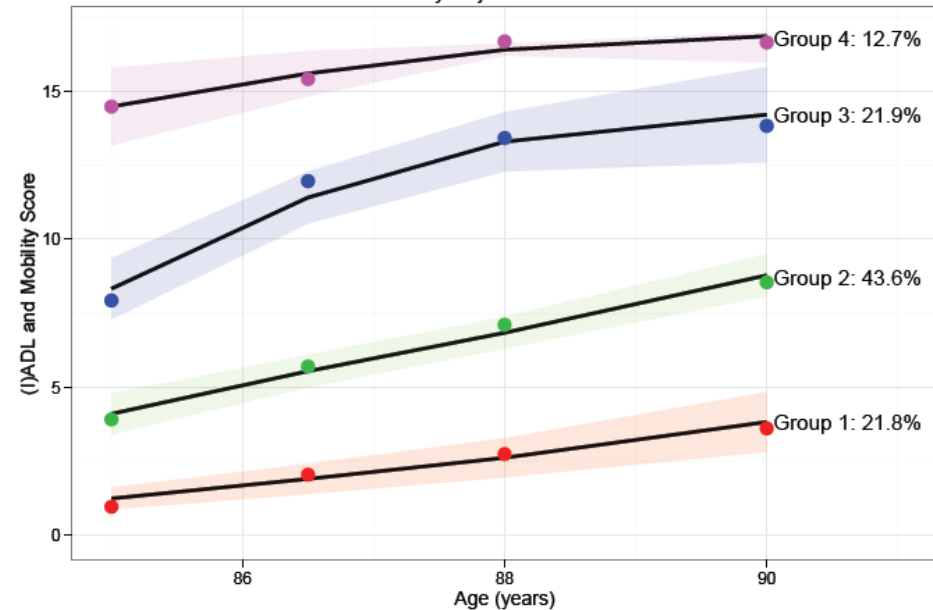


# Disability trajectories

Disability trajectories: Men



Disability trajectories: Women



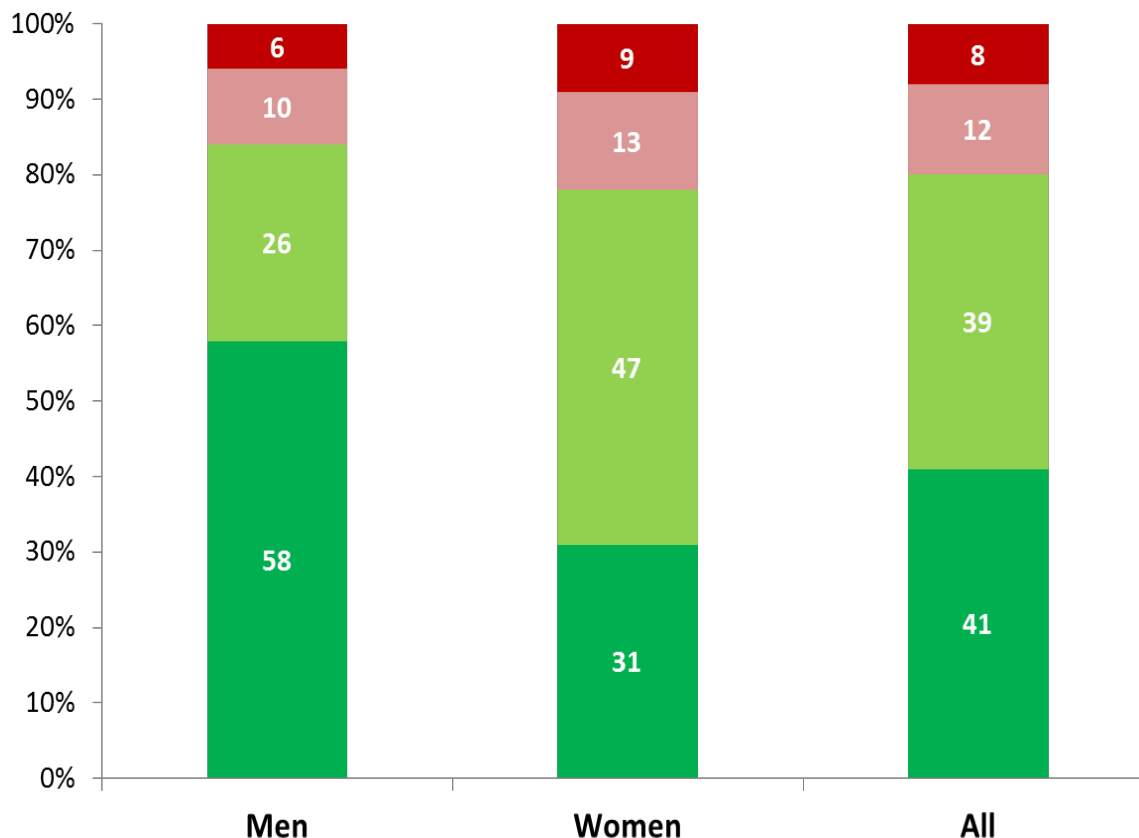
- 9% of men remained fully able over the 5 years



Kingston et al. Archives of Gerontology and Geriatrics 2014



# Need for care



- 75% in care homes
- If at home main carer child

- 33% in care homes
- If at home main carer spouse (34%), child (31%)

- 4% in care homes
- If at home main carer child (37%), no-one (18%)

- **Critical (requires 24-hour care)**
- **Short-interval (requires help at regular times daily)**
- **Long-interval (requires help less than daily)**
- **Independent**

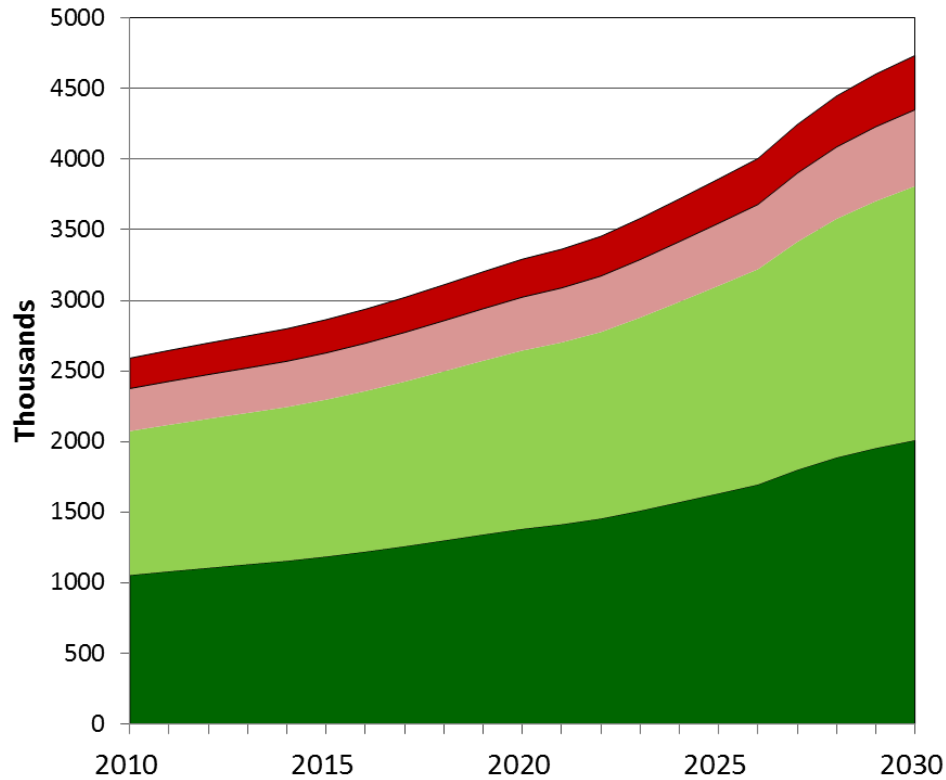
■ Independent 
 ■ Long interval 
 ■ Short interval 
 ■ Critical interval

*Jagger et al. BMC Geriatrics 2011*



# Implications of care needs

**Projected numbers in E&W aged 80+ by interval-need dependency, 2010-2030**



↑79% (302k to 541k)

↑80% (215k to 384k)

↑76% (1.02m to 1.8m)

↑91% (1.05m to 2.01m)



## Being 85 .....

- High quality of life - >80% satisfied with life
- Functional status surprisingly good – and for some men maintained over 5 years
- Good cognitive function
- Low proportion (8%) requiring 24 hr care
- People required help less than daily from age 85
- Functional decline follows a predictable course – but not at a specific age



## Being 85 .....

- Over 50% of women feel lonely some or all of the time
- High levels of disease and geriatric syndromes
  - 25% of women have severe or profound incontinence
- Multimorbidity is the norm:
  - implications for current single disease-based healthcare delivery



# 10 year follow up

- Currently aged 95 years
- 152 alive
- Interview and GP record review
- **AIMS**
  - (i) Confirming **trajectories of disability** and estimating years spent with disability and frailty between age 85 and 95.
  - (ii) Identifying **predictors of “healthy” ageing** to age 95.
  - (iii) Establishing **how health and social care resources change** between the ninth and tenth decade, particularly regarding informal care.
  - (iv) Determining late life factors influencing **frailty**, in particular cognition?
  - (v) Exploring the levels of **participation and loneliness**.





# Acknowledgements

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