Identifying the health care system benefits of housing with care

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Southampton City Council and the Housing Learning & Improvement Network

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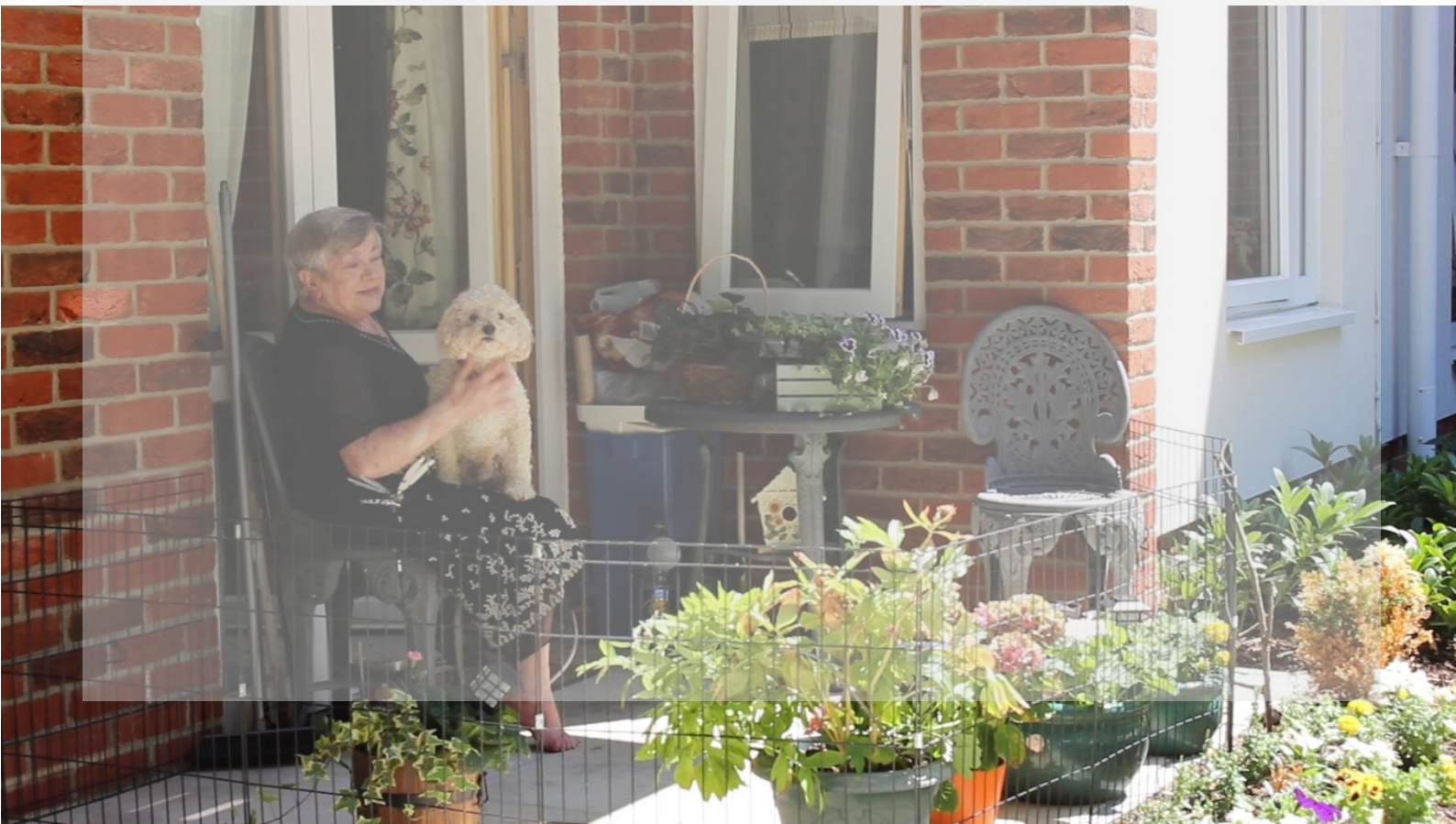

Contents

Executive summary

Introduction

Housing with care continues to grow in popularity as a form of housing for later life. With the government's recent Prevention Green Paper[1], there is also a growing interest amongst policy makers and commissioners in this type of housing, and the need to better understand the impacts it may have on health and social care systems. While some benefits are well understood (e.g. the impact on residents' wellbeing and the model's place in the social care pathways), the research into the model's impact on the health care economy has been more limited. As more agencies work jointly to meet the demand placed on services, including health and housing, a more holistic view of housing with care is required to support service development and delivery.

Local context

Southampton City Council has long recognised the benefits of housing with care, and made a commitment to significantly grow its housing with care provision over the coming years. This is in line with local strategies looking to promote independence and community based solutions to care, as well as to decrease the local authority's reliance on residential care and to promote more options and choice for people with care needs in later life.

Southampton City Council has commissioned research from the Housing Learning & Improvement Network (LIN) to investigate the impact of housing with care on health care systems and any associated evidence of the benefits to the health care system that derive from housing with care.

This research covers the following:

1. An evidence review which summarises the identified impact on and potential benefits to the **health care system** from housing with care services.
2. The **financial cost-benefits** associated with these identified health care system benefits from the use of housing with care.
3. The estimated **financial impact for health care services** of the current provision of housing with care in Southampton and the potential growth of housing with care services.

[1] https://www.gov.uk/government/consultations/advancing-our-health-prevention-in-the-2020s/advancing-our-health-prevention-in-the-2020s-consultation-document

Summary of findings

While the body of research available that identifies the health impacts of housing with care has been relatively limited, all the identified evidence suggested positive impacts on the health care economy, which included:

- Reductions in the number of GP visits (by housing with care residents).
- Reductions in the number of community health nurse visits (amongst housing with care residents).
- Reductions in the number of non-elective admissions to hospital (by housing with care residents).
- Reductions in length of stay and delayed discharges from hospital (amongst housing with care residents).
- Reductions in ambulance call outs, typically linked to reduced incidence of falls (amongst housing with care residents).

When quantified, it was possible to estimate that for each person living in the housing with care settings, the financial benefit to NHS was approximately £2,000 per person per annum (calculated as a costs benefit to the health care system).

When compared with the volume of the housing with care market in Southampton, it was possible to estimate that Southampton's current provision of housing with care (circa 170 units) has been producing a cost benefit to the health care economy of over £334,000 per year. This figure is estimated to increase to almost £890,000 per year once Southampton delivers on its ambition to grow its supply to about 450 units of housing with care.

In addition, the body of research identified a number of other benefits of housing with care, which included improved individual outcomes for residents such as improved quality of life and reduced loneliness.

While the findings of the research are encouraging, more needs to be done to promote the housing with care model and to highlight its positive impacts. More research would also help to establish the long term impact of housing with care.

1. Introduction

1.1. Housing with care: national context

There is a growing interest in housing for older people, with planners, policy makers and customers alike taking an active part in creating the demand for more options for housing for older people. The retirement housing sector in the UK, which includes housing with care, is starting to mature amid increasing recognition of the demographic trends that will underpin demand in the future. The expectations of older people are changing, too, with more people looking for appropriate housing options for later life. Residential care, which has been a traditional move-on choice for a number of years, is decreasing in popularity as more people look to find alternatives.

The sector is also becoming more defined between retirement housing (with less care on-site) and housing with care (with increased provision of communal facilities and onsite care).

Although the market is becoming more established, it is still very modest in size, with room for large-scale growth. Retirement housing (including housing with care) accounts for only around 2.6% of homes across the UK[2], which is surprising, considering that about 76% of older people are home owners[3] and that about a quarter[4] express interest in moving to that type of provision. This presents a significant pool of customers for potential new housing developments, specifically targeted at older people.

Local authorities have been commissioning housing with care (often referred to as 'extra care' housing) since the 2000s. This has been driven in part by a desire to extend the range of housing options available to older and disabled people and by the need to have more cost effective models of care. There is increasing interest amongst commissioners in both the long term benefits of housing with care in terms of improved quality of life for residents but also the benefits to the health and social care systems.

1.2. Housing with care: features and characteristics

Housing with care continues to grow in popularity as a form of housing for later life. It shares some key characteristics that distinguish it from other models, such as residential care and sheltered housing.

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[2] http://www.knightfrank.co.uk/research/uk-retirement-housing-insight-series-2018-5420.aspx

[3] New Approaches to Housing for Older People - Supporting organisations to pioneer new ways of working and review current and emerging practice (June 2014) CIH and Housing LIN Study http://www.cih.org/resources/PDF/Policy%20free%20download%20pdfs/New%20approaches%20to%20delivering%20better%20housing%20options%20for%20older%20people.pdf

[4] https://www.adass.org.uk/media/6396/2812-mears-report-low-res.pdf

These include self-contained accommodation with its own front door, an ethos of supporting independence, flexible care offer, on-site 24-hour care and support, access to activities and social events and various communal facilities that might include, for example, a shop, a restaurant and gardens.

Housing with care offers a multitude of benefits to its residents relating to maintaining independence, health and mental cognition and reducing loneliness. It is specialist housing, designed especially for people over the age of 60, who have additional needs, mostly relating to their mobility or mental cognition and younger people with disabilities.

Housing with care is often complex, both in terms of funding streams and the provision of care and support. This is particularly true where the care and the housing support and / or housing management are provided by different organisations.

1.3. Southampton context: housing with care: impact on health care systems

Southampton City Council recognises the need for more housing based options for older people, and the benefits this type of housing can offer, both in terms of quality of life of its residents, as well as the benefits to the local authority. This has resulted in a commitment to develop more housing with care in the city in the coming years. This approach supports City Council's other strategies, which seek to reduce the reliance on residential care settings for people with additional needs and to divert the demand towards independent living.

In Southampton, there are currently 169 units of housing with care. This number is anticipated to grow to 400 – 500 units over the next 10 years to adequately meet the projected need.

The City Council is keen to ensure that its housing with care strategy is underpinned by research evidence in relation to the positive impact that housing with care can make on the lives of older people and people with disabilities. While there is body of knowledge available to understand how housing with care supports individuals and the social care systems, there is very little information available to appraise its impacts on the health care systems. The City Council would like to better understand these impacts, especially in relation to any potential benefits housing with care can offer. This is to provide an opportunity for broader engagement with the health care systems and to potentially unlock new funding avenues in the development of housing with care services.

Southampton City Council has commissioned research from the Housing Learning & Improvement Network (LIN) to investigate the impact of housing with care on health care systems and any associated evidence of the benefits to the health care system that derive from housing with care.

The Council will develop a number of new housing with care schemes in the city over the coming years, and this research is intended to quantify the additional benefits these schemes bring to the local health care system.

The research report has three sections:

- An evidence review which summarises the identified impact on and potential benefits to the **health care system** from housing with care services.
- The **financial cost-benefits** associated with these identified health care system benefits from the use of housing with care.
- The estimated **financial impact for health care services** of the current provision of housing with care in Southampton and the potential growth of housing with care services.

2. Evidence review: the impact of housing with care on health care systems

There has been considerable research undertaken about housing with care since it emerged in the early 2000s as a new accommodation and care option for older and disabled people; which provides evidence of the wider benefits associated with housing with care:[5]

- There is a growing evidence base suggesting that, for some older people, housing with care offers better outcomes in terms of quality of life and independence when compared with remaining in mainstream housing. This is the case even for residents not in receipt of planned care and is partly due to some key features of the housing with care environment, including high levels of accessibility and security.
- Housing with care is very popular among those living in such schemes for a range of reasons, including the opportunities for social interaction, the availability of comprehensive facilities on site, and because the physical environment is purpose built to meet the needs of older people.
- Housing with care residents are on average less dependent, both physically and cognitively, than those living in residential care homes, but have significant needs that cannot be effectively met in traditional housing.

While the impact of housing with care on the social care sector and individual outcomes have been well evidenced, there is a gap in the research evidence is in relation to the impact housing with care has on health services. Southampton City Council is particularly interested to identify and understand the extent to which the impact of housing with care provides tangible evidence of health system benefits. Specifically the City Council wants to understand the nature of the current research evidence regarding the impact of housing with care on:

- General Practitioner services.
- Community nursing services.
- Non elective admissions to hospital.
- The length of stay and discharge from hospital.
- Ambulance call outs.

There is not currently an extensive body of research evidence in relation to the impact of housing with care provision on health systems, hence the need for this review of the evidence that is available, to determine the extent to which health benefits can be identified as being derived from the provision of housing with care services. The evidence review has considered relevant academic evidence, market intelligence, policy and guidance in relation

[5] https://www.housinglin.org.uk/_assets/Resources/Housing/Support_materials/ASSET_summary_findings.pdf

to whether older people's housing, specifically housing with care, delivers clear health system benefits, including cost benefits.

Whilst accepting that the body of current research evidence is relatively limited, the evidence that is available indicates that housing with care does have positive impacts on the health system specifically in relation to:

- Reduction in the number of GP visits (by housing with care residents).
- Reduction in the number of community health nurse visits (amongst housing with care residents).
- Reduction in the number of non-elective admissions to hospital (by housing with care residents).
- Reduction in length of stay and delayed discharges from hospital (amongst housing with care residents).
- Reduction in ambulance call outs, typically linked to reduced incidence of falls (amongst housing with care residents).

A synopsis of the evidence in relation to the impact and benefits of housing with care for each of these health care systems is set out below.

2.1. Impact on General Practitioner services

Housing with care schemes are characterised by the provision of onsite 24/7 care staff as well as the provision of communal spaces such as lounges and restaurants/cafes which are designed, amongst other things, to facilitate and encourage social interaction amongst residents. Housing with care services are intended to reduce the likelihood of loneliness amongst residents. Research by the International Longevity Centre identifies that lonely people use health services more frequently and are 1.8 times more likely to visit the GP; their research found that a housing with care resident experiences half the amount of loneliness (12.17%) than those people living in the wider community (22.83%), which suggests that living in housing with care reduces the likelihood of residents using GP services due to loneliness.[6]

Whilst a small number of housing with care schemes have been developed with co-located GP practices (for example St Monica Trust's housing with care scheme in Keynsham)[7] and some GP practices provide appointments within housing with care schemes to make better use of their time and reduce travel by residents, the majority of residents of housing with care schemes make use of their local GP services in exactly the same way as older people who do not live in housing with care.

[6] Wood, C. (2017). The Social Value of Sheltered Housing: Demos Briefing Paper. Available at: https://www.demos.co.uk/wp-content/uploads/2017/06/Sheltered-Housing-paper-June-2017.pdf
[7] https://www.stmonicatrust.org.uk/villages/the-chocolate-quarter

Polisson (2011)[8] found the average number of annual visits to a GP in England was 7.4 for women aged 65 and over, and 6.7 for older men. A longitudinal study by Aston University at an Extra Care Charitable Trust (ECCT) housing with care scheme[9] found that after 12 months GP usage by residents in the sample had decreased by 46%. Research for McCarthy and Stone found that on average, their residents reported that they had made 4 visits to their GP in the last 12 months.[10] Across the nine McCarthy and Stone schemes where research was conducted, residents had made 67 fewer visits to their GP in the previous 12 months compared with the 12 months before they moved into the scheme; or 0.66 fewer visits per resident.

Typically residents of housing with care will include people with more complex health and social care needs so it is particularly significant that there is evidence to indicate that housing with care can be effective in reducing the use of GP services amongst this cohort. Overall this indicates that **there is evidence to suggest that housing with care can have a positive impact in terms of reducing the number of GP visits made by housing with care residents.**

2.2. Impact on community nursing services

Part of the rationale for providing housing with care is that once people are better able to receive the care they need, their health and wellbeing is likely to improve and they may require fewer formal health care services.

Despite the limited research evidence available, there is evidence that housing with care can reduce the use of community nursing services by its residents as a result of the provision of on-site care staff, providing a living space that is designed to be better suited to age related needs, and the provision of nutritious food through an on-site restaurant. Several research studies have found in these circumstances that the use of community nursing services by housing with care residents has reduced.

Bäumker and colleagues (2008)[11] presented comprehensive evidence from twenty-two residents of an extra care scheme that showed the cost of health care dropped substantially with the single largest component drop being in nurse consultations. Aston University's[12] research of ECCT's housing with care schemes identified reductions in practice and district

[8] Polisson, M. (2011). Do waiting times matter in primary care? GP visits and list sizes in England.
[9] Holland, C. *et al*. (2015). Collaborative Research between Aston Research Centre for Healthy Ageing (ARCHA) and the ExtraCare Charitable Trust: Final Report.
[10] McCarthy and Stone (2014). McCarthy and Stone Local area economic impact assessment.
[11] Bäumker, T., Netten, A. & Darton, R. (2008) Costs and Outcomes of an Housing with care Scheme in Bradford. Joseph Rowntree Foundation.
[12] Holland, C. *et al*. (2015). Collaborative Research between Aston Research Centre for Healthy Ageing (ARCHA) and the ExtraCare Charitable Trust: Final Report.

nurse visits to housing with care residents. A study of a Bradford-based housing with care scheme, found there was a reduction in the intensity of community nurse consultations.[13]

Overall this indicates that **there is evidence to suggest that housing with care can have a positive impact in terms of reducing the number of community nursing service visits to housing with care residents.**

2.3. Impact on non-elective admissions to hospital

Unplanned emergency re-admissions to hospital have been a growing issue in the NHS in recent years.[14] 80 per cent of emergency admissions for more than two weeks are patients aged over 65. Falls are one of the most common (as well as costly) reasons for non-elective admissions among older people. Unsuitable home conditions can directly cause or at least contribute to a hospital admission, often via a fall. If individuals are discharged to unsuitable accommodation after their hospital stay, they may have further complications and return to hospital.

Housing with care is specifically designed to provide a living environment that is suited to older people, particularly those with health and social care needs or mobility constraints. The design features that support accessibility include wide corridors, lack of steps, lifts and potential risks or obstacles are designed out. Flats will often have generous space standards, with many adhering to HAPPI[15] principles enabling access for people with mobility issues and wheelchair users.

In addition, staff can support with identifying and addressing falls hazards, refer to appropriate services when required and contribute to the post-discharge support for individuals. They are well equipped in identifying any concerning trends in people's behaviours and appearance, and can trigger appropriate interventions in a timely manner, support that may not always be available to people living in the community. Good assessment of need is also quoted as a contributor to the general wellbeing of residents.

There is some research evidence that has found that this particular nature of the living environment in housing with care, coupled with the provision of onsite 24/7 staffing, which provides both general support to residents as well as direct and rapid assistance in an emergency, helps to reduce the likelihood and incidence of non-elective hospital admissions.

A longitudinal study by Kneale from 2002 to 2010 covering 1,400 to 1,600 housing with care properties,[16] reported that housing with care residents were less likely to be admitted to hospital initially than those in unsupported housing in the community and were more likely

[13] Bäumker, T., Netten, A. & Darton, R. (2008) Costs and Outcomes of a Housing with care Scheme in Bradford. Joseph Rowntree Foundation.
[14] Blunt, I., Bardsley, M., Dixon, J. (2010). Trends in emergency admissions in England 2004-2009: is greater efficiency breeding inefficiency? The Nuffield Trust.
[15] https://www.housinglin.org.uk/Topics/browse/Design-building/HAPPI/
[16] Kneale D. (2011) Establishing the extra in Extra Care: Perspectives from three Housing with care Providers. ILCUK.

to be admitted only once a serious condition had developed. The incidence of annual hospitalisation was 4.8 nights per year per person amongst those aged 80+ compared to 5.8 nights for those matched and living in the community.

Research conducted for McCarthy and Stone[17] identified that there were a total of 13 fewer admissions in previous year, or 0.13 fewer admissions per resident per year in their new housing with care scheme than previously.

Overall this indicates that **there is evidence to suggest that housing with care can have a positive impact in terms of reducing number of non-elective hospital admissions amongst residents.**

2.4. Impact on length of stay and discharge from hospital

Delayed transfers of care can be costly to both an individual's health as well as to the NHS. There are currently many older people in hospitals who are ready to be discharged, but where their discharge is delayed the estimated cost to the NHS is around £820 million[18]. Some of the primary reasons associated with older people experiencing delayed transfers of care include waiting for a care package in their own home, awaiting a place in a nursing or residential home or awaiting further assessment.[19] A lot of the difficulties associated with that could be mitigated successfully in the housing with care setting due to its unique characteristics.

Housing with care has 24/7 care available onsite and residents' care needs are typically already well understood by care and support staff. The care packages can be started or adjusted relatively quickly, significant adaptations are not required, and a number of schemes offer assessment flats – meaning that residents' needs can be better understood in the home environment, allowing for a more realistic assessment of need. Such provision also offers an opportunity for individuals to try and test the concept of living in housing with care, and as such effectively divert individuals from residential care, or a hospital setting.

There is some research evidence that has found that the nature of the service provided by housing with care, particularly the availability of onsite care, enables people to avoid delays in hospital discharge.

Research by Aston University[20] found that the housing with care model is associated with a reduction in the duration of (unplanned) hospital stays, from an average of 8-14 days to 1-2

[17] McCarthy and Stone (2014). McCarthy and Stone Local area economic impact assessment.
[18] National Audit Office (2016). Discharging older patients from hospital. Available at: https://www.nao.org.uk/report/discharging-older-patients-from-hospital/
[19] Housing Learning and Improvement Network (2017). Home from hospital: How housing services are relieving pressure on the NHS. Available at: https://www.housinglin.org.uk/Topics/type/Home-from-hospital-How-housing-services-are-relieving-pressure-on-the-NHS/
[20] ibid.

days. The duration of (unplanned) hospital stays reduced from a median of 5-7 days at baseline, to 1-2 days thereafter.

Research for McCarthy & Stone found that whilst a higher percentage of those in housing with care might receive an inpatient episode, they remained in hospital for only half the time of those not living in retirement housing.[21]

Overall this indicates that **there is evidence to suggest that housing with care can have a positive impact in terms of reducing the length of stay in hospital and helping to avoid delayed discharges from hospital amongst residents.**

2.5. Impact on ambulance call outs

The National Housing Federation's '*Home from Hospital*' report[22] indicates that providers of housing with care with 24/7 onsite staff who can respond swiftly to emergencies and provide increased levels of support where needed, can reduce the number of instances where ambulances are called out. The design and suitability for older people of housing with care can reduce the need for ambulances to attend incidents, whether due to the on-site staff handling the incident themselves or by reducing the overall frequency of incidents.

Often for older people, the incident that leaves them needing an ambulance is a fall. Research by Demos in relation to older people's housing, '*The Value of Sheltered Housing*'[23] identifies a clear link between the incidence of falls amongst older people and ambulance call outs. Living in unsuitable housing results in a greater risk of accident or injury including falls. Housing with care is not only designed with safety and accessibility in mind; the onsite staff can also reduce the likelihood of a fall by proactively addressing and mitigating fall hazards in residents' homes, which is not the case for many people living in general needs housing in the community.

The research by Demos estimates that 600,000 older people attend A&E following a fall each year (about 17% of all falls), and around a third are then admitted to hospital. This research estimated that 91,940 falls are prevented by people living in older people's housing, which is estimated to prevent 15,629 ambulance call outs and A&E attendances.

There is some research evidence that has found that the design of the living environment and the staffing typically provided in housing with care helps to reduce the incidence of falls amongst residents, or provides a swift response for a resident who had had a fall.

[21] ORB (2004). A Better Life: Private Sheltered Housing and Independent Living for Older People.
[22] Housing Learning and Improvement Network (2017). Home from hospital: How housing services are relieving pressure on the NHS. Available at: https://www.housinglin.org.uk/Topics/type/Home-from-hospital-How-housing-services-are-relieving-pressure-on-the-NHS/
[23] Wood, C. (2017). The Social Value of Sheltered Housing: Demos Briefing Paper. Available at: https://www.demos.co.uk/wp-content/uploads/2017/06/Sheltered-Housing-paper-June-2017.pdf

Research by Kneale[24] identified a reduced likelihood of falling in housing with care; falls rates were measured at 31% compared to 49% in general housing. Research by Aston University[25] identified the 'number of falls in the last 12 months' at baseline and at 12 months after living in housing with care. There was a significant overall reduction in falls over the period, with a reduction from an average of 0.66 falls per person at baseline, to 0.36 per person at 12 months.

Overall this indicates that **there is evidence to suggest that housing with care can have a positive impact in terms of reducing the number of ambulance call outs for residents,** particularly associated with a decreased likelihood of falling and/or staff being available onsite to assist directly a resident who has had a fall.

2.6. Summary of evidence

The body of current research evidence in relation to housing with care and health care systems is relatively limited, however, the evidence that is available indicates that housing with care does have a positive impact on the health care economy and provides benefits in the following areas:

- Reductions in the number of GP visits (by housing with care residents).
- Reductions in the number of community health nurse visits (amongst housing with care residents).
- Reductions in the number of non-elective admissions to hospital (by housing with care residents).
- Reductions in length of stay and discharges from hospital (amongst housing with care residents).
- Reductions in ambulance call outs, typically linked to reduced incidence of falls (amongst housing with care residents).

This research has also found a number of other benefits of housing with care provision, mostly related to the quality of life of the residents and individual outcomes. While these have not been measured as a part of this report, it is worth to note these in the context of this research.

For instance, there is evidence that living in a housing with care scheme can improve residents' general wellbeing. Research by Aston University[26] showed that there were significant continuous improvements across the research period in depression, perceived

[24] Kneale D. (2011) Establishing the extra in Extra Care: Perspectives from three Housing with care Providers. ILCUK.
[25] Holland, C. *et al*. (2015). Collaborative Research between Aston Research Centre for Healthy Ageing (ARCHA) and the ExtraCare Charitable Trust: Final Report.
[26] ibid.

health, memory and autobiographical memory, in a way that was significantly different from the way the measure changed over time for the control group.

In addition, evidence suggests that housing with care residents often express high levels of satisfaction with living in housing with care and improvements in their well-being. An evaluation of a housing with care scheme in Dorset[27] found that older residents' quality of life significantly improved following a planned move into a new housing with care scheme. Research by Croucher *et al.*[28] found that one of the main advantages and most valued aspects of housing with care amongst residents is the independence it provides.

In summary, based on the relatively limited evidence available in relation to the impact of housing with care on health care systems, there is scope for additional research to be undertaken to provide a more substantive evidence base in terms of measuring and assessing its impact on health care systems. Nonetheless, the evidence that was available indicates multiple benefits of housing with care, such as improved quality of life of individuals, improved health and social care outcomes, as well as broader benefits to the health care system. These are particularly significant, as they evidence the ability of specialist housing to help with the management of the demand for health services, which clearly has practical implications for policy makers, as well as financial impacts, which are discussed in detail in the latter part of the report.

[27] Housing Learning and Improvement Network (2014). Blazing a trail: Extra Care Housing in Blandford Forum, Dorset. Available at: https://www.housinglin.org.uk/_assets/Resources/Housing/Practice_examples/Housing_LIN_case_studies/HLIN_CaseStudy82_TrailwayCourt.pdf

[28] Croucher, K., Hicks, L., Jackson, K. (2006). Housing with care for later life: A literature review. Available at: https://www.jrf.org.uk/sites/default/files/jrf/migrated/files/9781859354384.pdf

3. Estimating the financial health care benefits of housing with care

3.1. Establishing the financial cost-benefits and metrics from the evidence review

The evidence review identified the specific health care system outcomes associated with living in housing with care. This section estimates the **financial cost-benefits** associated with the impact on and the identified benefits for the health care system that accrue from the provision of housing with care.

This method has been used to generate estimated financial cost-benefits for each of the health care system benefits from the use of housing with care and these are set out in Table 2, which consists of the identified health care system benefit measures in relation to:

- Reduction in the number of GP visits (by housing with care residents).
- Reduction in the number of community health nurse visits (amongst housing with care residents).
- Reduction in the number of non-elective admissions to hospital (by housing with care residents).
- Reduction in length of stay and delayed discharges from hospital (amongst housing with care residents).
- Reduction in ambulance call outs, typically linked to reduced incidence of falls (amongst housing with care residents).

The method used to produce estimates of the financial cost-benefits is described in the table below. This method has then been applied to each of the identified health care system benefit measures.

The financial cost-benefit method
A. Evidence and context from evidence review This section identifies from the evidence review (covered in Section 2) the key elements of the research evidence that allow a financial cost-benefit to be calculated for each health care system benefit identified.
B. Associated financial cost-benefit This section applies relevant financial 'metrics' to each health care system benefit to calculate an estimated financial-cost benefit. Where assumptions have been used, a conservative approach has been taken to estimating financial cost benefits to avoid 'over estimating' any financial cost benefit. The final value is written **in bold**.
C. Caveats and assumptions In this section, applicable caveats and assumptions are specified that need to be acknowledged when considering the estimated financial cost-benefits.

A table in the above format for all health system impacts is shown below (Table 1).

Table 1. Health care system financial cost-benefits from the provision of housing with care

Health care system benefit measure: Reduction in the number of GP visits
A. Evidence and context from evidence review Polisson (2011)[29]: the average number of annual visits to a GP in England was 7.4 for women aged 65 and over, and 6.7 for older men. This is on average 7.05 visits per annum. Aston University's longitudinal study at a housing with care village[30] found that after 12 months GP usage by housing with care residents in the sample had decreased by 46%. A 46% decrease in GP visits from the 7.05 found by Polisson[31] suggests that HwC residents visit a GP on average 3.85 times per annum compared to 7.05 visits on average amongst all 65-year-olds.
B. Associated financial cost-benefit Polisson[32] reported an increase in the number of annual visits to the GP over the period 1974-2004 of between 1 and 1.5% per year (for older men and older women respectively). If the average number of visits increased at this rate (average +1.25%/yr over 30 years) this would change the average number of GP visits in 2018 to 8.39 (general average) vs 4.58 (average housing with care resident) or an updated average saving of (£38 x 8.39) – (£38 x 4.58) equals a financial cost-benefit (saving) of **£144.78 per person per year.**

[29] Polisson, M. (2011). Do waiting times matter in primary care? GP visits and list sizes in England.
[30] Holland, C. *et al*. (2015). Collaborative Research between Aston Research Centre for Healthy Ageing (ARCHA) and the ExtraCare Charitable Trust: Final Report.
[31] ibid.
[32] ibid.

C. Caveats and assumptions

- PSSRU (2017) Unit Costs of Health and Social Care calculations[33], a brief (9.22 minutes) consultation with a GP costs £38.
- Assumes that the average rate of increase (of GP visits) stays the same as over the 1974-2004 period.
- Assumes that the decrease of 46% found in the Aston University research would be found in all housing with care schemes.
- Some people may save more/less than this figure after moving into housing with care.
- Assumes that average GP visit is the same length (9.22 minutes). The average length of a visit may trend in one direction over time, affecting the savings.

[33] Curtis, L. & Burns, A. (2017) Unit Costs of Health and Social Care 2017, Personal Social Services Research Unit, University of Kent, Canterbury.

Health care system benefit measure: Reduction in the number of community health nurse visits

A. Evidence and context from evidence review

Bäumker *et al*. (2008) studied housing with care and calculated the health and social care expenditure before and after the residents moved in. They found a mean decrease in the expenditure on nurse visits at home of £37 per resident per week.

The proportion of residents who were visited by a nurse at home increased (32% vs 73%) but the mean number of consultations per resident decreased from approximately 22 to 11 visits in 6 months.

B. Associated financial cost-benefit

The PSSRU (2015) identifies the cost for a community nurse visit (the most recent available) is £31.25. 11 visits would cost £343.75 (a saving of £343.75 compared to 22 visits).

This would be approximately £362.55 in 2018, adjusting for inflation.

If it is assumed that the average housing with care resident had 22 community nurse visits before moving into a housing with care scheme and 11 after moving, this is a saving of **£362.55 per person per year**.

C. Caveats and assumptions

- The proportion of residents in a scheme being visited by a community nurse may increase which may indicate unmet need in the previous residence rather than an increase in need. This may be offset by a decrease in the average number of visits per resident.
- Assumes the same pattern of community nurse visits seen in the housing with care scheme studied would be seen across majority of housing with care schemes, which may be different sizes/have different populations/vary in many other ways (however, there has been no other research into community nurse visit rates to different types of housing).

Health care system benefit measure: Reduction in the number of non-elective admissions to hospital

A. Evidence and context from evidence review

Kneale's (2011) research[34] identifies that those in housing with care are only admitted overnight to hospital for serious conditions and may be treated as outpatients for less serious conditions, whereas those in the community they may be more likely to be admitted overnight and not discharged for minor procedures.

B. Associated financial cost-benefit

Kneale (2011) uses PSSRU costings to calculate that residents aged 65+ in extra care schemes save £512 per annum in hospital attendances each compared to someone aged 65+ living in the community.

£512 in 2010 adjusted for inflation at 2.9% per year to 2017 equates to a saving of **£624.11 per person per year**.

C. Caveats and assumptions

- Assumes that the cost hasn't changed after adjusting from inflation.

[34] Kneale D. (2011) Establishing the extra in Extra Care: Perspectives from three Housing with care Providers. ILCUK.

Health care system benefit measure: Reduction in length of stay and delayed discharges from hospital

A. Evidence and context from evidence review

Delayed hospital discharges cost the NHS in England £820 million annually[35]. Over the 12 months from November 2017 to November 2018 there were 1,744,457 delayed bed days in England[36]. 56% of all the bed days of all inpatients staying over seven days are accounted for by patients aged over 60[37].

The Aston University research[38] identifies that the duration of unplanned hospital stays reduced from a median of 5-7 days at baseline, to 1-2 days after moving into housing with care.

B. Associated financial cost-benefit

£820 million/1,744,457 bed days = £470 per delayed day. Assuming a stay duration reduction from 6 to 1.5 days (based on the Aston University research), this translates to a reduction per annum of £2,820 - £705 = £2,115.

In the Aston University research, the mean unplanned admission rate was 0.22/yr.

£2,115 x 0.22 admissions per resident per year equates to a saving of **£465.30 per person per year.**

C. Caveats and assumptions

- Uses average cost and delay data (cost of delayed day, reduction in stay length) which will not reflect reality for everyone.
- These savings may vary between schemes.

[35] Buck, D., Simpson, M., Ross, S. (2016). The economics of housing and health: The role of housing associations. Kings Fund.
[36] NHS England (2018). Delayed Transfer of Care, NHS Organisations, England. NHS England Data Collection – MsitDT.
[37] Edwards, N. (2017). Will the NHS really need fewer beds in the future? Available at: https://www.nuffieldtrust.org.uk/news-item/will-the-nhs-really-need-fewer-beds-in-the-future.
[38] Holland, C. *et al*. (2015). Collaborative Research between Aston Research Centre for Healthy Ageing (ARCHA) and the ExtraCare Charitable Trust: Final Report.

Health care system benefit measure: Reduction in ambulance call outs, typically linked to reduced incidence of falls

A. Evidence and context from evidence review

A study by the Strategic Society Centre (James Lloyd*)* calculates[39] that people aged 65+ have a 33% probability (0.33) of experiencing a fall each year, but this is reduced to between 1.5 and 2.8 (2.15) times less likely in specialist retirement housing, such as housing with care.

B. Associated financial cost-benefit

By multiplying the probability of a fall each year by the average cost of a fall to the NHS (£2,108) by 10 years, Lloyd calculates that the average expected lifetime cost of falls in mainstream housing over 10 years is around £7,000 compared with £3,200 in specialist retirement housing. This represents a potential saving of around £3,800 over 10 years.

This equates to a saving of **£380 per person per year.**

C. Caveats and assumptions

- Assumes the number can be applied on a single year basis to produce a saving per person per year.

[39] Lloyd, J. (2016). Valuing Retirement Housing: Exploring the economic effects of specialist housing for older people. Strategic Society Centre, London.

3.2. Summary of financial cost-benefits

Table 2 summarises the financial cost-benefits in relation to health care system benefits that accrue from a person living in housing with care.

Each cost-benefit has been kept as specific as possible in order to minimise 'double counting'. Where two numbers were available for the same measure, the one from the most robust source was used (e.g. a long-term study with controls).

An overall financial cost-benefit per person per year is shown below. **It is estimated that living in housing with care generates a health care system financial cost-benefit of £1,976.44 per person per annum.**

Table 2. Summary of financial cost-benefits of housing with care (per person per annum)

Health care system benefit measure	Financial cost-benefits (per housing with care resident per year)
Reduction in the number of GP visits	£144.78
Reduction in the number of community health nurse visits	£362.55
Reduction in the number of non-elective admissions to hospital	£624.11
Reduction in length of stay and delayed discharges from hospital	£465.30
Reduction in ambulance call outs, typically linked to reduced incidence of falls	£380.00
TOTAL	**£1,976.74**

4. Application of health care system financial cost-benefits to housing with care in Southampton

Southampton City Council has plans to expand the development of housing with care in the city. In this context the purpose of this research was:

- To provide evidence of the potential health care system benefits that may be associated with the provision of housing with care.
- To identify the financial cost-benefits to the health care system of the provision of housing with care.
- To use this evidence base and identified benefits to engage with and secure the support of the health sector to the development of additional housing with care services.

The health care system financial cost-benefits identified in section 3 are applied to the current provision of housing with care in Southampton as well as two housing with care development (growth) scenarios, in line with Southampton City Council's growth strategy.

The intention is to estimate the overall financial impact for health services in the city of the current provision of housing with care and the potential growth of housing with care services.

Three scenarios are modelled in terms of the estimated health care system financial cost-benefits of housing with care:

- Scenario A: Assumes no further services/units are developed beyond the 2017 housing with care capacity (169 units).
- Scenario B: Assumes housing with care services developed to 2020 planned capacity (249 units).
- Scenario C: Assumes housing with care services developed to 2025 planned capacity (450 units).

Table 3 shows the estimated health care system financial cost-benefits of housing with care for these three housing with care provision scenarios in the city.

Table 3. Estimated financial impact for health services of housing with care provision in Southampton

Financial cost-benefit measure	Financial cost-benefit (per housing with care resident per annum)	Scenario A (169 units of housing with care)	Scenario B (249 units of housing with care)	Scenario C (450 units of housing with care)
Reduction in the number of GP visits	£145	£24,468	£36,050	£65,151
Reduction in the number of community health nurse visits	£363	£61,271	£90,275	£163,148
Reduction in the number of non-elective admissions to hospital	£624	£105,475	£155,403	£280,850
Reduction in length of stay and delayed discharges from hospital	£465	£78,636	£115,860	£209,385
Reduction in ambulance call outs, typically linked to reduced incidence of falls	£380	£64,220	£94,620	£171,000
TOTAL cost-benefit (£ per annum)	**£1,977**	**£334,069**	**£492,208**	**£889,533**

This indicates that:

- The current housing with care provision (169 units) provides an annual health cost-benefit of £334,069
- Expansion of housing with care provision to 249 units would provide an annual health cost-benefit of £492,208
- Expansion of housing with care provision to 450 units would provide an annual health cost-benefit of £889,553

5. Summary of findings

While the model of housing with care has been around for a number of years now, its impact and associated benefits to the broader health and social care economy have not been as widely known or researched as the benefits for residents. The Housing LIN and Southampton City Council wanted to contribute to the literature available on the subject in order to promote the model and to highlight the health benefits this type of housing generates. The report's findings are encouraging and relevant to anyone with an interest in health, care and housing.

5.1. Housing with care benefits

Housing with care continues to grow in popularity as a form of housing suited to ageing well in later life.

Housing with care offers a wide range of benefits to its residents including maintaining independence, health and mental cognition and reducing loneliness.

For many older people, housing with care will be a genuine alternative to living in a residential care home.

5.2. Health care system benefits

The evidence that is available indicates that housing with care does have a positive impact on the health care system and provides the following health benefits:

- Reductions in the number of GP visits (by housing with care residents).
- Reductions in the number of community health nurse visits (amongst housing with care residents).
- Reductions in the number of non-elective admissions to hospital (by housing with care residents).
- Reductions in length of stay and delayed discharges from hospital (amongst housing with care residents).
- Reductions in ambulance call outs, typically linked to reduced incidence of falls (amongst housing with care residents).

5.3. Health care system financial cost-benefits

There are financial cost-benefits in relation to health care system benefits that accrue from a person living in housing with care.

It is estimated that living in housing with care generates a health care system financial cost-benefit of £1,976.44 per person per annum.

Applying this estimated health care system financial cost-benefit to the current provision of housing with care in Southampton and to planned growth in housing with care in the city suggests:

- The current housing with care provision (169 units) provides an annual health cost-benefit of £334,069.
- Expansion of housing with care provision to 249 units would provide an annual health cost-benefit of £492,208.
- Expansion of housing with care provision to 450 units would provide an annual health cost-benefit of £889,553.

5.4. Findings and implications

The evidence that is available indicates that housing with care does have a positive impact on the health care system and provides a series of health benefits.

There are significant financial cost-benefits for the health care system that accrue from housing with care.

There is a strong case for expanding the development of housing with care in Southampton to increase and maximise these health care system cost benefits, as well as expanding housing and care choices for older citizens.

There is an opportunity for the City Council to use this evidence to engage with the health services to develop a shared vision for the expansion of housing with care services. A partnership approach to supporting housing with care between health, social care and housing professionals should be encouraged to maximise on its benefits.

There is a need to undertake additional research to provide a more substantive evidence base in terms of measuring and assessing the impact of housing with care on health care systems. Part of extending this evidence base could involve undertaking longitudinal research of the impact of housing with care in Southampton.

For more information about this research, or to find out about Southampton's approach to the development of housing with care, please contact: market.development@southampton.gov.uk or consultancy@housinglin.org.uk

About the Housing LIN

The Housing LIN is a sophisticated network bringing together over 25,000 housing, health and social care professionals in England, Wales and Scotland to exemplify innovative housing solutions for an ageing population.

Recognised by government and industry as a leading 'knowledge hub' on specialist housing, our online and regional networked activities:

- connect people, ideas and resources to inform and improve the range of housing choices that enable older and disabled people to live independently
- provide intelligence on latest funding, research, policy and practice developments, and
- raise the profile of specialist housing with developers, commissioners and providers to plan, design and deliver aspirational housing for an ageing population.

For further information on the links between health and housing please visit our Health Intel pages at https://www.housinglin.org.uk/Topics/browse/HealthandHousing/

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