THE UNIVERSITY of York
Centre for Reviews and Dissemination

Interventions to reduce unplanned admissions from care home settings

- There is little good quality comparative evidence to inform strategies for reducing unplanned admissions from care homes.
- Much of the evidence for integration and community geriatric services comes from case studies which are not always well reported; any positive findings may not be easily replicated elsewhere.
- Closer working between healthcare and care home staff (through dedicated GP or community geriatric services), protected training for care home staff, and implementing processes for stated end-of-life care preferences all appear promising.
- NICE recommends that multifaceted interventions to prevent delirium should be implemented in long-term care settings.
- The lack of good quality evidence in this area highlights the need to monitor the impact of changes made to the delivery of services especially in relation to resource use and patient experience.

This evidence briefing has been produced by the Centre for Reviews and Dissemination. Full details of methods are available on request (paul.wilson@mbs.ac.uk or liz.bickerdike@york.ac.uk). The content of this briefing was judged to be up to date as of December 2014.

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Background

Due to their complex care needs many care home residents may experience multiple unplanned hospital admissions. Northumberland CCG requested a summary of the evidence focused on interventions and approaches that could be employed to reduce unplanned hospital admissions (and deaths in hospital) from care homes.

This briefing has focused on the summarizing evidence related to community geriatrician services, case management, discharge planning, integrated working between primary care and care homes, medicines management, the prevention of delirium and end-of-life care.

Effectiveness

Community geriatrician and multidisciplinary team services

We did not find any systematic reviews of community geriatrician services for care home residents but we did identify some relevant case study reports. We have not systematically searched for case studies so it is worth noting that there is a possible risk of bias. The case studies presented may not represent the totality of the available evidence.

A 2012 case study of geriatrician input in to nursing homes observed a reduction in length of hospital stay and number of hospital admissions.[1] Geriatricians had fortnightly medical advisory meetings with GPs and community pharmacists and provided a daily telephone advice service. Geriatricians were alerted if one of the care home residents was admitted so that hospital discharge could be expedited. Intravenous antibiotics and fluids were provided in care homes for patients not requiring full acute services but not yet ready for discharge.

Community multidisciplinary team visits to care homes have been recently piloted in the Wirral.[2] Teams visited care homes for half a day per week to support residents requiring specific support. An out-of-hours GP also phoned care homes on weekends to determine whether any support was required. The evaluation of the pilot does not report any data about hospital admission outcomes but states that stakeholders “felt the pilot had contributed to reduced hospital admissions”.

The King’s Fund reported a recent case study of the Leeds interface geriatrician service, which works within 12 existing community multidisciplinary teams, each covering approximately 70,000 people.[3] Although the service is not focused on care home residents, it is presented here as an example of community geriatrician services. Geriatricians attend community multidisciplinary team meetings and provide home visits. They also provide a telephone advice service to GPs and community staff and facilitate getting patients directly admitted to specialty beds, bypassing A&E. They work with intermediate care teams (intermediate care beds in care homes) bridging acute services and community services. The geriatric specialist input in to the existing integrated care teams is funded via a direct agreement between the three Leeds CCGs and Leeds Teaching Hospital. While it is difficult to determine the impact of the service on admissions (separate to the integrated MDTs) the increase in the rate of emergency admissions did fall over a 12 month period.

Case management

We did not find any systematic reviews looking at case management for care home residents, but systematic reviews of case management for community-dwelling older people may be of some relevance.[4,5]

One recent, well-conducted systematic review included five trials of community-initiated case management and six of case management initiated in hospital or at discharge for older people.[4] Community-initiated case management interventions were delivered by GPs or nurses and in some cases involved the support of a multidisciplinary team. Hospital-initiated case management was delivered by advanced practice nurses of members of the geriatric team. While none of the included studies were conducted in the UK, studies were performed in a variety of health care

systems and almost consistently showed that case management did not reduce unplanned hospital admissions. Community-initiated case management did not affect other outcomes including emergency department or GP visits. An earlier review reached similar conclusions.[5]

Discharge planning

No systematic reviews were found looking at discharge planning for care home residents, however reviews about planning for frail older people being discharged in to the community may have some relevance.

One systematic review included five randomised controlled trials evaluating comprehensive geriatric assessment for community-dwelling older people discharged within 72 hours from acute hospitals. The overall quality of the evidence was poor and the review concluded that there was no clear evidence of a benefit in mortality or readmission.[6]

Integrated working between care homes and healthcare services

A systematic review evaluating different approaches to integrated working between primary care professionals and care home staff found a small number of studies reporting a positive impact on avoiding hospital admissions where there was strategic integration between the two.[7] Hospital admissions were avoided where care homes were supported by dedicated health service teams, health service funded beds or managed care. Facilitators to integrated working included the support of care home managers and protected time for training and support for all care home staff from health care professionals. Barriers included a failure to acknowledge expertise of care home staff, care home staff's lack of access to health care services and a high turnover of care home staff.

We also identified a report by the same authors of three different approaches to integrated working between primary care services and care homes.[8] The models studied were care homes with NHS/LA funded beds with linked multidisciplinary teams, care homes receiving specialist service support, and care homes using primary care services equivalent to those provided to people living at home. While no one model was more successful than another, the authors suggested that having a single practitioner or practice with care home responsibilities could be overwhelming and unsustainable alongside a generalist case load.

Medicines management

Two reviews have assessed a range of interventions to optimise prescribing for older people in care homes.[9,10] The reviews evaluated the effects of medication review, multidisciplinary case conferencing, care home staff education, and clinical decision support technology. Neither review found any evidence of an effect on adverse drug events, hospital admissions or mortality.

Delirium

Delirium is a major cause increased morbidity, mortality and functional decline in the frail elderly and, is a significant driver of unplanned admissions and healthcare utilisation costs. There is evidence that delirium can be prevented in hospitals.[11,12] Successful interventions are multifaceted and combine staff education with systematic targeting of modifiable risk factors (such as dehydration, pain and mobility). NICE recommends that such interventions should be implemented in long-term care given the likely benefits. However, there is as yet no good quality evidence to suggest that this approach is reduces unplanned admissions.[13] A pilot study that aims to assess the effectiveness and cost effectivenss of a multifaceted intervention (Stop Delirium!) delivered in care homes is ongoing.[14]

End of life care

Evidence about advance care planning and end-of-life care is lacking.[15] A Cochrane review of end-of-life care pathways in the general population did not find any studies meeting the inclusion criteria. A protocol for a Cochrane review about advance care planning for end-of-life care has been published but the review has not yet been completed.[16]

A recent systematic review of end-of-life care policies in care homes included three case series involving 64 nursing homes.[17] The quality of the evidence was low but suggested implementation resulted in benefits for residents in terms of improved communication (increases in documentation for “do not attempt resuscitation”, and advanced care planning); continuity of care (increased “when necessary” or “prn” medication); care of the dying (increased use of a “last days of life” pathway); reduced number of hospital admissions, reduced number of inappropriate days spent in hospital, and consequently reduced number of deaths taking place in hospital; and a lower number of crisis events. The programme also appeared to increase staff’s knowledge, skills and confidence around palliative care. More rigorous comparative studies are needed to confirm these findings.

Cost effectiveness

We found evaluations looking at the cost effectiveness of an integrated care model in a residential home, clinical medication review for care home residents and an advanced directive programme in nursing homes.

A multidisciplinary integrated care model was evaluated in residential homes in The Netherlands.[18] The model involved a quarterly assessment of health status and care needs which formed the basis of an individual care plan, and a multidisciplinary consultation offered to the frailest residents with complex health care problems. Quality of care was higher in the short term when compared with usual care and there were modest cost increases in the intervention group.

Evaluation of clinical medication review by a pharmacist in nursing and care homes around West Yorkshire, compared with usual GP care, showed no significant differences in the rate of hospitalisation, GP consultations or medication costs, although a significant reduction in falls was observed.[19] However, the study has some significant limitations which make it difficult to determine whether the findings are reliable.

A randomised controlled trial compared usual practice with the Let Me Decide advance directive programme.[20] Let Me Decide provided various choices relating to life-threatening illness, cardiac arrest and feeding for elderly people in Canadian nursing homes. Although the cost data from 1997 are out of date, results highlight that it is possible to reduce the number and length of hospitalisations (and therefore costs) through the expressed preferences of residents to remain in a nursing home rather than inpatient care. Total number of hospitalisations in the intervention homes was 143 compared to 290 in control homes. There were no significant differences between groups on mortality or residents’ satisfaction.

Implementation

The reviews looking at different approaches to integrated working between primary care and care home staff suggested a facilitator to successful integrated working was protected time for training and support for all care home staff from health care professionals.[7,8] The report authors also recommended:

- Mapping care provision and existing ways of working with care homes
- Improving data systems on activities and costs
- Developing the quality of relationships between primary care and care home staff
- Protected time for training and support for all care home staff from health care professionals

The King’s Fund case study of geriatrician service in Leeds highlights the importance of high level clinical leadership and ensuring there is sufficient capacity in the geriatric workforce to enable consultants to take on out-of-hospital work load.[3]

The lack of good quality evidence in this area highlights the need to monitor the impact of changes made to the delivery of services especially in relation to resource use and patient experience.

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