

# Changes in dementia prevalence: implications for public health

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**TITLE** A two-decade comparison of prevalence of dementia in individuals aged 65 years and older from three geographical areas of England: results of the Cognitive Function and Ageing Study I and II

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**JOURNAL** *Lancet* 2013; 382: 1405–12

**DECLARATION OF INTERESTS** Professor Starr is a co-investigator on the UK Dementia Platform with Professor Carol Brayne, one of the authors.

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## SUMMARY

The Medical Research Council (MRC) cognitive functioning and ageing study (CFAS) I study collected epidemiologically representative data between 1989 and 1994 in people aged 65 and over in England and Wales; it estimated dementia prevalence to be 8.3% in this age group, standardised to the 2011 population. CFAS II replicated the survey in Cambridgeshire, Newcastle and Nottingham in 2008–11 and found a dementia prevalence of 6.5%, a statistically significant relative decrease of 21% over 20 years. CFAS I had an 80% response rate, with a 56% response rate in CFAS II: sensitivity analyses showed that assuming non-responders were 50% more likely to have dementia increased estimated prevalence in CFAS II to 7.7% and if they were twice as likely to have dementia, prevalence would have been 8.5%. A total of 5% of people aged 65 and over lived in care homes in CFAS I of whom 56% had dementia, but by CFAS II only 3% of the sample were care home residents, though dementia prevalence among these had increased to 79%: the net effect was that by CFAS II a higher proportion of people with dementia resided in their own homes. Newcastle's estimated standardised dementia prevalence of 7.2% was higher than that of Nottingham (6.0%) and Cambridgeshire (6.1%).

## OPINION

The headline decrease in dementia prevalence over the last 20 years has important public health implications. Similar decreases have been observed internationally<sup>1</sup> and this mirrors the increase in cognitive performance in British cohorts.<sup>2</sup> Despite using identical methods of recruitment, the response rate in CFAS II was a little over 50%, which increases uncertainty about prevalence estimates because non-responders are unlikely to be missing at random. Such a low response is a matter of concern and suggests that urgent measures are required

to identify barriers to research participation by older adults in the UK. All three areas have seen substantial population increases over the last 20 years, especially Cambridgeshire, and incomers are generally at lower risk of dementia,<sup>3</sup> which may explain a little of the decrease: areas of the UK which have experienced net outward migration may have done less well. A further notable public health implication is that there may be non-random geographical variation in dementia prevalence across England and Wales so that local diagnostic rate targets cannot be calculated from the overall prevalence of 6.5%. Interestingly, dementia prevalence was higher in the more northerly Newcastle than Nottingham or Cambridgeshire, consistent with existing scant data suggesting that northern areas have higher dementia rates.<sup>4</sup> Such geographical patterning may be informative about potential environmental risk or protective factors given that the substantial decrease in dementia rates cannot be attributed to changes in the genetic risk. Identifying these environmental factors is a key research challenge over the next decade or so.

## REFERENCES

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