

# **Optimal NHS service delivery to care homes: a realist evaluation of the features and mechanisms that support effective working for the continuing care of older people in residential settings**

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## Background

In England, long term continuing care for older people is principally provided by independently owned care homes. The care home market is diverse. Across the NHS there are numerous approaches to health care provision for this sector including: general medical services (GMS) provided by local GP practices, linked community services, outreach clinics, care home specialist nurses or support teams, pharmacist-led services, designated NHS hospital beds and enhanced payment schemes for GPs. The recurrent issue is how to embed and sustain productive patterns of working between health care services and providers of long term care.

The organisational flux in the NHS and the way in which local contexts influence services mean that it is unlikely that a single model of health service delivery can promote effective working for all care homes. Rather there will be key features or explanatory mechanisms, already manifest within several models that are potentially applicable more widely.

The research questions were:

1. What is the range of health service delivery models designed to maintain care home residents outside of hospital?
2. What features (in realist evaluation terms 'mechanisms') of these delivery models are the 'active ingredients' associated with positive outcomes for care home residents? (Models may include general medical services [GMS], linked community services, outreach clinics, community matrons, specialist nurses or care home support teams, pharmacist-led services, designated NHS hospital beds and enhanced payment schemes for GPs.)
3. How are these features/mechanisms associated with key outcomes, including medication use, use of out-of-hours services, resident, relatives and staff satisfaction, unplanned hospital admissions (including A&E) and length of hospital stay?

4. How are these features/mechanisms associated with costs to the NHS and from a societal perspective?
5. What configuration of these features/mechanisms would be recommended to promote continuity of care for older people resident in care homes at reasonable cost?

## Methods

This realist evaluation was organised in two phases.

**Phase one** developed a theoretical understanding and working propositions of how different contexts and mechanisms influence how the NHS works with care homes, with reference to five outcomes: admission to hospital, length of stay in hospital, use of out of hours services, medication use and review and residents, relatives and staff satisfaction. To develop a preliminary understanding of what supported good health care provision to care homes we completed a scoping of the literature, that included a review of reviews and survey of types of service provision to care homes. We also interviewed National Health Service and Local Authority commissioners, providers of services to care homes, representatives from the Regulator, care home managers, residents and their families. We used these data to develop theoretical propositions that were further tested in the literature to explain why an intervention may be effective in some situations and not others. We searched electronic databases and related grey literature. Finally the findings were reviewed with an external advisory group.

**Phase Two** was a mixed method longitudinal case study design. It aimed to develop further a theory based explanation of the interrelationships between the different contexts and mechanisms identified from phase one in achieving improved outcomes for residents, the NHS and care home staff.

We purposively recruited 12 care homes from three geographically disparate study site. Each organised health care support to care homes differently. This defined the case. Site 1 had invested in care home specialist teams with expertise in care of older people, site 2 had linked care homes to specific GP practices and provided extra funding to support GP involvement and site 3 had limited extra provision for care homes apart from two linked

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specialist nursing posts. The care home managers in site 3 had all completed a leadership programme. We tracked the care residents received for 12 months and interviewed care home staff, residents, family and visiting health care professionals about how they provided and received care, what they perceived was important in supporting residents and how they worked together to achieve good care in relation to our five outcomes of interest. At the end of data collection we conducted an online survey with care home staff to assess their satisfaction with the health care services received.

## Results

In phase one the review of service provision to care homes included 15 surveys of service provision to care homes that had been published since 2008 and 6 reviews on health care interventions to care homes. We found limited agreement in the intervention literature about outcomes, how they should be defined or what quality of care and life for care home residents looked like. The review of surveys found that the variation in the organisation, provision and funding of health services, both generalist and specialist, to care homes could not be explained by resident need or care home type. The wide variability in the provision of services to care homes and widespread lack of dental services signalled that erratic and inadequate care for residents were a persistent feature of health care provision to residents in care homes.

The 58 stakeholder interviews provided overlapping accounts of what was necessary to achieve “good” health care. These included education and training of care home staff, access to clinical expertise, the use of incentives and sanctions to achieve minimum standards of care, the value of champions and designated workers working in and with care homes and the importance of activities that built robust working relationships between the two sectors. Combining this with the review evidence, and an initial scoping of the literature we refined these into propositions to test in the wider evidence.

The realist review findings led us to propose that it is activities that support and sustain relational working between care home staff and visiting health care professionals that explain the observed differences in how health care interventions are accepted and embedded into care home practice. Contextual factors such as financial incentives or sanctions, agreed protocols, clinical expertise and structured approaches to assessment and

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care planning could support relational working to occur. However, of themselves were unlikely to be insufficient to achieve change if they did not lead to visiting health care professionals and care home staff working together to identify, plan and implement care home appropriate protocols for care. This explanatory theory was the starting point and putative explanation of what enabled health care services to work well with care homes that we sought to test and refined in phase two.

Phase 2: The three sites organised health care to care homes in different ways. Site 1, emphasised specialised care of older people, working in partnership with care homes. This was characterised by multiple multidisciplinary teams that either worked exclusively with care homes or had explicit responsibility for care homes as part of their work. A nurse-led care home service had been in place for 15 years, which included the case management of new residents. Formal and informal systems for team-to-team referrals about specific residents included access to a specialist dementia outreach team.

Site 2, emphasised incentives and sanctions and service delivery was characterised by a focus on GPs as coordinators of healthcare services provided to care homes. Specific GP practices received extra payments to work with care homes and homes were asked to register their residents with one of these. Structured training for care homes was being introduced to equip staff with the knowledge and skills to provide care for residents with complex needs and reduce unplanned hospitalizations. Completion of training meant a care home was eligible to receive additional payments. Site 2 had some elements of specialized services for older people. There was a nurse specialist in palliative care designated to care home residents, and there were two other services available to care homes (but not specifically targeted towards them) - a team of nurses and therapists, and a dementia advice and support service. The overall emphasis of provision was on services for individual residents.

Site 3 healthcare provision was characterised by services that did not differentiate between older people living in their own homes and in care homes. Individual expert practitioners with competencies relevant to management of care home residents, for example tissue viability and cardiac nurse specialists, received referrals through separate routes. For some but not

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all the care homes there was one care home nurse specialist to respond to acute deteriorations in residents to prevent admission to hospital, and one dementia care specialist nurse. All the care home managers had received leadership training from a charity focused delivering positive change in care homes for older people.

In total, 242 residents were recruited across the three sites and 181 interviews were completed with residents, relatives, health care professionals and care home staff. The resident cohort was representative of UK care homes generally in terms of the prescribing rates seen. Across the three sites, 83 participants were lost to the study through death and three were transferred to other care settings. Most residents had infrequent health service use of many types of health services, GPs were the most heavily utilised group with over 90% of residents having some level of GP contact in each site.

For the most part there was no compelling difference in service use, or costs, between sites. Site 3, which might have been expected to have been substantially cheaper, given that the cohort recruited here was substantially less dependent, however, this was not in fact the case. It also had a greater number of secondary care non-admitted contacts, as well as a trend towards higher costs associated with hospital admissions. This may indicate a tendency to refer residents into hospital, rather than provide care in-situ. Site 1, which might have been expected to have been substantially more expensive due to routinely using more specialist care was not.

A descriptive analysis of unplanned admissions found that 39 residents were hospitalised at some point during the 12 month data collection period, just 16% of the total number of residents recruited to the study. The length of stay ranged between one night (n=17) and 47 nights for one case involving a dementia-related mental health assessment, with 22 residents being hospitalised for more than five nights in one episode. These support the findings from the quantitative analysis of a greater reliance upon secondary care in site 3 and highlight the tendency for patients to stay much longer in hospital in this site.

Over the study period, there were 366, 261 and 266 medication changes – representing 0.40, 0.44 and 0.49 changes per resident per month – in sites 1, 2 and 3 respectively. There were no consistent trends in anticholinergic burden scores, antibiotic or opioid prescribing. Healthcare practitioners across all three sites identified common issues with medication management, including concerns about care home staff knowledge of pharmacology, difficulties of prescribing for wound management, the challenges of multiple prescribers visiting care homes and the importance of access to emergency end-of-life medication. When GPs held regular clinics in the care homes, there were few or no references to difficulties in securing prescriptions and reviews were conducted more frequently. There were also higher levels of care home staff satisfaction with access to health care in those sites where GP clinics were offered. A lack of pharmacist involvement in medication reviews was highlighted as a gap in service provision across the sites.

All health care professionals identified avoidance of unnecessary hospitalizations as an important part of their involvement with care homes. However, apart from the GPs, all of the care home services worked office hours, and out of hours service provision did not always fit around the needs of older people living with dementia in care homes. An example across all three sites was that residents had to be admitted to the emergency department at the weekend if they needed a psychiatric opinion. Some out of hours services were perceived as having negative attitudes towards care homes and staff and were sometimes described as ignoring care plans put in place by teams providing more routine support to care homes during the working week. Care home residents were perceived to be a low priority for out of hours and emergency services.

There were differences between the sites in how care home and NHS staff described working together, how care homes were represented as providers of care to older people, and the ability of services to engage with the issues and care needs of people living and dying with dementia.. Across all sites, six contexts were identified as being key to how care was organised and operationalised. These were: the system for referrals, availability of dedicated health services for care homes, team working, the use of case management, care



home based training and the length of time NHS services and practitioners had worked with care homes and each other.

The synthesis of the two phases of work resulted drew on both positive and negative examples of NHS support to care homes to test and develop an explanatory theory of what works when and in what circumstances that has the following elements:

### **Relational working**

Supporting (incentivising) the right mix of people to be involved in the design of health care provision to care homes such as discussions before setting up a services, use of shared protocols and guidance and regular meetings (context) prompts co-design and alignment of health care provision with the goals of care home staff and a shared view about what needs to be done . This creates opportunities for joint review and anticipation of residents' needs including medication and retaining residents with complex care needs in the care home (outcome).

At an institutional level, the case studies suggested that activities that linked NHS services around the care home as well as with the care home were important. The organisation and funding of NHS services to care homes in the three sites reflected a continuum of association that in part showed how relational patterns of working had developed over time. Thus, the focus and content of work-based decisions were facilitated by and/or inhibited by relationships between visiting health care professionals and care home staff. These acted as a source of influence on the nature and expression of health related interests and values in conjunction with individual's differences and length of association.

How the different services were organised around the care homes affected the level of horizontal integration achieved. An explicit (funded) commitment to spend time working with care homes was more likely to foster relationships and confidence that residents could access services as needed. This was especially true when health care professionals working with care homes were linked to other NHS services and their care home work was recognised by these services as important. These patterns of working and visiting created naturally occurring opportunities to meet and discuss care, a nurtured a mutual appreciation

of the challenges both NHS and care home staff faced each day. There was some evidence that it fostered access to a wider array of services, freed up GPs to focus on GMS tasks and enabled an approximation of care/case management, even when such roles were not made explicit.

We found little evidence, however, apart from adjusting times of visiting and improving access, of NHS services organizing services to accommodate care home staff or residents' priorities. Where individual health care professionals involved other services on a resident by resident basis, the frequency and intensity of their involvement were at their discretion and was often shaped by the demands of their wider caseload.

### **Importance of General Practitioners**

The involvement of the GP was important, even if other services had absorbed some of their activities such as medication review, responsive care and case management. Services that provided intensive care home support, through a model of relational working, still needed links to GPs, for diagnosis, urgent care and discussions about unresolved issues of care. This was also related to how the working relationships between secondary care, care home staff and visiting NHS services were organised.

### **Investment in care home specific work as part of a system of care:**

Commissioning several NHS services to work with care homes on a regular and ongoing basis creates a network of expertise in the care of older people (context) and increases NHS Staff and services' confidence and ability to refer residents and review care to adapt patterns of service delivery (mechanism). This can improve residents' access to care and reduce demand on urgent and emergency care services (outcomes). Where there is a narrow focus on care homes as a drain on NHS resources commissioners and practitioners' focus on short term interventions and measure outcomes in terms of what had not happened and how resources had not been used. This does not foster relational approaches to working together.

At a practitioner level formal acknowledgement that working with care homes was important and valued work had a legitimizing function that gave NHS staff permission to engage with care homes. When health care provision is funded to work with care homes on a regular

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basis and services have developed over time (contexts), and practitioners see this as a legitimate and manageable use of their time and skills, then staff and services are more likely to develop ways of working that seek to link residents with other services and work with care home staff to resolve problems (mechanisms). This can lead to improved access to NHS services, crises avoided and care home staff and resident satisfaction with health care provision (outcomes)

### **Access to age appropriate care (dementia)**

Phase one identified access to age appropriate clinical assessment and care as an important context.. Phase two supported this inasmuch it found that pain, pressure ulcer prevalence, medication use and comorbidities were predictors of increased health service utilisation amongst care home residents. Access to NHS expertise in dementia care is particularly important. We found that the greater the severity of cognitive impairment, the less likely it was that a resident would see a primary care professional. The presence of dementia complicated care provision and not all services could easily deal with this complexity. Qualitative accounts from NHS staff described how difficult they found visiting residents with dementia, notably where there was no ready access to specialist dementia services. If NHS and care home staff have access to dementia expertise when addressing residents' behaviours that they find challenging (context) then they have confidence and skills in providing care (mechanism) that reduces the need for antipsychotic prescribing and the distress of residents (outcome).

### **Conclusions**

A theory of commissioning for health care provision to care homes proposes that NHS services are more likely to work well with care homes when payments and role specification endorse staff working with care homes at an institutional level as well as with individual residents. Integral to such endorsement is a recognition of the value of supporting activities that, over time, enable NHS staff and care home staff to co-design how they work together to improve residents' health care.

Commissioning arrangements should also consider how services are organised around the care home. This worked well when it included expertise in dementia care, the GP as part of

the care delivery team and access to a wider array of services, and enabled an approximation of care/case management, even when such roles were not made explicit.

### **Implications for practice**

There are multiple ways that the NHS works with care homes and it is unlikely that there is one right way of working or model of service delivery. The following implications are directly related to the different elements of the programme theory:

1. When commissioning and planning NHS service provision to care homes it is important that residents in care homes have access to health care that is equitable and equivalent to those received by older people living at home. We found that service provision to care homes is often ad hoc, and reactive and that some services (e.g. dental health care, speech and language therapy) were either not offered to all care homes or were limited in scope.
2. Health care professionals' work with care homes should be formally recognised by NHS managers as key to the support of integrated working for older people. Recognised referral links with other community and hospital services are more likely to support continuity of care and management of acute episodes in the care home. Where care home services are a standalone service or an adjunct to an existing role without protected time, practitioners can struggle to co-ordinate residents' care and involve NHS services when needed.
3. Investment and incentives to NHS services and practitioners working with care homes should be structured to support joint working and planning *before* services are changed or modified. Where funding and sanctions are designed to reduce inappropriate demand on secondary care and other NHS services this can have the unintended consequence of focusing on failure. The study found that when funding supported care home teams and GPs to have more time to learn how to work with care homes and identify shared priorities and training needs this was more likely to facilitate co-operation, affirm best practice and motivate staff to find shared health care solutions.

4. Care home providers' referral guidance needs to fit with NHS referral protocols together with opportunities for dialogue where they are uncertain about how to identify different NHS services. The study found that care home staff were often unsure who to involve when they were concerned about a resident. Established relationships that had developed over time between care home staff and HCPs were also observed to facilitate appropriate referrals that in turn helped to reinforce best practice.
5. Care home based training needs to include all care home staff working with residents not just the nurses or senior carers and support them to work with the NHS and communicate with family carers. New care home staff in particular need support from NHS staff when working with residents and understanding their health care needs. The study findings suggested that when training included all members of the workforce (e.g. catering staff and junior staff) there was more likely to be engagement at an organisational level and sustained implementation of service improvements.
6. GPs need to play a central role in residents' health care. How their work complements other care home focused services should be specified and agreed between all those involved in assessing, treating residents and making referrals. Regular GP clinics or patterns of visiting that were predictable were associated with higher levels of care home staff satisfaction with health care and fewer medication related problems and more frequent medication reviews. This was particularly true when there was opportunity to discuss care provision across the care home and not just individual residents' health care.
7. Dementia expertise needs to be integral to regular service provision not part of a separate service. The study found that both care home and NHS staff could benefit from ongoing access to training and resources to equip them to support residents living with dementia.
8. Care home staff play a vital role in managing and monitoring residents' medication but may need further training and support in this area. The study

found that this was an aspect of care that was of particular concern to both residents and their relatives

### **Recommendations for future research**

Our recommendations for future research relate both to aspects of research methods and to a number of research questions to further evaluate and explicate our programme theory.

1. We conclude from the findings that there is limited value in further descriptive work on NHS healthcare service provision to care homes that is not linked to an understanding of how the services work with care home staff to improve care home residents' health-related outcomes.
2. There is an urgent need for research that can develop and refine a minimum data set for residents that can link with health and social care patient/client data systems.
3. This study found limited evidence of care home residents, staff or families influencing or shaping how or what kind of health care support was provided. Further research is needed that can build on the principles of relational working and co-design to test different ways of supporting their meaningful participation.
4. We found very little evidence of how family members contribute to or monitor the health care that their relatives receive. There is a need for further research to understand how their knowledge of the resident and their insights might inform care.
5. Research on how training and development in dementia care across the NHS and social care workforce (and not just care home staff) can improve the quality of care of people living and dying with dementia.