



Dementia is a major public health challenge; it is estimated that by 2050, the number of people in the UK affected by dementia will be about 1.7 million¹. Patients with dementia are frequently admitted to hospital as emergency cases, however dementia itself is often not the primary diagnosis. Medical problems like infections, malnutrition, dehydration and injurious falls, are reported more frequently in patients with dementia; in addition, these patients are often elderly, and frequently suffering from other comorbid conditions including cardiovascular disease, chronic lung disease and musculoskeletal disorders. Patients with dementia are more likely to be unnecessarily admitted to hospital, and when they are it is often as an emergency admission via the ambulance services. This CLAHRC fellowship project studied the possible ways in which the impact on the ambulance services could be examined.



Policy context

A report from the National Audit Office emphasised the need for every NHS organisation, including ambulance services, to improve care for people with dementia in order to avoid unnecessary hospital admissions¹.

People with dementia are still more likely to be unnecessarily admitted to hospital, have longer lengths of stay and enter residential care more prematurely than people without dementia^{1,2}.

Demand for emergency ambulance services has steadily risen over recent years. The majority of patients with dementia who are admitted, are admitted as emergencies, thus increasing pressure on ambulance and A&E services.

The research

This project sought to consider options to address the research question - what is the impact of dementia on ambulance services? A search of electronic databases seeking papers which address this question was undertaken.

Discussions were held with colleagues and organisations in emergency and related services to understand how the impact of dementia on ambulance services could be quantified using routinely collected data.

In addition, an audit was undertaken of A&E attendances with dementia at a local hospital for a four year period to March 2011, compared with an age matched group without dementia to examine differences in the extent of ambulance usage.

Key points

- Patients with dementia are often admitted to hospital as emergency cases; however dementia itself is often not the primary diagnosis .
- Elderly patients suffering from dementia frequently suffer from a number of co-morbid conditions such as cerebrovascular disease, chronic lung disease and musculoskeletal disorders.
- Medical problems such as infections, malnutrition, dehydration and injurious falls, have all been reported as occurring more frequently in patients with dementia.
- Dementia sufferers are at risk of multiple acute hospital admissions as a result of their dementia and/or existing co-morbidities.

The results

The literature review yielded four papers of relevance, which confirmed the findings above. Consultation with local experts revealed that even the crudest measure of impact - intensity of ambulance use - has not so far been quantified. Measures which could be used to study this include journey frequency, call severity and on-scene time. However, to quantify these for patients would be difficult due to the lack of specific diagnostic coding in routine ambulance data.

The hospital audit showed that people with dementia were more likely to arrive at hospital by ambulance than those without dementia (82% versus 54%, Odds ratio 3.73, 95% CI 3.49-3.99), however caution is needed in interpreting these data.

Conclusions and recommendations

The scoping exercise demonstrated the inherent difficulties in this study, including the difficulties presented by coding differences between different IT systems. To examine the research question two options were proposed:

- An in-depth retrospective investigation bringing together datasets from general practice, ambulance data and hospital episode statistics. However barriers include access to data, information governance and linkage of data sets.
- A prospective observational study to collect information from a number of GP practices and the East of England Ambulance Service Trust, but this would also be complicated by IT and linkage difficulties.

Stakeholders who attended a consultation forum overall favoured the first option, but accepted that there would be technical challenges to be overcome.

One local Trust has already undertaken various strands of work as part of their dementia strategy, including a dementia patient pathway, patient and carer experience, and training for staff caring for dementia patients. This has resulted in reduced length of stay and improved patient advocacy.

Anecdotal evidence suggests that organisations have moved forward from trying to quantify the impact of dementia on ambulance services, to developing services to prevent avoidable admissions and to support people with dementia once they are admitted to hospital. The stakeholders concluded that a more practical way forward might be to evaluate projects aimed at preventing avoidable admission. If admission can be prevented or hospital stays shortened through improved preventive and supportive care, this will in all likelihood have a significant impact on ambulance services.

The development of an evaluation tool would provide valuable evidence to inform best practice in this area.

A CLAHRC Fellowship project



CLAHRC Fellow 2011, Uju Okereke, leads on Mental Health and Learning Disabilities at NHS Great Yarmouth and Waveney. She also covers a number of other projects including the NHS Prevention East of England QIPP pilot programme and the Health Trainers contract. Prior to working in public health Uju worked as a pharmacist in hospital and community settings.

On the CLAHRC fellowship programme Uju's project was to investigate the impact of dementia on ambulance services, and to determine the impact of location (rural/urban) and place of residence (own home/care home) on the ambulance service.

Uju says 'It is hoped that by understanding how ambulance services are used by dementia patients for unplanned care episodes, we can improve both their care and the impact on secondary services. The project in itself is exploratory in the first instance and the foundations laid for further work by future CLAHRC fellows'.

CLAHRC Fellowships offer clinicians and other healthcare professionals and managers the opportunity to conduct locally appropriate research in collaboration with research staff.

References

1. National Audit Office Improving Dementia Services in England - an interim report. England 2010
2. Natalwa et al, Reasons for Hospital admissions in dementia patients in Birmingham, UK, during 2002-2007. *Dementia and Geriatric Cognitive Disorders* 2008;26:499-505