government. We must develop the evidence base on child health, particularly for early intervention, including the Healthy Child Programme, and promote resilience in its widest sense. Further recommendations seek to translate the evidence presented in the Annual Report into practical actions, which include commissioning age-appropriate training for health professionals, translating the evidence on children and young people’s views of health care into a “Health Deal” (panel 2), and developing tool kits for schools to improve educational attainment through Personal Social Health and Economic (PSHE) education. We badly need independent monitoring of progress against outcome indicators.

This report is not unprecedented. Much has been written about the state of child health in the UK, and children are championed by front-line staff and many groups in civil society, as well as the Children’s Commissioner. The experts who contributed to this report drew together the contemporary scientific evidence, and we combine this with new economic analyses to make a powerful case for focusing anew everyone’s efforts on children and young people. Economic realities alongside the rising health-care demands for an ageing population make improvement in this area challenging. But this report shows that prevention can pay. Our children deserve better.

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We all contributed to the Annual Report of the Chief Medical Officer 2012. SCD appointed CL as Editor in Chief of the Annual Report of the Chief Medical Officer 2012; together they drafted the structure of the report and invited experts to contribute. CL received fees from, and is Director and co-founder of, Diagnosis Ltd, a clinical leadership social enterprise company. SCD, JS, and LW declare that they have no conflicts of interest.

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The findings of the Cognitive Functioning and Ageing Study (CFAS) I and II are unequivocally good news. New data, reported in The Lancet, suggest that the prevalence of dementia in the UK in 2011 was significantly lower than would have been expected based on the estimated prevalence in 1991. For CFAS I, data were taken from three geographical areas—Cambridgeshire, Newcastle, and Nottingham—to generate an estimate of the prevalence of dementia in the UK in 1991. This was based on a randomly selected sample of 7635 people aged 65 years and older interviewed in these areas, with 1457 being diagnostically assessed for dementia. An algorithmic diagnostic approach was used so that the resulting estimate, which was standardised to the 1991 population structure, could be compared with future results. For CFAS II, investigators used an identical diagnostic method to estimate the prevalence of dementia in the UK in 2011. On the basis of the age and sex specific prevalence estimates from CFAS I, 664 000 individuals were estimated to have dementia in 1991. After applying the effects of population

Good news on dementia prevalence—we can make a difference
ageing to this estimate, the number of people with dementia was projected to be 884 000 in 2011. However, extrapolation of the results of CFAS II suggests that the number of people with dementia in 2011 was 670 000, a decrease in prevalence from 8.3% in 1991 to 6.5% in 2011 (OR for CFAS I vs CFAS II 0.7; 95% CI 0.6–0.9). Importantly, the study’s greatest strengths are in its relative estimates of changes between phases rather than its absolute estimates of numbers. As with any research criteria, the diagnostic system used in this study has limitations, as acknowledged by the authors. The low response rate (56% vs 80% for the first phase) for the second phase might also be a source of error. Even with the adjustments and modelling made, it remains entirely possible that there is a substantial response bias, which might have a substantive effect on the prevalence estimates.

However, these data do suggest that things that the population has done have decreased the age-specific incidence of dementia, and therefore the number of people with dementia is lower than it would have been without our making these changes. The adage asserted in England’s National Dementia Strategy that “what’s good for your heart is good for your head” therefore seems to be supported by the new evidence presented. It is plausible that changes in health behaviour and provision, including smoking cessation and improved management of cardiovascular risk factors such as hypertension, have prevented or delayed the onset of dementia at a population level. The next questions must be: how much further can we go in pursuit of this preventive agenda? How many more cases can be prevented? What do we need to do to have the greatest effect? These questions need empirical investigation followed by purposeful strategy formulation and implementation.

A powerful message from these data is that what we as individuals and services do matters in terms of dementia. The CFAS data point to substantial added value from existing healthy lifestyle messages. They suggest that lifestyle changes—eg, in diet, exercise, and smoking—might reduce the risk of dementia and promote more general health and wellbeing. This notion should be incorporated into health promotion messaging. Inclusion of the potential benefit of dementia prevention in communications could drive greater adoption of healthy lifestyles with resulting benefits for individuals and society.

This is a message of empowerment, but it comes with a warning. As with all investments, in this investment in health, positive past performance does not always predict future gains. Thus, a need exists for caution in prediction of the future numbers with dementia. If positive changes in health behaviour can decrease prevalence of dementia, then negative lifestyle choices might promote, rather than prevent, dementia. The cohorts of people who have been developing dementia in the past 30 years lived through periods of austerity during which diet was often controlled and this might have protected them in the balance of risk. This was not the case for present cohorts entering the period of risk for dementia (ie, those aged >60 years). It is plausible that the present epidemic of morbid obesity, with consequent cardiovascular disorders, stroke, and diabetes, might act to increase the proportion of people with dementia in future cohorts.

What these data do not mean is that dementia should be any less of a priority. Even with the changes described by Fiona Matthews and colleagues, dementia remains very common, very expensive, and profoundly negative in its effects on people with the disorder and their families. Even with a small decrease in incidence and prevalence, population ageing will still double the numbers with dementia worldwide in the next generation. Dementia remains one of the greatest challenges faced by health-care and social-care systems worldwide, in low-income and middle-income countries as well as in more developed economies. Dementia is one of the few health disorders that in itself has a macroeconomic effect, driven by the contribution of dementia to long-term care costs, with at least three quarters of people in care homes now having dementia, as shown by the CFAS estimates, and by people with dementia being over-represented in general hospital and emergency populations. The existing management of dementia at a population and an individual level is improving with the execution of national plans and improved individual care. But there remain public and professional misconceptions, a low level of diagnosis with more than half of those with dementia never identified as such, and discontinuities and poor quality care from diagnosis to end of life for many.

Dementia is a powerful example of the complexity and long-term nature of the disorders that are now the major outstanding challenges for health-care systems. Those with dementia are generally an old and frail population with multimorbidity; data from the Scottish School of Primary Care suggest that only 17% of people with dementia have no other long-term disorder. If we
can get services right for dementia, then we will be a long way towards getting them right for all individuals with complex and long-term disorders. The CFAS results suggest that prevention is possible and that we can have agency in this most complex of disorders. These findings should spur us on, to go further and faster in secondary and tertiary prevention as well as primary prevention in dementia, for the benefit of all. This study shows that we can all make a difference.

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### Frailty and diabetes

In The Lancet, Anthony Barnett and colleagues provide evidence that linagliptin, a dipeptidyl peptidase-4 (DPP4) inhibitor, effectively lowered glycated haemoglobin (HbA\(_1c\)) in a cohort of 241 older patients (mean age 75 years) with type 2 diabetes poorly controlled with usual treatments. This randomised, placebo-controlled trial was done in a 24-week period; mean HbA\(_1c\) was 7.8% (SD 0.8) at baseline, and at week 24, placebo-adjusted mean change in HbA\(_1c\) with linagliptin was –0.64% (95% CI –0.81 to –0.48, p<0.0001). The investigators acknowledge the scarcity of specific studies of glucose-lowering treatments in older patients with diabetes and of the DPP4-inhibitor class in particular. They provide some potential reasons why this class can offer some advantages in treatment of older patients, such as a reduced risk of hypoglycaemia and no appreciable weight gain. Additionally, they argue that it is important to consider the special issues of medical co-morbidities and frailty in older patients in trials of this kind. The Lancet, perhaps in recognition of this shortfall in the medical literature, also published a similar study of the DPP4 inhibitor vildagliptin in a group of older patients with type 2 diabetes.²

The study by Barnett and colleagues was well designed and powered to show a clinically meaningful, significant difference in HbA\(_1c\) in the groups studied, without an increased risk of hypoglycaemia. In general, the patients studied had levels of duration of diabetes and renal impairment commonly noted in older patients with this disorder. The investigators accept the limitations of this type of pharma-directed, short duration study. Longer-term monitoring data are needed to ensure safety of patients.

This study, however, missed crucial opportunities to provide increased insight into the management of...