Background

- Accurate and timely diagnosis of dementia is important to allow individuals to access support, plan for the future and commence treatments.
- There is regional variability in the number of people diagnosed in a timely manner in the UK, with diagnostic rates ranging from 21.6% per 100,000 to 76.5% per 100,000, with a national average of 46% per 100,000. In the UK, primary care acts as gatekeeper to the dementia diagnostic pathway, conducting basic initial assessment and deciding which patients should be referred for further investigation. In 2012 the DfH launched the DemenTia Challenge, which is a programme of work designed to make a difference to the lives of people with dementia and their families and carers, including the way in which people with dementia are diagnosed.
- Cantab Mobile is a brief and language-free assessment of executive memory, depression and activities of daily living designed to help primary care physicians make more informed decisions when making referrals to secondary care memory clinics.

- This model aims to evaluate the cost-effectiveness of introducing Cantab Mobile to the standard diagnostic pathway for patients presenting with subjective memory complaints (SMC) in the UK.

Methods

2. Diagnosis rates for Scotland and Wales are from the Government’s Quality and Outcome Framework data for 2012.
3. Methods: We calculated the probability of different groups to present with primary care (MP), including dementia, mild cognitive impairment, depression and the unwell.
4. The cost of diagnosing these patients in the current standard diagnostic pathway was compared against that of a diagnostic pathway using Cantab Mobile in the primary care setting.
5. In the standard pathway it was assumed that all patients would receive assessment in primary care and in a memory clinic. Patients with depression alone would also receive GP assessment after the memory clinic for diagnosis.
6. When Cantab Mobile was introduced it was assumed that patients would only receive primary care assessment in the primary care setting. Only patients classified by Cantab Mobile as having clinically relevant memory impairment (MRI) were referred to a memory clinic. The cost of the diagnostic pathway for these patients was calculated and then added to the cost of the standard pathway.
7. The cost of the diagnostic pathway was calculated from published literature, and was assumed to remain relevant for future NHS settings.
8. The probability of having unrecognised depression was applied. In the standard pathway this was for the duration of the memory clinic waiting time. In the Cantab pathway this was applied to these patients with depression carerad with dementia whose depression was not diagnosed until after the memory clinic, and dementia was 'allowed for' in the cost calculations.
9. The one-way sensitivity analysis was carried out on key model parameters. The probability associated with untreated depression was also calculated in the model.

Results

- The model estimated that, based on published sources on presenting populations, 47% of people presenting to primary care with SMC are likely to be ‘treated’ and an additional 15% to have depression and dementia. Therefore, over half of patients presenting to primary care with SMC may not need referral to more costly dementia services, and could be monitored or managed locally.
- In the standard diagnostic pathway, the average total cost per patient presenting to primary care was £422.03.
- However, systematic use of a validated cognitive test and depression screen in patients with SMC resulted in a reduction in diagnostic costs of 46% in comparison to the systematic approach to diagnosis.
- Additional information: Quality of life benefits were associated with earlier diagnosis, including an associated reduction in disability of 50% quality adjusted life-years (QALYs) per patient.

Conclusions

- This model illustrates the health economic benefits of accurate and appropriate primary care triage of possible dementia cases in the UK.
- Because primary care plays a key role in supporting and meeting the demands of an aging population, these findings have important implications for future service planning and healthcare providers.