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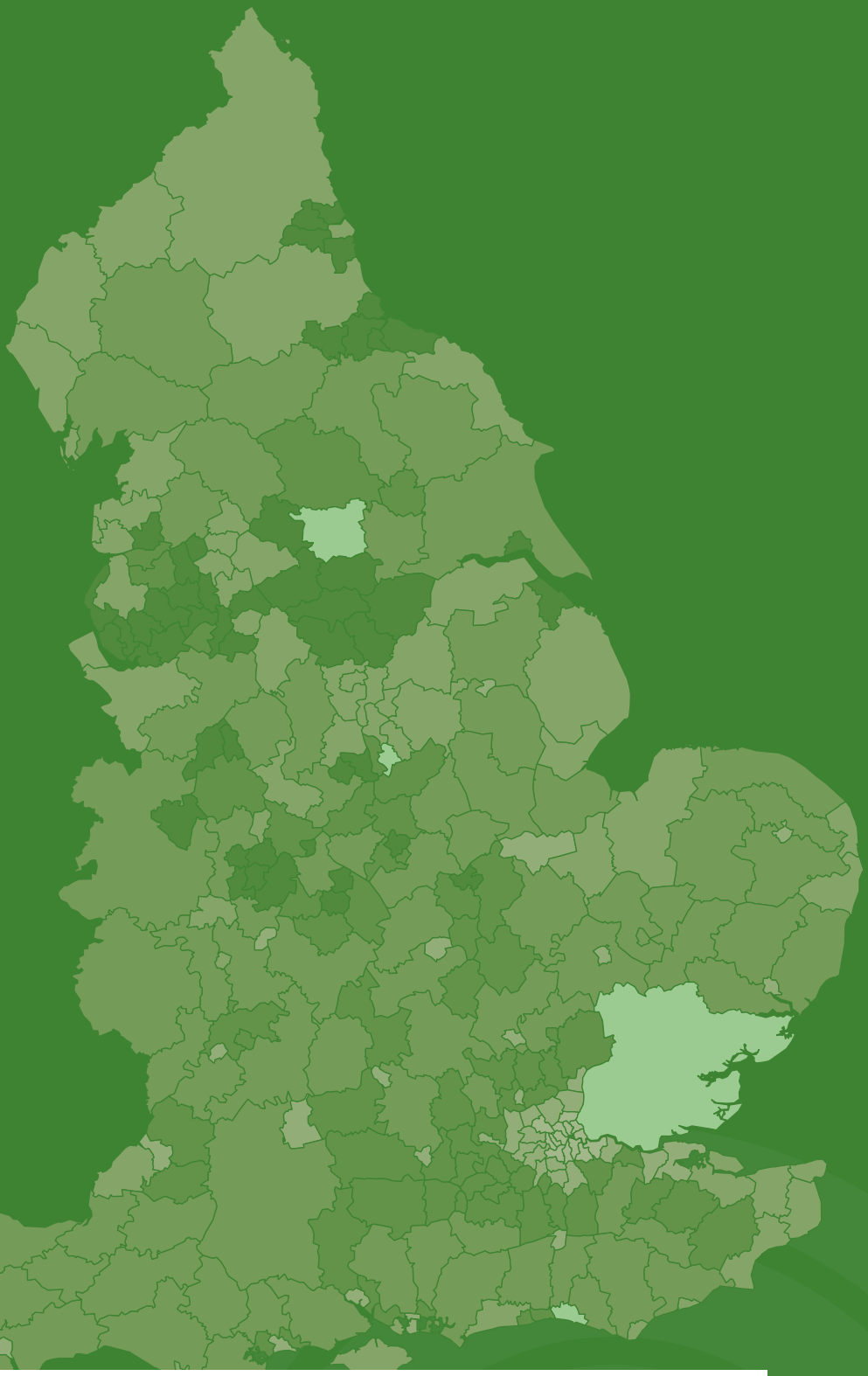

Facilitating Care Insight to Develop Caring Economies

cambridge econometrics
clarity from complexity

About us

Future Care Capital is a national charity that uses the insight gathered through evidence-based research to advance ideas that will help shape future health and social care policy to deliver better outcomes for society.

The charity aims to facilitate and stimulate a national debate around health and social care provision. As a provider of insight and analysis, we use events, campaigns and policy papers to inform public policy. We also have a keen interest in how technology can transform health and social care outcomes.

Beginning life as the National Nursery Examination Board in 1945, the charity has evolved throughout its 70-year history and we continue to have Her Majesty the Queen as our Royal Patron.

More information about us can be found via our website: www.futurecarecapital.org.uk

About the Editors

Annemarie Naylor MBE is the Director of Policy and Strategy at Future Care Capital. For a large part of her career, Annemarie has worked in public policy and economic development working with local, regional and central government.

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We are very grateful to Cambridge Econometrics for undertaking the detailed statistical analysis and case study interviews which underpin the recommendations in this report. The contribution of individuals on behalf of Brighton and Hove City Council, Essex County Council, Leeds City Council and Nottingham City Council has also been invaluable.

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Introduction

That our population is growing and ageing at a time of unprecedented technological transformation is well-known, but how we might reorient our individual lives, our communities and our economy to take advantage of the opportunities as well as tackle the challenges that flow from such demographic change is less clear.

In 'The 100-Year Life: Living and Working in an Age of Longevity' (2016), Gratton and Scott flesh out some of the potential implications for individuals. They explore what it might mean to work for longer and how we will likely need to rethink when and how (often) we access education and (re)training. They consider how we might approach planning and financing a longer life in very practical terms, as the 'lock-step' of education, employment, then, retirement gives way to what they term a 'multi-stage life'. They also question what our longevity is liable to mean for identity formation and our relationships with others over time. The shift in mindset required is profound, and the same surely holds for our approach to community and economic development as well as public service design as we look to the future and, yet, we are it seems ill-prepared.

At present, our lives and communities remain intimately bound up with the post-war settlement (albeit they have, arguably, been impacted significantly by a fetishization of free markets at the expense of the state's value add proposition in more recent years). There is, then, a pervasive sense that we are each of us entitled to expect a level of 'service' from and 'security' via the state in return for our contributing tax revenues to the Exchequer, and an increasingly uneasy stand-off where there appears to be a mis-match between individual contributions and expectations. Recent headlines about health and social care services epitomise such a mis-match – hence the ongoing debate about rights, responsibilities and funding for both the NHS and social care services. However, they are overwhelmingly concerned with immediate pressures and, too often, result in the advancement of somewhat traditional as well as short-term (largely, revenue funding) solutions, precisely because they take the 'here and now' as their context rather than reflecting upon 'where we might want to get to in future'.

Here, we take an in-depth look at the scope to utilise publicly available data to facilitate 'care insight' and better plan and shape the provision of care against this backdrop. Ultimately, our aim is to enable the development of 'caring economies' which better reflect our society's changing age profile, and we take the view that that requires a more nuanced appreciation of local 'care infrastructures', together with the differing risks and opportunities each implies, than is currently feasible.

In Section One, we introduce the approach taken and the role of data and evidence in decision-making, differentiating between its use for the purposes of monitoring, evaluation and appraisal. In Section Two, we explore patterns in publicly available data that are used by social care commissioners to plan and monitor current care provision. In Section Three, we summarise the findings from case study interviews with representatives from four local authorities which were undertaken to help explain statistical information about care in their area. We then synthesise conclusions from the quantitative and qualitative research exercises undertaken and highlight the key learning points which underpin our recommendations.

We are grateful to Cambridge Econometrics for undertaking the detailed statistical analysis and case study interviews which underpin the recommendations in this report. The contribution of individuals on behalf of Brighton and Hove City Council, Essex County Council, Leeds City Council and Nottingham City Council has also been invaluable.

Section One – Approach

Research Questions

Three research questions motivate the study:

1. What are the risks and opportunities for future care provision at a local level?
2. How are these risks and opportunities visible in existing data?
3. What are the challenges for effective planning and provision, and how are local areas coping with these challenges?

A local approach is vital to understand the nature of stresses around the country and what policies may or may not be generally applicable. This understanding is closely related to decision-makers' ability to observe and anticipate developments which, in turn, affects their ability to confidently intervene to improve outcomes. However, this does not mean that the solution is to simply and indiscriminately gather more data. Data collection incurs costs and there are limits to how much data an organisation can reasonably absorb and act upon.

The judicious use of data is important. As we set out below, the purpose of data and evidence differs between organisations within the care system according to their responsibilities. An understanding of data needs and the purpose of those data is vital before making any assessment of whether data are fit for purpose.

Our approach combined quantitative and qualitative analysis to answer our three research questions. Defined broadly, the 'care system' is the network of formal and informal provision to support independent living and to provide for those who are either unable or no longer able to live independently. An understanding of the care system requires information on the complete ecosystem of provision. However, from an assessment of the available data and discussions with stakeholders, the research here highlights how incomplete the picture of this ecosystem is. Consequently, much of the analysis in the following sections considers provision for people who are unable to live independently and 'known' to service commissioners and paid providers, such as those in care homes. The research discusses the implications for decision-makers of only parts of the care ecosystem being visible.

The research focuses for the most part on older people but does acknowledge at various points the challenges of working-age adults and, in particular, those with learning disabilities.

Quantitative analysis

The quantitative analysis we undertook considered publicly available data and what those data might reveal about the characteristics of different areas in England. It provides a data-driven assessment of how local areas differ and what this might suggest about their ability to deliver care relative to one another in the future.

Differences might arise from factors such as:

- Demography (for example, the age profile of the population);
- the nature of care provision, whether formal or informal, including characteristics like the intensity of unpaid care or the structure of the local provider market; and
- wider contextual or institutional features reflecting the configuration of other assets in the area (for example, the distribution of an area's population between rural and urban areas, or levels of disadvantage/deprivation).

Qualitative Analysis

The qualitative analysis we undertook consisted of interviews with representatives from four local authorities to:

1. Test our findings from the quantitative analysis;
2. explore and explain local circumstances that may not be easily identifiable in the quantitative analysis;
3. discuss whether and how data, and data gaps, affect local decision-makers' ability to carry out effective planning and provision; and
4. better understand local strengths and challenges, and what this means for new models of care and preventative measures.

Ultimately, our interest is in how areas can carry out their statutory duties effectively, where they see the balance of risks and opportunities, and what is necessary to support effective action. The four local authorities we engaged with in-depth were: Brighton and Hove City Council, Essex County Council, Leeds City Council and Nottingham City Council.

The Role of Data and Evidence in Decision-making

Data and evidence can fulfil many roles. Before considering the value of a dataset, it is important to be clear about the purpose of that dataset. Without a clear purpose and identified user, it is impossible to assess the usefulness of the data.

Broadly, there are three roles for data and evidence as it relates to care provision:

1. **Monitoring:** *how* the system is performing
   Data for monitoring concern about how the system and its components are performing against a pre-specified set of measures.
2. **Evaluation:** *why* a programme performed as it did and what it tells us about successful programmes (i.e. 'what works').
   Evidence collected not only to judge the success of a programme but also to identify lessons from its implementation. These lessons can be applied to improve the effectiveness of future programmes.
3. **Appraisal** (design and implementation of future programmes): *what* we might expect to see if a new programme were implemented.

   Data and evidence to inform prospective interventions. This might involve, for example, scenario planning / modelling to assess and compare the merits of alternative care models, and possibly in combination.

Monitoring

Data for **monitoring** typically comprise headline measures to summarise the performance of a system and/or its components. These measures are typically quantitative and often set against stated targets (accountability) and/or used to compare or benchmark (relative) performance. Data for monitoring concerns *whether* performance is improving or deteriorating.

At a national level, accountability measures are often 'high stakes' with incentives or penalties to drive the pursuit of 'good' outcomes. These outcomes are defined by the measures themselves. This places great importance on good 'mechanism design' to protect against unintended consequences. In public policy, accountability measures are often proxies for the outcomes of interest. Measures which align poorly with the 'true' outcomes of interest risk driving behaviours that are inconsistent with the desired behaviours.

As we discuss later in this report, there is some indication that **existing national-level monitoring indicators are not keeping pace with how local areas understand and manage their provision**. Specifically, national-level measures tend to focus more on 'late-stage' indicators of social care with an emphasis on safeguarding. One example of this is delayed transfers of care, which tracks the delays in moving people on from their current hospital-based care due to non-clinical reasons. As one council put it, there tends to be more focus on getting people out of hospital than preventing them from going into hospital in the first place. In contrast, local decision-makers increasingly understand their duty as being to promote wellbeing more generally (i.e. to support people to thrive throughout their lives). Whether this leads to a genuine tension between national and local concerns, and whether such a tension could or should be managed, is a separate question.

Operational monitoring is also important at a local level to summarise and track performance at the frontline.

Evaluation

Evaluation seeks to assess the effectiveness of interventions and identify lessons to inform future interventions. They may be either quantitative or qualitative and tend to be 'low stakes'. Data and evidence for evaluation focuses on why performance is improving or deteriorating. In turn, such information should point to candidate actions that lead to improved performance.

Evaluation concerns specific interventions or programmes and can be carried out at a national or local level. As we discuss later in this report, there is some indication that **councils are incentivised to prioritise monitoring whilst under-resourced to undertake fundamental research and analysis that might otherwise result in improved 'business intelligence' and, thereby, bolster evaluation activities**.

Appraisal

UK government guidance (HM Treasury 2018) draws a technical distinction between evaluation and **appraisal**. Evaluation concerns past programmes while appraisal concerns prospective programmes. Moreover, appraisal usually involves a comparison of a range of options to identify the preferred one. This applies at both the national level (for example, when considering alternative funding regimes) and the local level.

Given the greatly expanded remit of councils under the Care Act (2014) as well as the prospect of even greater financial pressures if current trends continue, **appraisal will become increasingly important to local decision-makers. Effective planning requires appraisal as a capability**. Without this knowledge, decision-makers only have a limited ability to plan effectively, allocate resources wisely and design/implement new models of care and preventative measures.

Data and evidence to support appraisal places a heavy need on understanding the fundamentals of a system to properly intervene and is currently regarded as an important data gap if service models are to change. As we discuss in the chapters that follow, appraisal may involve assessments of local population 'assets' or 'strengths' as well as their needs together with analysis to consider the likely effects of alternative models of provision in different contexts.

Different users have different needs

Data and evidence needs differ by purpose. Moreover, differing responsibilities in the system imply different purposes/needs of data. It is therefore **not necessarily the case that all data and evidence can universally meet all needs**. It is not possible to properly assess whether a dataset or piece of evidence is fit for purpose without an appreciation of that purpose. As a concept, 'fit for purpose' requires a prior definition of purpose. This also motivates our interest in asking **what different users need to know** in order to perform their broad-ranging duties.

The analysis that follows considers data and evidence needs with reference to these purposes and duties.

Section 2 – Identifying Patterns in Care Data

This Section presents the quantitative data analysis undertaken to assess local variations in caring economies across England using publicly available data.

It briefly outlines the challenge for care provision in the coming years from demographic change then presents the results from the analysis to establish a broad categorisation of area types. After highlighting some current risks and outcomes in the system, we identify potential future sources of risks and opportunities for the different types of area identified.

The Challenge: a growing and ageing population

The basic demographic trends are well known: the population of England is growing and ageing, with the more elderly age groups expected to see the fastest rates of growth. As Table 1 shows, ONS projections for England expect an 8% increase in the population between 2018 and 2030. However, that breaks down into a 3½% increase for those aged under 65 and an almost 30% increase in the population aged 65 and over (some 2.9m more people will be in this age band by 2030). More extreme, still, is the profile of that growth among older people - with some **750,000 more people aged 85 and over by 2030**. This is a more than 50% increase on the 2018 level in the group with the greatest care needs.

Table 1: Population projections for England, 2018-30

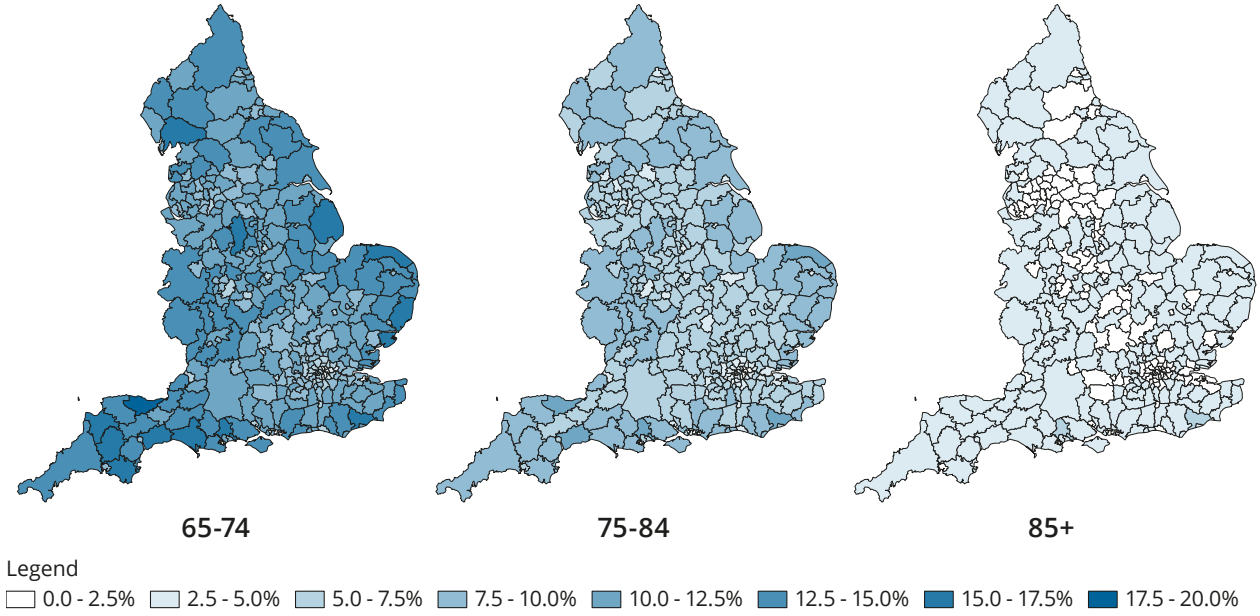
	Population ('000s)		Share of population (%)		Change (%)
	2018	**2030**	**2018**	**2030**	**2018-30**
0-64	45,815	47,357	81.7	78.2	3.4
65-74	5,550	6,443	9.9	10.6	16.1
75-84	3,295	4,576	5.9	7.6	38.9
85+	1,401	2,149	2.5	3.6	53.3
TOTAL	**56,061**	**60,524**	**100.0**	**100.0**	**8.0**
55-64	6,602	7,252	11.8	12.0	9.9
65+	10,246	13,167	18.3	21.8	28.5

Source(s): ONS (2016) 'Subnational population projections for England: 2014-based projections'.

The implication of 'double-digit growth' in the old-age population is that carrying on as we have would require a substantial scaling up of provision. This would come at considerable cost. At the same time, our ageing population includes greater longevity among younger adults with disabilities **which increases both the volume of people in need of care but is also, over time, raising the average cost of care because of the increasing complexity of needs**.

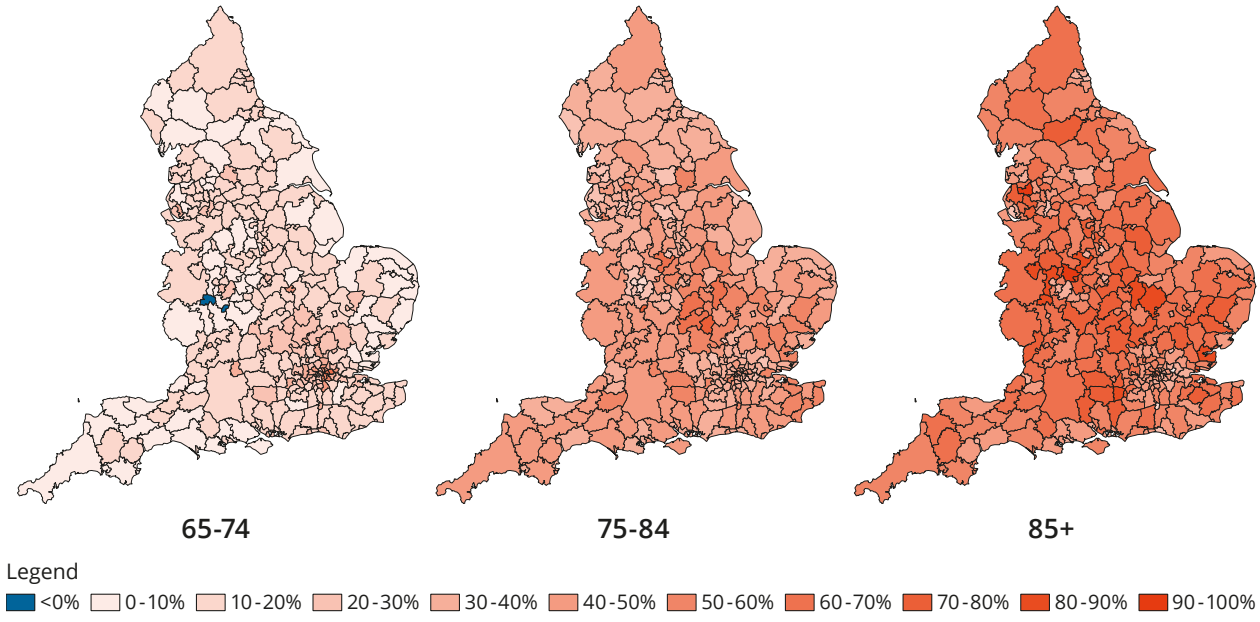
Figure 1 shows the share of the population by district aged 65+ by age group (65-74, 75-84, 85+). The high concentrations of older people are generally outside major urban areas.

Figure 1: Share of older people in the population of England by age band, 2018



Source(s): ONS (2016) 'Subnational population projections for England: 2014-based projections'.

Figure 2: Projected growth in the old-age population of England by age band, 2018-30



Source(s): ONS (2016) 'Subnational population projections for England: 2014-based projections'.

However, the geographical distribution of projected population growth among those aged 65 and over is broad (see Figure 2).

All areas are projected to see double-digit growth in the number of people aged 75 and over; **no one area escapes the growing demand pressure**. Scaling up existing models of provision to meet that demand is both infeasible and prohibitively expensive and there is growing recognition that an alternative way forward is required – one that places greater emphasis upon prevention, healthy ageing and independent living.

People relocate over their lives, posing further challenges for care planning

Figure 1 and Figure 2 highlight the scale of the challenge ahead and raise immediate concerns about how individual areas can plan for such demographic change. A further complication for planning is the nature of internal migration (i.e. within England).

Figures for 2016 from the Office for National Statistics (2018) estimate that circa 188,000 people aged 65+ moved to a district of England from somewhere else in the UK. This represents around 2% of the population in that age group. Around 87,000 of those moves are by people aged 75+ (again, around 2% of that population).

As Figure 3 shows, there is a tendency for people in the ten years before and after retirement to move out of London and its periphery as well as other urban centres. This is indicated by the blue areas in the leftmost and centre maps of Figure 3. There is net out-migration: the numbers of people in these age groups who move out exceeds the numbers who move in. The deeper the blue, the greater this effect. In contrast, net in-migration (the red areas) tends to occur in less urban areas and, the deeper the red, the greater this rate of in-migration.

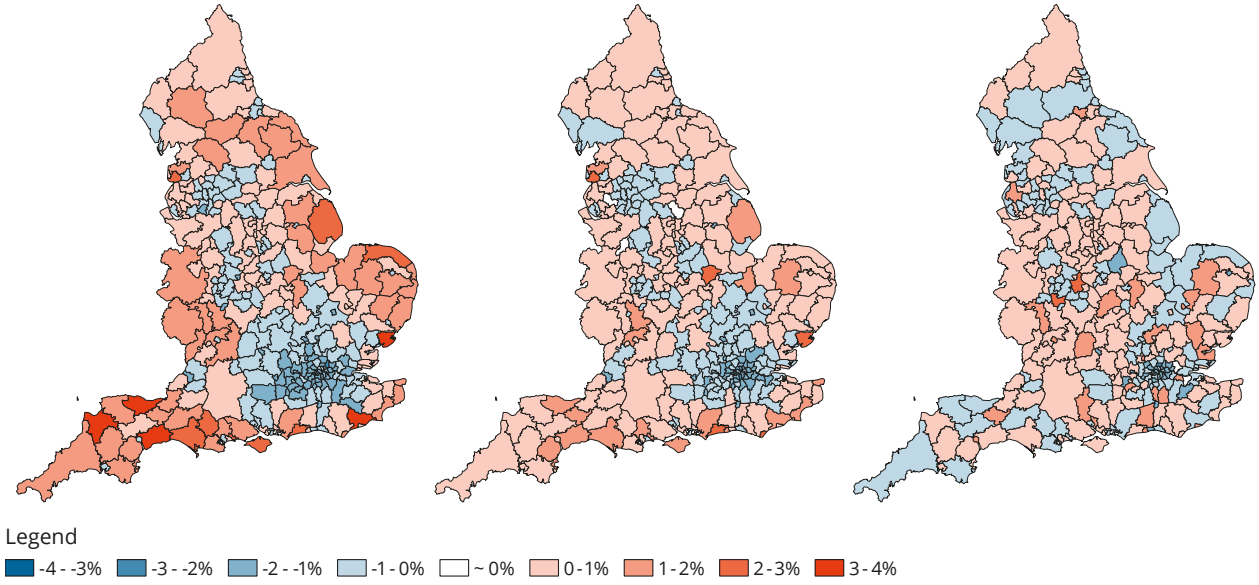
Those planning future care provision must take into account the movement of people in older age cohorts, and not just the needs of the current resident population as they age. The characteristics of those who do or do not move are relevant. If an area, possibly because of lower housing costs, tends to attract people with lower income/wealth, depending on means-testing arrangements, they may have greater need for local authority-funded care. Their socio-economic circumstances may also be correlated to other, exacerbating factors (e.g. health and later care needs).

Moreover, while there is some similarity in the patterns of net migration for those aged 55-64 and 65-74, as the rightmost map of Figure 3 shows, the pattern for older people aged 75+ is markedly different. There remains a tendency for older people to move out of London but, in some areas, there is something of a reversal (albeit on smaller numbers of people by this age group). It is perhaps too narrow to think of a single house move by people upon retirement. Rather, people may initially retire to one area and, as their (care) needs change, they may move again. To the local decision-maker, this presents a more subtle planning problem. Sheer numbers may not in themselves be a useful guide to future need because people may relocate before they need certain kinds of care and, perhaps more crucially, who moves and where may be related to their personal and financial circumstances. An area may prove to be just one stage of a person's journey through care – with implications for provision as well as individual strengths and needs.

As an issue, **better understanding of internal migration and the *types* of people who move in and out of different areas is a crucial element of better population segmentation, if not full personalisation, of care**. The sections that follow highlight that the ability to account for such effects provides vital information with which to anticipate and thus plan for future care needs.

If care in England requires new care models and methods of delivery, the capacity for appraisal of this type must be significantly bolstered. As Nik Lomax of the University of Leeds argues, this is relevant to a range of resource allocation and policy decisions.[1] In England, researchers must resort to alternative methods to infer these movements outside of census years. **The use of commercial data sources shows promise in this regard but is not yet at a point where they can be reliably used for such planning**. Such research has shown, for example, the inter-relationships between London and the greater South East forming an 'escalator region' for young people early on in their careers.[2] A similar understanding of movements by older people to ensure that the built environment as well as care provision is fit for purpose would be invaluable in mitigating future care pressures.

Figure 3: Net internal migration in England by age band (% of population in that age band), 2016

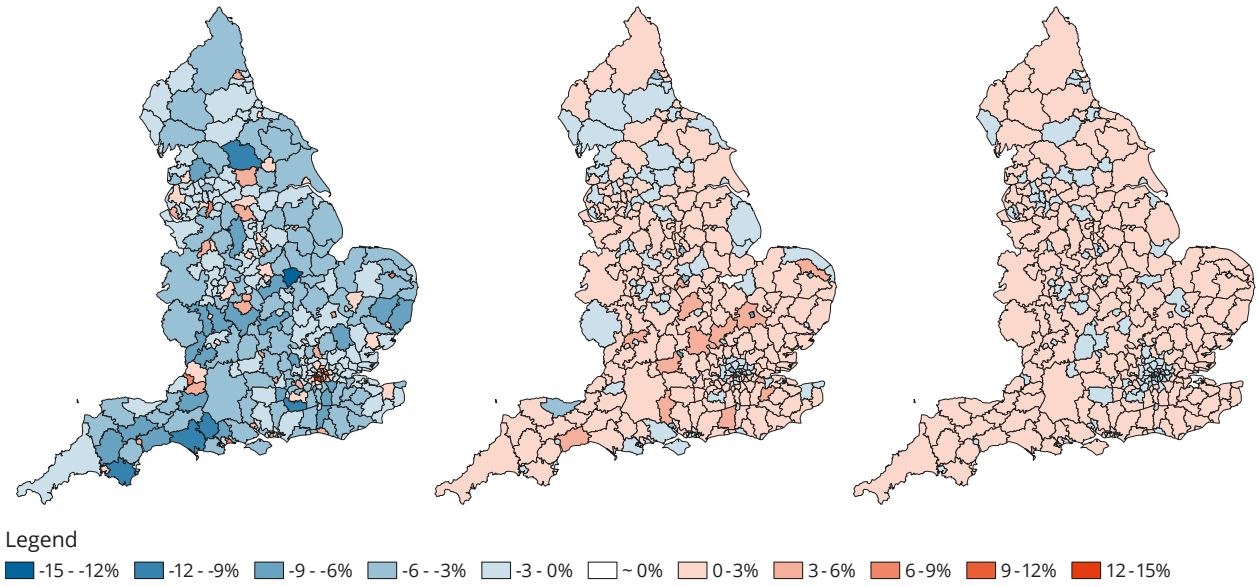


An understanding of internal migration is also crucial from a supply perspective. Location decisions by the working-age population determine the location of the workforce. As Figure 4 shows, **patterns of migration for younger people differ to those for older people** which may lead to imbalances between the need for and availability of carers. **Steps to address such demand and supply imbalances may require consideration and coordination of a range of policies and, in particular, spatial and workforce plans**.

1 Lomax, N., 'Understanding Housing Mobility', https://www.cdrc.ac.uk/news-archive/understanding-household-mobility-nik-lomax/

2 Lomax, N., 'Household mobility: where and how far do we move?', https://www.cdrc.ac.uk/news-archive/household-mobility-where-and-how-far-do-we-move/

Figure 4: Net internal migration of younger people in England by age band (% of population in that age band), 2016



Clusters

England comprises a large number of diverse areas. To introduce some structure to an assessment of local risks and opportunities, cluster analysis is used below to group the 326 local authority districts of England with similar characteristics. While not intended to be a definitive classification, the results provide an illustrative typology to classify and understand local areas.

A preliminary data assessment grouped the publicly available data into four categories, providing a framework with which to think about the different features of a local area in terms of:

1. **Demand:** factors that influence the need for care, such as demographic pressures.
2. **Supply:** local assets and resources for care provision in the form of, for example, unpaid care and care home provision.
3. **Context:** wider factors not directly related to care but which represent underlying influences on demand or supply and how they interact.
4. **Outcomes:** performance indicators relating to care as collected and published for (mainly national) reporting and which arise from the interplay between the three factors above.

Grouping local areas according to common combinations of features identifies six groups, and the different characteristics of each area type imply different risks and opportunities for providing care.

As Table 2 and Figure 5 show, the description and geographical arrangement of the clusters is intuitive and plausible, distinguishing:

- Inner London (and two areas in outer London).
- a set of Young Urban Centres which either surround London or are dotted around as pockets of towns/cities.
- Old Industrial Hubs in the Midlands and north of the country.
- more sprawling bands of commuter belts around urban areas.
- extensive rural areas around the country with 'Remote' areas (whether urban or rural) at the extremes of the country.

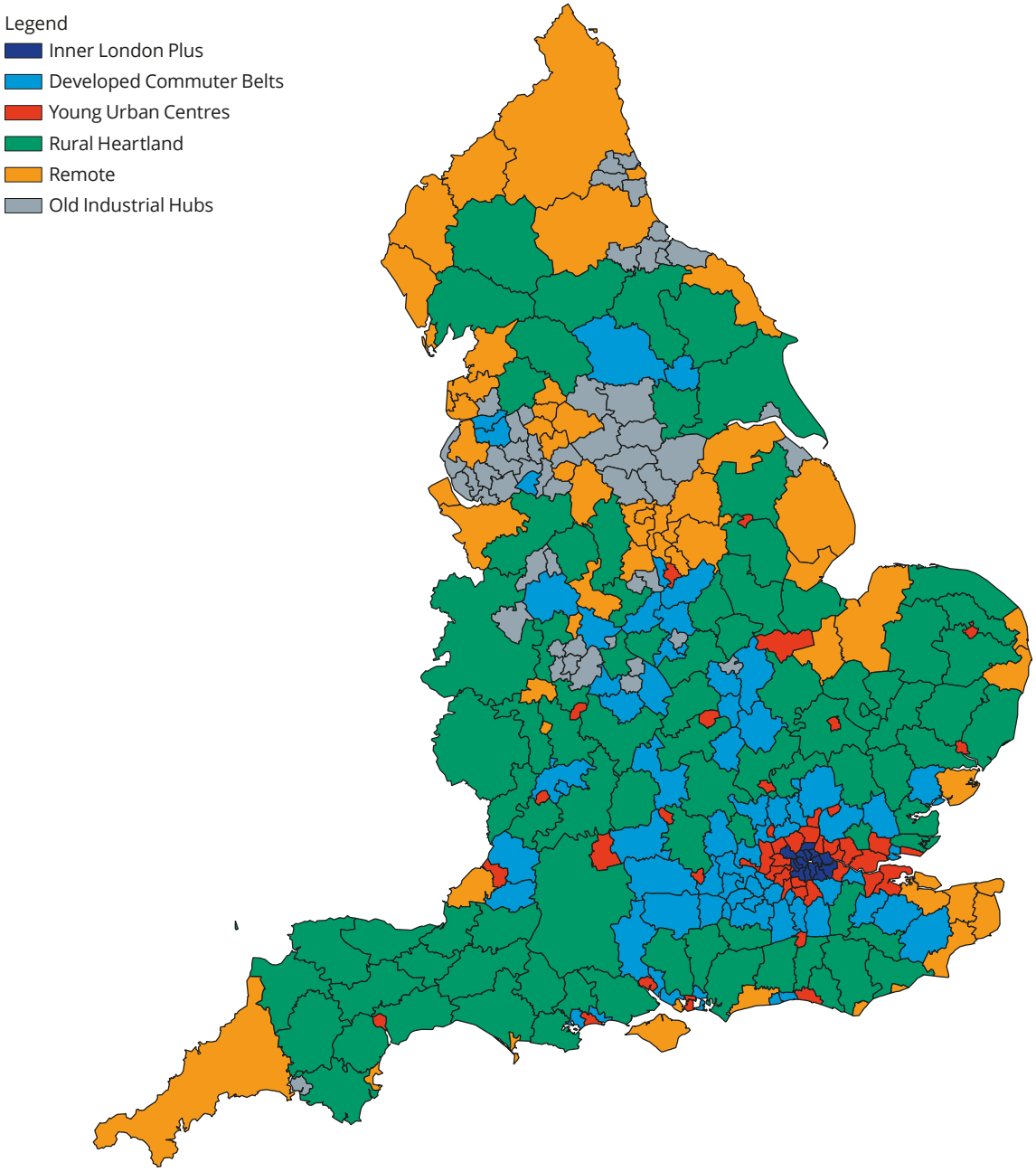
The table at Appendix I summarises the characteristics of the clusters by their selected features.

Table 2: Cluster Definitions

	Cluster	Description	Examples	Number in cluster
	Inner London Plus	Very expensive, almost entirely urban areas Few older people and a greater tendency for them to live alone or move out High rates of international in-migration of working-age people Low rates of home ownership and high rates of social/private renting Strongest prospects for economic growth High inequality, with marked differences in mean and median pension incomes and high rates of deprivation	Inner London, Brent, Greenwich	15*
	Developed Commuter Belts	High house prices and high rates of home ownership Correspondingly low rates of social/private renting Somewhat older population with medium, but balanced, in- and out-migration Low rates of older people living alone Mean pension incomes relatively high compared to median pension incomes but deprivation relatively low	Bedford, Colchester, Guildford, Harrogate, Milton Keynes, Solihull, York	70
	Young Urban Centres	Highly urban High house prices and relatively high rates of home ownership Moderate rates of social renting High uptake of ultrafast broadband A young population with some tendency for older people to either live alone or move out (though not nearly to the same degree as for areas in inner London)	Brighton and Hove, Bristol, Cambridge, Norwich, Oxford, Reading, Southampton	45
	Rural Heartland	Rural High share of older people and a tendency for them to move into these areas Low international in-migration of working-age people Medium economic growth prospects High rates of home ownership and low rates of social renting Limited development of digital infrastructure	Breckland, Cotswold, Herefordshire, Melton, Rutland, Shropshire, Stratford-on-Avon, Tunbridge Wells, Wiltshire	86
	Remote	High share of older people and a tendency for them to move into these areas Low international in-migration of working-age people Relatively high rates of private renting (second only to inner London) Very limited development of digital infrastructure	Blackpool, Canterbury, Cornwall, County Durham, Dover, Great Yarmouth, Rochdale, Scarborough	57
	Old Industrial Hubs	Low house prices Low rates of internal migration of older people (both in- and out) and modest rates of international in-migration of working-age people High rates of social renting and low rates of private renting Weak economic growth prospects Relatively advanced in terms of digital infrastructure High rates of income, employment and health deprivation	Birmingham, Bradford, Leeds, Liverpool, Manchester, Newcastle upon Tyne, Sheffield	51*
			TOTAL	**324**

Note(s): City of London and Isles of Scilly excluded owing to limited data (figures not available for all indicators). Manchester manually reclassified to Old Industrial Hubs (from Inner London Plus). Original cluster definitions left as is. Source(s): CE calculations.

Figure 5: District classifications

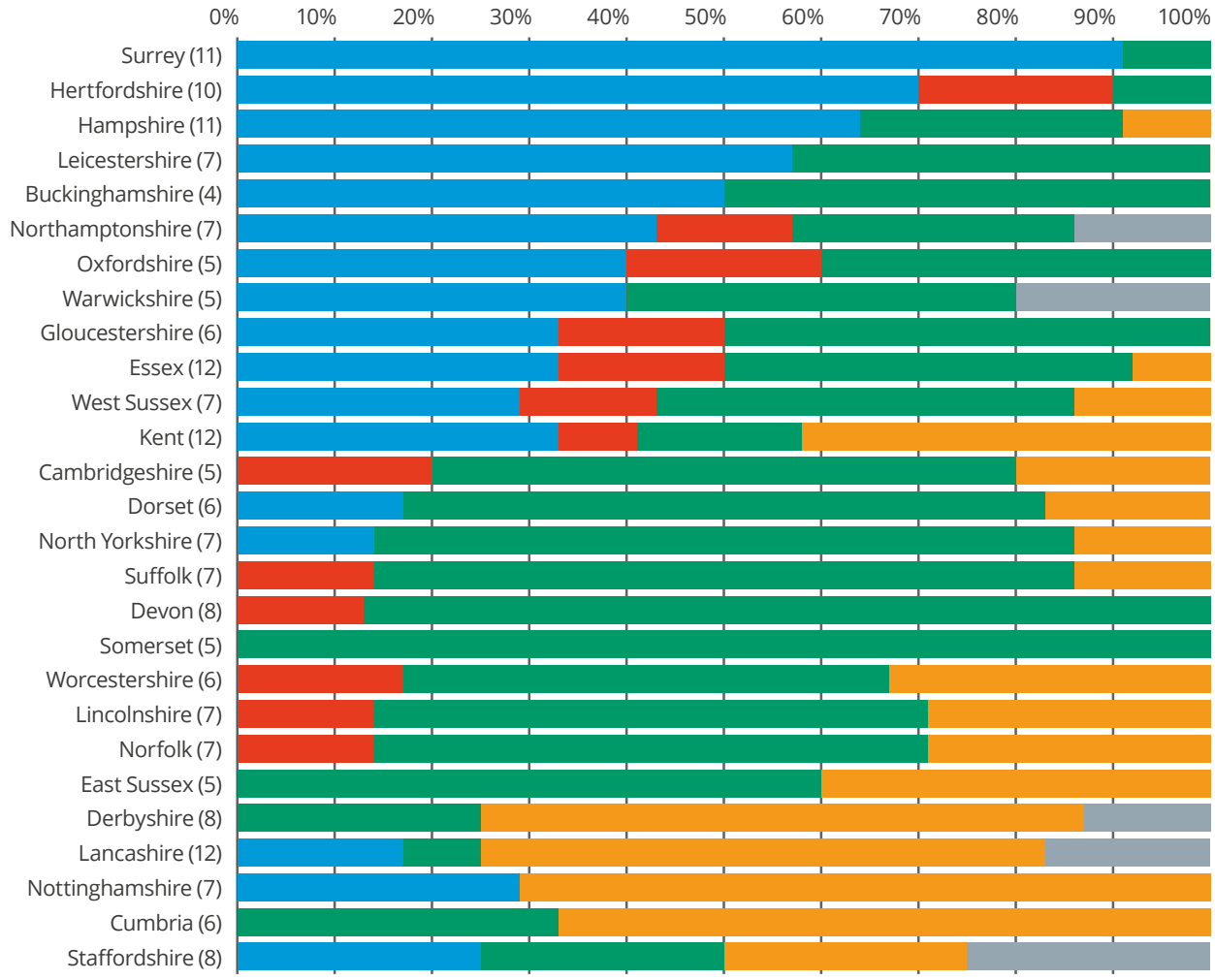


Source(s): CE calculations

Our analysis was carried out at the level of districts to use the most detailed geographical breakdown available for the features of interest. Responsibility for adult social care lies with councils with adult social services responsibilities.[3] Figure 6 shows how diverse these geographies are in terms of the types of districts they contain. Broadly, Figure 6 shows these council areas to be mixtures of commuter, rural and Remote areas, possibly with either a young, or an old-industrial, urban area.

3 There are 152 councils with adult social services responsibilities in England. Of the 326 local authority districts, 125 correspond directly to a council. The remaining 201 districts are subdivisions of 27 (shire) counties

Figure 6: Composition of shire counties



Note(s): Number of constituent districts given in brackets. Source(s): CE calculations.

Risks and Opportunities

Having identified a set of area types from the cluster analysis, this section considers how such areas are exposed to different risks and opportunities. Different area types have different proportions of older people and different rates of projected growth in those populations. This points to different scales of demographic pressure over time. The level of associated risk varies by type of area. However, it is not necessarily the case that an area that faces high risk of one kind will also face high risk in another. **The nature of care infrastructure and assets differs across the country and differing circumstances lead to differing risks**. It is in this way that **policymakers should be wary of 'one-size-fits-all' solutions to care provision and should recognise and work with local diversity in strengths as well as weaknesses**.

Our assessment of risks explores three areas:

1. **Demand:** the risks and challenges presented by growing pressure from growing needs.
2. **Funding:** constraining factors that might affect the availability of financial resources to fund care, whether from public money or self-funding by individuals.
3. **Delivery:** challenges to effective operation/expansion of care in an area, or particular models of care.

The risk assessment takes a qualitative approach that assigns a low, medium or high rating to the risk *relative to that from other factors*. That is, a low risk rating does not necessarily mean that the risk can be ignored, only that it likely represents less of a priority to an area than other risks (i.e. it is not *as* pressing as other risks in the register). As presented, the focus of this section is on risks but, in many cases, the opposite represents an opportunity. As an example, limited digital infrastructure is a risk to areas that might be considering telecare as part of their suite of candidate care models. Conversely, an area that has better developed digital infrastructure has a clearer opportunity to deploy telecare.

Demand

Three main demand risks are identified, of which, the last is not readily assessable at a local level using publicly available data:

1. Growth in the old-age population: higher growth (in percentage terms) implies a greater need to scale up provision.
2. Growth in the number of older people living alone: higher growth suggests a greater population that may need support from outside the home.
3. Changing (growing) incidence of health conditions: increasing prevalence of certain conditions would raise care needs over and above that implied by population growth alone.

The third of these is critical to understanding the level and nature of future need given the ageing of current cohorts of the population. **Case study evidence indicated that more information about this would be helpful** - particularly when considering the growing number of people with multiple or 'complex' needs – **and it is, therefore, worthwhile commissioners placing emphasis upon this facet of demand in integrating health and care datasets at the local level**.

Table 3: Risk register: Demand

	IL+	DCB	YUC	RH	R	OIH
Growth in the old-age population						
Growth in the number of older people living alone						
Changing (growing) incidence of different (and multiple) conditions	Unknown: limited evidence at a local level					

Key: **High risk** **Medium risk** **Low risk**

IL+ - Inner London Plus, DCB - Developed Commuter Belts, YUC - Young Urban Centres, RH - Rural Heartland, R - Remote, OIH - Old Industrial Hubs

Source(s): CE assessment.

Growth in the Old Age Population

The growth in the old-age population in percentage terms is important if we are to understand the extent to which provision needs to grow to accommodate an increase in potential demand (albeit this assumes that the balance of care models and provision is not to change substantively in the near future, and we have already stated that this is neither desirable nor feasible in practice). Table 4 thus shows **Inner London Plus has the highest risk from growth in the elderly population**. Despite a relatively low current share of the population aged 65+, that age group is projected to increase by an average of 26%. Growth elsewhere is projected to average

around 20% and thus to be of somewhat lower, medium risk. Increases are still large, and all areas face a substantial demand challenge in the coming years.

Table 4: Projected changes in the old-age population (aged 65+) by cluster

	2018 share (%)	2030 share (%)	Absolute difference (pp)	Percentage change (%)
Inner London Plus	9.6	12.1	2.5	26.0
Developed Commuter Belts	19.6	23.4	3.8	19.4
Young Urban Centres	14.3	17.0	2.7	18.9
Rural Heartland	24.3	29.2	4.9	20.2
Remote	22.5	27.0	4.5	20.0
Old Industrial Hubs	17.8	21.3	3.5	19.7

Source(s): ONS (2016) 'Subnational population projections for England: 2014-based projections'. CE calculations.

Growth in the Old Age Population Living Alone

As with the growth in the old-age population, it is the growth in the old-age population living alone that is particularly relevant to understand how provision might need to expand (or, alternatively, the extent to which a reorganisation of services might be necessary).

In part because there is already a large share of the old-age population living alone in London, Table 5 suggests that the risks in this cluster will be somewhat lower than in other areas. In the Inner London Plus cluster, growth of 36% is projected compared with 42-45% elsewhere (see Table 5). Again, all areas can expect a large increase in this population over time, pointing to a likely increase in need.

Table 5: Projected changes in the old-age population (aged 65+) living alone by cluster

	2018 share (%)	2030 share (%)	Absolute difference (pp)	Percentage change (%)
Inner London Plus	12.9	17.5	4.6	35.7
Developed Commuter Belts	3.9	5.6	1.7	43.6
Young Urban Centres	6	8.6	2.6	43.3
Rural Heartland	3.8	5.4	1.6	42.1
Remote	4.2	6	1.8	42.9
Old Industrial Hubs	4.8	7	2.2	45.8

Source(s): Ministry of Housing, Communities and Local Government [MHCLG] (2016) '2014-based household projections in England, 2014 to 2039'. CE calculations.

More generally, and as discussed at the beginning of this Section, a **deeper understanding of demographic change is necessary to understand trends in need over time that go beyond rudimentary projections of population size**. The need for, and design of, accommodation for single living in older age groups is something that the existing household projections might

reasonably support, for example. **A deeper understanding of individuals' circumstances (for example, why they live alone, proximity to family and alternative provision) could go further to not only tailor provision but also help in the design of measures to sustain independent living**. This extends to an improved understanding and segmentation of the population – for example, whether there are *types* of individual who are more likely to be living alone, distinguished by financial means and health factors. Views put forward by **case study interviewees supported the idea that effective personalised care required such insights**.

Summary

A better understanding of the scale and nature of need is critical to effective care planning. This is relevant to investment in both service provision and developing the capacity to adopt and support individualised, 'strengths-based' approaches to care. At a minimum, better understanding of demand risks should enable decision-makers to anticipate needs and develop appropriate care models. However, ultimately, and in line with the well-accepted importance of the wider system, demand risks cannot be seen as simply a given to be responded to. Rather, **the demand profile should be seen as something that can be reshaped through effective prevention and earlier intervention**. There is much work to be done in this area but, for example, analysis of data in Lambeth and Southwark by King's College London, for Guy's and St Thomas' Charity (2018) is shedding light on the risk factors and progression of multiple long-term conditions. Work such as this points to the scope for preventative interventions to delay and/or reduce the impact of these conditions upon care provision.

Funding

Funding pressures are a central theme of the ongoing social care debate. Here, the availability of funds for both councils and individuals is considered.

The policy trend continues towards increasing devolution of powers and localisation of revenues (principally business rates). While full localisation has not happened (the current business rates retention scheme levels out funding across areas, compensating for a dwindling Revenue Support Grant), there is no indication that this trend will not resume in the future. As such, indicators of local revenue raising power are important to understand how councils' financial situations might change in the future as a result of:

- increasing dependency ratios (higher growth in the old-age population relative to the working-age population):
  - depending on older people's financial circumstances (e.g. council tax support for those on Pension Credit), this may reduce council tax revenues.
  - lower growth in the working-age population may be associated with lower economic activity (see below) and thus local business rates revenues.
  - there may be tension between the levels and kinds of services that a council must provide, depending on changing demographics over time.
- low economic growth, leading to lower potential to raise revenue from business rates.

For individuals, potential funding risks include:

- Income deprivation, suggesting a greater need for state funded support (because of means-testing) and a lower ability to self-fund and/or absorb short-term financial difficulties (and the spectre of so-called 'catastrophic care costs'); and
- limited personal wealth, indicating less potential for equity release to fund potential care needs.

Table 6: Risk register: Funding

	IL+	DCB	YUC	RH	R	OIH
Increasing dependency ratio						
Low economic growth						
Income deprivation						
Limited personal wealth						

Key: High risk Medium risk Low risk

IL+ - Inner London Plus, DCB - Developed Commuter Belts, YUC - Young Urban Centres, RH - Rural Heartland, R - Remote, OIH - Old Industrial Hubs

Source(s): CE assessment.

Increasing Dependency Ratio

The dependency ratio is the ratio of old-age to working-age population (see Table 7).

The dependency ratio does not directly imply a need to scale up provision (and is ambiguous as to the balance of local revenues), so both the ratio itself and the size of the change are considered. The large increase for **Rural Heartland and Remote areas, paired with already-high dependency ratios, marks these areas as being high risk**.

Inner London Plus has an overall medium risk because a large proportionate increase comes from a low (and continued-low) dependency ratio. The risks for the remaining three area types (Developed Commuter Belts, Young Urban Centres and Old Industrial Hubs) are also more modest owing to lower increases and lower dependency ratios.

Table 7: Projected changes in the old-age dependency ratio by cluster

	2018 (%)	2030 (%)	Absolute difference (pp)	Percentage change (%)
Inner London Plus	13.9	18.2	4.3	30.7
Developed Commuter Belts	33.5	42.5	9	26.7
Young Urban Centres	22.9	28.3	5.4	23.8
Rural Heartland	43.6	56.9	13.3	30.6
Remote	39.3	50.9	11.6	29.4
Old Industrial Hubs	29.3	37.1	7.9	26.8

Source(s): ONS (2016) 'Subnational population projections for England: 2014-based projections'. CE calculations.

Low Economic Growth Prospects

Low economic growth is a potential risk in the face of continued devolution. A central idea to increased localism is the devolution of both responsibilities and resources; paired with an incentive for areas to grow their local economies. While this is appealing to areas with a legacy and predisposition for strong growth, it may hinder development in areas with less dynamic local economies. The tension lies between the need for a strong incentive to reward growth and the risks that lower-growth areas fail to raise the revenues necessary to support public services. The latter is currently addressed through a mechanism of redistribution.

Should local revenues be increasingly tied to local economic performance, and depending on means-testing and caps, the level of risk depends on prospects for different areas. Table 8 presents projections of economic and employment growth over 2018-30, with **Inner London Plus having lowest risk** (the highest projected economic growth) over 2018-30 (22.6%) and Rural and **Old Industrial Hubs having the highest risk** (lowest economic growth at around 16.5%). The other areas lie between these extremes and are of medium risk, relatively speaking.

Projected employment growth follows a similar pattern with lower employment growth accompanying low GVA growth.

Table 8: Projected changes in GVA and employment, 2018-30 (%)

	IL+	DCB	YUC	RH	R	OIH
Projected change in GVA, 2018-30 (%)	22.6	18.1	18.7	17.8	16.5	16.3
Projected change in employment, 2018-30 (%)	6.9	4.6	4.8	4.2	3.1	3.0

Note(s): GVA is Gross Value Added, a measure of productive output in an economy.
Source(s): CE multi-local area projections. CE calculations

Income Deprivation

Income deprivation is viewed through two measures from the English indices of deprivation, as well as the difference between the mean and median pension income across clusters (see Table 9).

Table 9: Measure of income deprivation (inequality)

	IL+	DCB	YUC	RH	R	OIH
Difference between mean and median pension income, 2015-16 (%)	37.0	23.8	16.5	22.1	15.4	11.4
English indices of deprivation, 2015, average income deprivation score	0.195	0.094	0.147	0.090	0.156	0.190
English indices of deprivation, 2015, average IDAOPI score (income deprivation affecting older people index)	0.317	0.111	0.178	0.107	0.162	0.210

Source(s): HM Revenue and Customs (2018) 'Personal incomes statistics for the tax year 2015 to 2016', MHCLG (2015) 'English indices of deprivation 2015,' CE calculations.

These three figures highlight the:

- high levels of deprivation and inequality in Inner London Plus, with the greatest disparity in mean and median pension income (on average, mean pension incomes are 37% greater than the median) and the highest average deprivation scores; by some way for older people: **high risk**.
- relatively high deprivation in Old Industrial Hubs (comparable to inner London areas) albeit with smaller differences in pension income (a little over 10%, indicating relatively fewer older people who benefit from large private pensions): also **high risk**.
- medium levels of deprivation in Young Urban Centres and Remote areas: **medium risk**.
- comparatively low levels of deprivation albeit some indication of inequality in pension incomes (15-22%) in Developed Commuter Belts and Rural Heartland areas: **low overall risk**.

Limited Personal Wealth

Personal wealth is considered through both the average house price (average value of assets) and the rates of home ownership among the over 65s (the likelihood of an older person holding such an asset).

Table 10: House prices and tenure

	IL+	DCB	YUC	RH	R	OIH
Average house price, 2017 (£'000s)	602	326	320	274	170	141
Share of home ownership among households with household reference person aged 65+, 2011 (%)	44.9	79.8	72.4	79.4	76.0	69.9
Share of council rental among households with household reference person aged 65+, 2011 (%)	27.2	6.6	14.3	5.1	8.3	13.5
Share of other social rental among households with household reference person aged 65+, 2011 (%)	17.7	8.1	6.7	8.2	8.1	10.0
Share of private rental among households with household reference person aged 65+, 2011 (%)	7.7	3.3	4.3	4.8	5.1	3.7

Source(s): HM Land Registry (2018) 'UK House Price Index, January 2018', ONS (no date) 'Census 2011', CE calculations.

Consequently, despite a high average house price in Inner London Plus, of some £600,000, low rates of home ownership (just under 45%) among residents over 65 suggests a much more limited asset base than it might first seem. Large proportions of older residents (around 45%) live in social housing of some form. The risk associated with limited personal wealth comes from a possibly greater future need for state funded care. It is thus high for areas in inner London. This challenges the idea that all Londoners are necessarily wealthy (or eventually move out to live elsewhere) and have no need for state-funded support. Strategic planning by councils needs to reflect this.

The risk is similarly high in Old Industrial Hubs because of low house prices (the lowest among the clusters, at £141,000 on average) and lower rates of home ownership relative to other areas outside of inner London. Home ownership is somewhat low and, even those who are

home owners have comparatively little in the way of housing wealth. High property values and high rates of home ownership among older people point to low risk in Developed Commuter Belts, from the point of view of funding, and somewhat lower house prices and rates of home ownership lead to medium risk in the remaining areas.

Summary

The risks above are of concern because they affect how local authorities might need to plan their spending according to potential revenues. This is especially the case if localisation of tax revenues (retention of business rates) is to continue in a way that seeks to incentivise local growth strategies. A further concern from a care perspective is the ability of residents to fund their own care and, conversely, how much the local authority might have to provide. The indicators above show how these risks differ across area types and the case studies in the next section also highlight the differences in circumstances.

If both local authorities and people in need of care across the country vary substantially in their ability to fund care, there is the risk of substantial inequality (a 'postcode lottery') in outcomes. As well as the need to better invest in prevention, possible responses might include targeted economic strategies to promote growth (though growth potential varies widely across regions). The design of funding formulae and the mechanism for calculating individual cost contributions are also macro-level interventions available to and considerations for central government.

Delivery

The risks associated with delivery concern alternative models of care and whether conditions in some local areas might better support some models more than others. The factors considered are:

- **Unpaid care:** high rates of unpaid care are principally a current risk because they are a signal of people in high need of care (which could quickly lead to a need for further intervention, such as in an emergency) as well as pressure on carers.
- **High economic growth:** while this may be a source of local tax revenues, a faster-growing economy will tend to expand in non-care sectors. This represents a competing demand for labour which might compound workforce issues in a care sector already struggling with recruitment and retention.
- **Limited digital infrastructure:** the absence of broadband connectivity and fast connections may preclude digital solutions such as telecare.
- **Low population density:** a more dispersed population (i.e. less urban / more rural) increases the area that care models need to cover to cater for older people. This may entail higher coordination and travel costs.
- **Limited space to expand care facilities:** in built-up areas, there may be limited space to expand the capacity of care homes and/or consider more innovative solutions like extra care housing. This is compounded by high property values (as might be indicated by high house prices).
- **Small care homes:** smaller care homes may be at greater financial risk to market instability compared to larger ones (as measured by the number of care home beds).
- **High rates of private rental among older people:** older people who are renting privately may face greater difficulties in accessing suitable housing and/or ensuring that adaptations are made to accommodate their changing needs over time.

Table 11: Risk register: Delivery

	IL+	DCB	YUC	RH	R	OIH
High unpaid care						
High economic growth						
Limited digital infrastructure						
Low population density						
Limited space to expand care facilities						
Small care homes						
High rates of private rental among older people						

Key: High risk Medium risk Low risk

IL+ - Inner London Plus, DCB - Developed Commuter Belts, YUC - Young Urban Centres, RH - Rural Heartland, R - Remote, OIH - Old Industrial Hubs

Source(s): CE assessment.

High Unpaid Care

Informal care is a vital part of the wider care system but often overlooked compared with the more visible financial pressures and delivery targets against which organisations tend to be measured. Unpaid care is not in and of itself a problem. It is in many respects a desirable part of care provision. The concern is *high levels* of unpaid care.

High levels of unpaid care are problematic because they are taken, here, as a signal that a part of the care ecosystem is potentially under strain. Those in receipt of such care may have high levels of need, with an eventual requirement for even greater support/action, possibly in an emergency. For carers, there is an immediate concern about the strain this places on them and that their health may suffer as per the findings of the State of Caring: 2018 survey results published by Carers UK.[4] While unpaid care is both a form of provision and a buffer, a care ecosystem ought not to become overly reliant upon it – otherwise, notional cost-savings in one part of the system will tend to become cost pressures in others (for example, from the point of view of health spend and lower economic productivity).

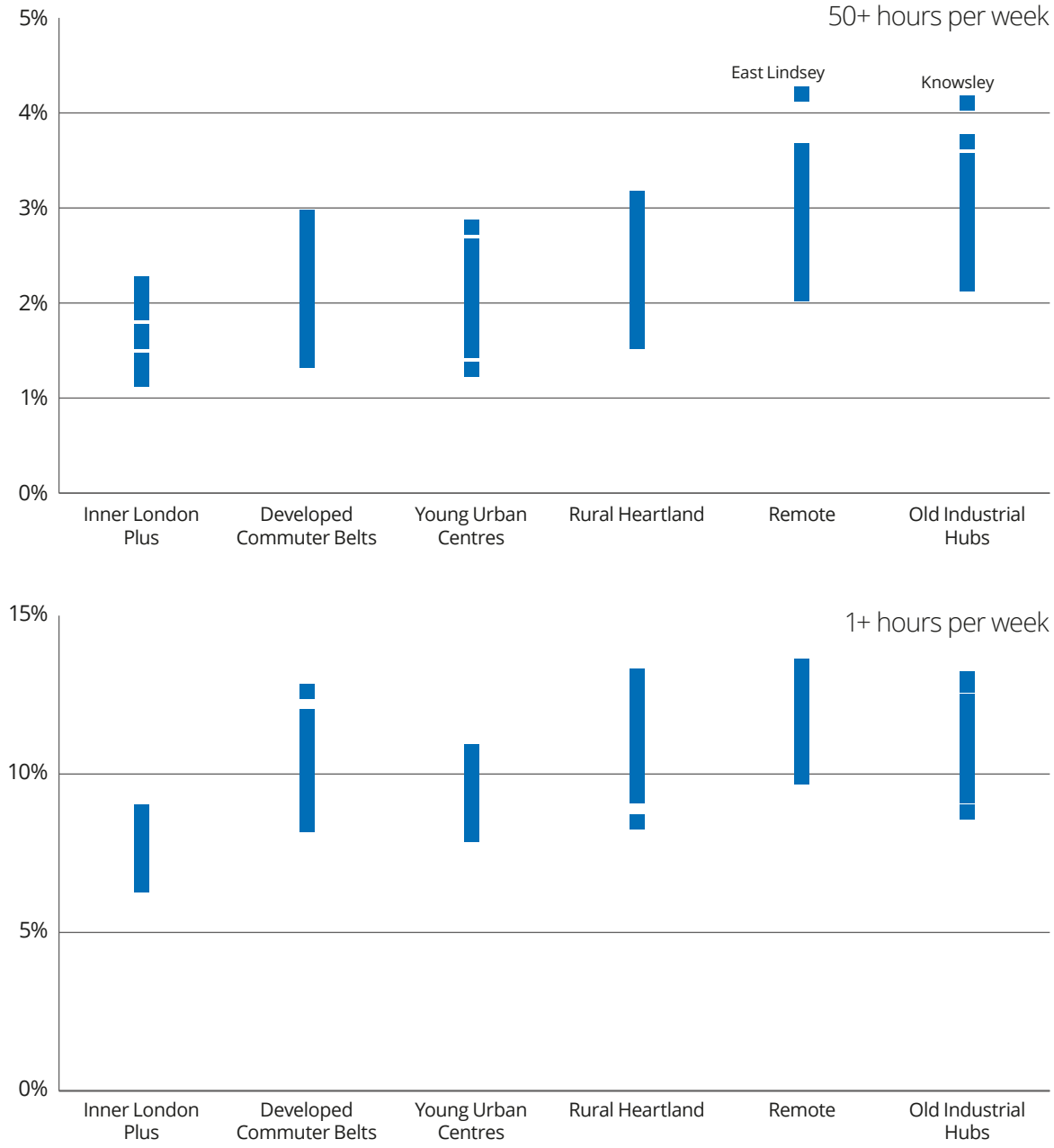
Figure 7 shows the percentage of people in each district who provide any unpaid care and who provide 50+ hours of unpaid care per week. It is instructive because it shows a greater tendency for **higher levels of unpaid care in Remote areas and Old Industrial Hubs** (areas of high risk), lower levels in Inner London Plus (low risk) and rates towards the lower end for the other three clusters (medium risk).

Lower rates in Inner London Plus are plausibly so because of a younger population, but similar profiles of unpaid care among other clusters do not so obviously relate to older populations. Certainly at 50+ hours per week, Remote areas and Old Industrial Hubs have the highest rates, but the areas with the largest shares of older people are in the Rural Heartland. Other factors seem to be at work - although it is ambiguous as to what those factors might be and whether the outcomes are 'good'. This might depend, for example, on access to formal care or the nature of demand itself.

4 Carers UK, State of Caring: 2018, https://www.carersuk.org/for-professionals/policy/policy-library/state-of-caring-2018-2

In terms of solutions for the two high-risk areas, Remote areas have relatively large proportions of their populations living in rural areas. This contrasts with the highly urban populations of Old Industrial Hubs. Both area types likely face greater current and future risks from intensive unpaid care, but the solutions to alleviate that pressure are likely to differ between the two groups.

Figure 7: Rates of unpaid care by cluster



Source(s): ONS (no date) 'Census 2011'. CE calculations.

The figures above are from the 2011 census and provide the most comprehensive view of unpaid care in England. However, there is a ten-year interval between such figures, and analysis of survey data by Petrie and Kirkup (2018) shows how family care provision has increased between 2005 and 2015. In 2005, 13.5% of UK adults were providing family care. For the period 2015-17 this share increased to 14.5% but with the share of carers providing 20+ hours per week increasing to 28% (from 24%).

From a monitoring perspective, **information on unpaid care remains sparse, but there is some evidence to suggest that provision (certainly family care) is increasing and favouring more intensive care**. This should be of concern both at the national level to understand wider system pressures across the country and at the local level as a signal of strain. As a measure of how the wider care ecosystem is faring, this should not be overlooked because of how it interacts with other elements thereof.

There is also a hidden, and unequal, impact of high levels of unpaid care because of the kinds of people that typically provide unpaid care, and their employment situations. Petrie and Kirkup (2018) find that those who provide higher levels of family care (a subset of unpaid care more generally) are more likely to reduce their hours of work or exit the workforce altogether. This affects women more than men and the authors find evidence of a pay gap between family carers and non-carers (albeit without further statistical analysis to control for other factors). **This may put financial pressure on households in the short-term as well as reduce households' ability to accumulate savings and thus financial insurance to cover their future care costs**. Where unpaid care is under pressure, there is likely to be both an immediate and longer-term challenge. Drawing parallels with maternity and paternity policies, and the gender pay gap, Petrie and Kirkup (2018) put forward recommendations that are designed to ensure employers better accommodate the needs of those with caring responsibilities going forward.

Box 1: Health matters - younger populations are not necessarily in less need of care

As an example of what cannot be readily inferred beforehand from the available data, the general pattern of unpaid care in our case studies matched our expectations. Areas with young populations (Brighton and Hove and Leeds) tended to have rates of unpaid care towards the lower end, while areas with older populations (such as Essex) had somewhat higher rates. Of the four case study areas, Nottingham was slightly unusual. Nottingham has a young population (even outside of the typical age range for students) and an overall low rate of unpaid care. However, broken down by the number of hours of unpaid care per week, Nottingham has a somewhat elevated rate of intensive unpaid care of 50 or more hours per week. Nottingham also has a relatively high ratio of beds to older people, indicating higher levels of formal care provision. One possible explanation raised in the case study interview was that care needs in Nottingham were perhaps higher because of the relatively low healthy life expectancy leading to people needing support earlier in life. This could, in turn, generate a greater need for care than could be inferred from the demographic structure of the population. From the perspective of wider system provision and prevention, Nottingham would seem to have more pressing health concerns

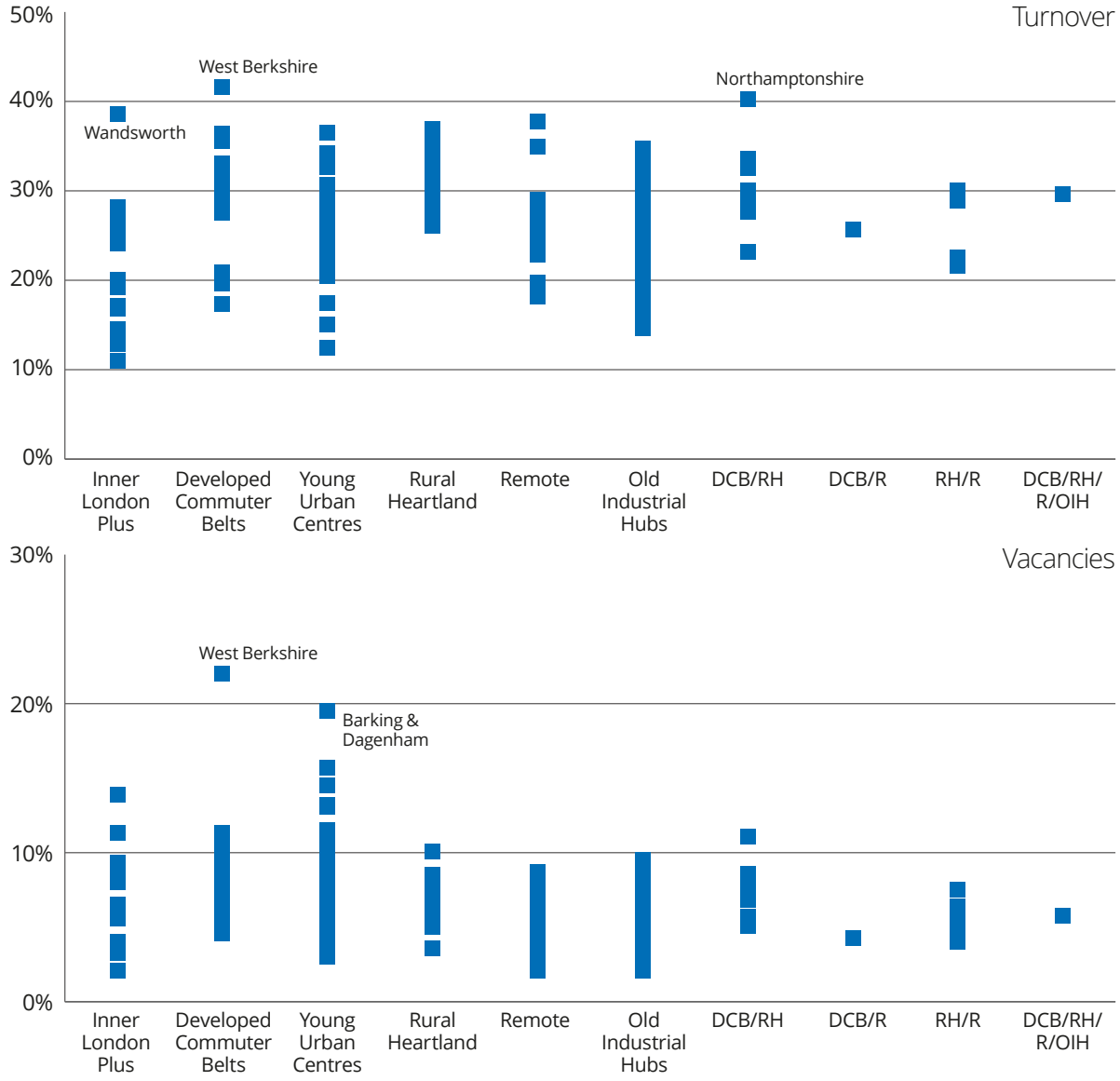
High Economic Growth

Low economic growth represents a funding risk (should devolution continue, leading to local tax revenues being increasingly tied to local economic performance). However, high economic growth presents a different kind of risk because it **generates a need for labour in other parts of the economy**. This creates a competing demand for labour. High economic growth and employment **will tend to push up pay in other sectors whereas funding and pay in social care remains tight**.

This might also discourage people to invest in a career in care, reducing the quality of provision. The risks are thus the opposite to low economic growth for funding.

Workforce turnover and vacancy rates are an indicator of current risk, with implications for institutional memory/expertise as well as the quantity and quality of care. Data made available by Skills for Care at a council level can be grouped by cluster but also by county, which comprise mixed clusters. Certainly compared to other sectors, turnover and vacancy rates are high in social care. Few areas could claim to have no problems at all.

Figure 8: Workforce turnover and vacancy rates, 2016/17



Source(s): Skills for Care (2018) 'Workforce Intelligence: Adult social care workforce estimates 2016/17'. CE calculations

Owing to generally high rates across the board, there seems relatively little to distinguish the clusters, although Rural Heartland areas seem notable for a narrow range of quite high turnover rates. Remote areas and Old Industrial Hubs have a somewhat lower and narrower range of vacancy rates. Among Developed Commuter Belts, West Berkshire seems to stand out as an area that suffers from both high turnover and higher vacancy rates. Retention and recruitment both seem challenging in this area.

Box 2: Recruitment and retention difficulties can vary by area

Of our case study areas, Brighton and Hove and Essex had above-average vacancy and turnover rates, suggesting combined difficulties in both recruiting and retaining staff. In contrast, whilst Leeds and Nottingham both had relatively high turnover rates, their vacancy rates were towards the lower end. This could suggest difficulties with retaining, but not necessarily replacing, staff. As we discuss later in this chapter, challenges to maintaining employment levels in the sector include a transient population (as was mentioned by Brighton and Hove City Council) and the presence of alternative employment (as was mentioned by Nottingham City Council). These have different implications for local workforce policy that would not be easily understood without local knowledge.

In terms of impending risks related to competing employment opportunities, **areas in Inner London Plus, Developed Commuter Belts and Young Urban Centres are more likely to face difficulties in recruitment and retention due to the strength of employment options elsewhere in the economy**. Employment opportunities in other sectors will be somewhat less in Remote areas and Old Industrial Hubs.

Table 12: Projected changes in GVA and employment, 2018-30 (%)

	IL+	DCB	YUC	RH	R	OIH
Projected change in GVA, 2018-30 (%)	22.6	18.1	18.7	17.8	16.5	16.3
Projected change in employment, 2018-30 (%)	6.9	4.6	4.8	4.2	3.1	3.0

Note(s): GVA is Gross Value Added, a measure of productive output in an economy.
Source(s): CE multi-local area projections. CE calculations.

Limited Digital Infrastructure

Here, the percentage of premises with ultrafast rather than superfast broadband connections is considered (see: Table 13). Rates of uptake are lowest for Rural Heartland and Remote areas (less than 10%), representing a challenge (high risk) to advanced telecare and other digital solutions, should these areas consider pursuing them. Connectivity is high in Young Urban Centres and Old Industrial Hubs (60% or more) and somewhat lower for other areas. For areas with high connectivity, there is already an opportunity to implement advanced telecare models. For other areas, **should there be a desire for telecare, or to cater for related technological solutions, uptake of broadband should be an infrastructure priority**.

Table 13: Broadband connectivity

	IL+	DCB	YUC	RH	R	OIH
Proportion of premises connected to superfast broadband (%)	53.3	42.9	27.2	77.5	84.3	34.0
Proportion of premises connected to ultrafast broadband (%)	40.4	49.9	69.0	7.1	7.4	60.1

Source(s): Ofcom (2017) 'Connected Nations 2017', CE calculations.

A limitation of this measure is that it does not indicate whether older people have ultrafast broadband or not. It is likely that younger households have faster connections such that this measure might overstate the level of connectivity for the purposes of delivering alternative models of care. Moreover, there are no indicators of the degree of technological engagement/ comfort by users in key population groups. This will also affect the viability of providing such solutions to target groups. **This is another area in which commercial data could provide additional insight**. Internet service providers hold information on customers' age, location and broadband package, which could, if made available to commissioners, help to address some of the gaps outlined above.

Low Population Density

Low population density reduces the scope for economies of scale in provision. For a given number of people in need of care, a carer (broadly defined) must travel further and for longer in a rural area than a more urban one. There is an opportunity for certain models of care to take advantage of population density in urban areas. There is a significant delivery challenge for more rural areas as it requires access to transport, either by carers having a car or high-quality transport links to connect areas. Low population density **also impacts access to services and increases the risk of social isolation amongst older people endeavouring to age healthily and live independently**.

The risk assessment for low population density is based on the rurality measure in Table 14. This highlights the particular disparity between Rural Heartlands and, to a lesser extent, Remote areas. These are areas that, in general, suffer from poor-quality transport links. This is another aspect of infrastructure and service provision that will need to be addressed, particularly as the old-age population in such areas is high and expected to continue to grow strongly.

Table 14: Population living in rural areas

	IL+	DCB	YUC	RH	R	OIH
Proportion of population living in rural areas (%)	0.0	20.0	1.7	75.0	34.5	5.6

Source(s): Department for Environment, Food & Rural Affairs (2016) 'Rural urban classification', CE calculations.

In particular, **it may be worthwhile policy-makers taking into consideration the potential for new modes of transport (for example, autonomous vehicles) to help mitigate the effects of low population density for care provision when planning and investing in related infrastructure** – whether to reduce direct costs for care providers in such areas or, else, to better support healthy ageing and independent living amongst ageing populations themselves.

Limited Space to Expand Care Facilities

While a complete scaling up of existing provision will be impractical, some increases will be necessary. The extent to which such provision is possible, particularly with respect to care-home provision, depends on the availability of (affordable) space. This risk combines the rurality measure and the house price measure (see Table 15). Were it not for the house price measure, the risks would simply be the opposite of those for low population density. This is the case for Inner London Plus, Young Urban Centres and Old Industrial Hubs, where space is already at a premium. High house prices in inner London compound that high risk: there are many (and more lucrative) uses of that space. Low property values in Remote areas further reduce the limitations of a somewhat urban area, leading to low risk.

Table 15: Space constraints for conventional care

	IL+	DCB	YUC	RH	R	OIH
Proportion of population living in rural areas (%)	0.0	20.0	1.7	75.0	34.5	5.6
Average house price, 2017 (£'000s)	602	326	320	274	170	141
Median beds per care home	15	24	18	28	25	27

Source(s): CQC (2018) 'CQC care directory data, 1 February 2018', Department for Environment, Food & Rural Affairs (2016) 'Rural urban classification', HM Land Registry (2018) 'UK House Price Index, January 2018', CE calculations.

It is conceivable that small care homes also reflect greater exposure to market conditions and instability. The risk assessment considers:

- The median care home size in terms of bed numbers (also reproduced in Table 15).
- More broadly, the distribution of bed numbers across care homes in each group.

The two measures are closely related and Figure 9 shows how skewed inner London is towards smaller care homes (over 60% have fewer than 20 beds) with Young Urban Centres not far behind. These represent high and medium risks, respectively.

For these two area types, this skew reflects a higher proportion of care homes that cater for people with learning disabilities.[5] Such care homes tend to be smaller with the median care home of this type having fewer than ten beds. In both of these areas, such care homes account for two-fifths of the care homes and a little under 20% of the beds. This compares to an England average of 35% and 15% respectively. The greater diversity of need in such areas (which also have high population density and thus limited space) presents a complication for planning and provision compared to areas where there is more homogeneity of need (from older people).

Other areas have care home markets with larger care homes and are thus deemed lower risk.

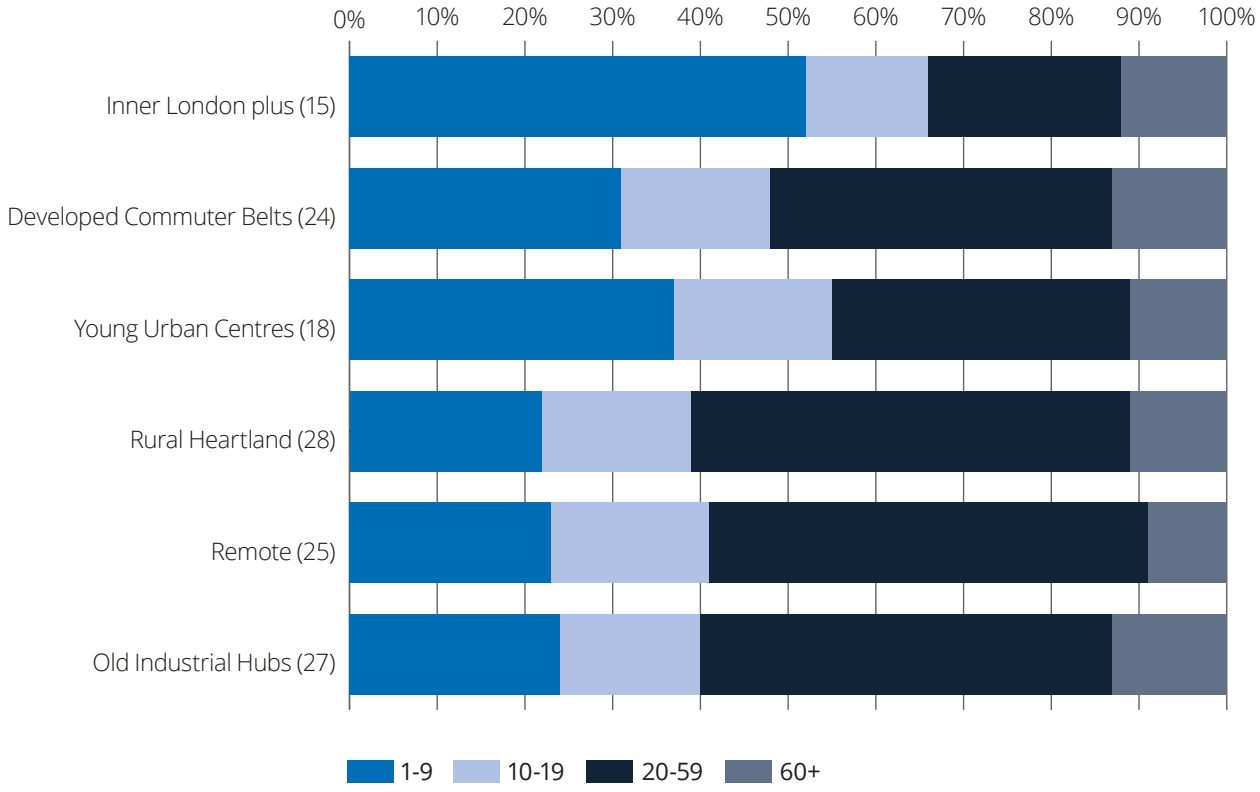
5 As identified in CQC data based on care homes that declare a service user band of 'Learning disabilities or autistic spectrum disorder'.

Box 3: Challenges for care home provision in inner-city areas

A tendency for smaller care homes in inner-city areas came as no great surprise to case study interviewees. What was informative from the discussions was a deeper understanding of care market dynamics that reinforce this risk, but which are not visible in the publicly-available data. It is thought that smaller care homes in such areas are likely to be longstanding facilities and that limited development space is likely a factor in care home sizes. Further off-putting at least in some areas are high property prices. As well as the higher cost of development, smaller care homes are less attractive financially because they tend to be more exposed to risk of closure. Developers now prefer to build larger homes (50-60 beds) elsewhere.

A final factor, highlighted by Nottingham City Council, is the extent to which care home residents are self-funded or not. In places like Nottingham, where most residential care is paid for by the council, rates (and thus revenues) are low. Self-funders tend to be charged more and are therefore more lucrative to care home providers. To the extent that numbers of self-funders are difficult to know, this is a detail that is perhaps lost in aggregate data.

Figure 9: Distribution of care home sizes (by number of beds)



Note(s): Median number of beds per care home given in brackets. Source(s): CQC (2018) 'CQC care directory data, 1 February 2018'. CE calculations.

High Rates of Private Rented Properties Amongst Older People

As well as indicating lower financial wealth, **high rates of private rental may pose a risk to provision outside of care homes**. This is because they **may present a barrier to these older people living in suitable housing as well as ensuring adaptations to maintain the suitability of housing over time**. The indicator focuses on private rental because home owners have greater control over if and how they modify their properties while councils and social landlords have greater responsibilities to social renters. The highest private rental rates and thus the highest risk lies in Inner London Plus. Conversely, Developed Commuter Belts, Young Urban Centres and Old Industrial Hubs are low risk by this measure. Rural Heartland and Remote areas lie somewhere in the middle.

Table 16: Tenure among those aged 65 and over

	IL+	DCB	YUC	RH	R	OIH
Share of home ownership among households with household reference person aged 65+, 2011 (%)	44.9	79.8	72.4	79.4	76.0	69.9
Share of council rental among households with household reference person aged 65+, 2011 (%)	27.2	6.6	14.3	5.1	8.3	13.5
Share of other social rental among households with household reference person aged 65+, 2011 (%)	17.7	8.1	6.7	8.2	8.1	10.0
Share of private rental among households with household reference person aged 65+, 2011 (%)	7.7	3.3	4.3	4.8	5.1	3.7

Source(s): ONS (no date) 'Census 2011', CE calculations

Policy-makers should consider how to help commissioners support healthy ageing and independent living in areas with high rates of private rental amongst older age cohorts.

Box 4: Housing in Nottingham

Nottingham has a relatively high rate of social renting among those aged 65 and over: 30% in total (22% in council housing and 9% in other social renting). Nottingham City Council notes that this afforded an opportunity for ensuring suitable housing because the council is in control of (and has a responsibility to adapt) such housing.

However, there is less guarantee that housing will be suitable (and remain suitable) over time, particularly in areas with high rates of private rental among older people, and especially where this rate might be increasing. Different areas have different policy levers with which to ensure suitable accommodation.

Summary

Using publicly available data, this section shows the extent of variation across local areas of England, highlighting current (known) pressures, uncertainties owing to data limitations, and possible risks for different area types. All areas face a substantial challenge and demographic trends point to increases in both the volume and intensity of care needs over time. Current models of care cannot be scaled up sustainably, hence the increasing drive for health and care integration to deliver care more efficiently as well as a wider agenda of prevention, healthy ageing and independent living being championed through the reconfiguration of local public services.

Different areas face different challenges according to their local population needs and care infrastructure. Operationally, this has implications for the deployment of new care models and there is little reason to presume that any 'one-size-fits-all' policy, funding or delivery solution will be able to alleviate current and impending pressures.

For example, a sparsely-populated rural area faces challenges in providing support to people distributed over a wide area. Carers spend more time in transit and must either have access to private transport or good public transport links. Those in need of care may be far from critical services with less-developed digital infrastructure precluding telecare and other technological options. However, the cluster analysis suggests that home ownership is relatively high in Rural Heartlands and income deprivation, on average, is towards the lower end with house prices lying somewhere in the middle of the distribution. People in these rural areas may have more secure financial positions (on average - a point discussed further below) from which to fund their future care, depending on future government policy on means-testing and caps. The greater space in such areas may also afford more opportunities for innovative housing design such as extra care housing.

In contrast, more urban areas face much tighter constraints in terms of physical availability and price of land and properties to expand care facilities. While this might hinder certain care models, high population density also confers an advantage by making it easier to provide services to large groups of people (i.e. at scale). Where digital infrastructure is well-developed, such areas may also be more amenable to new technological solutions, whether telecare at present or from emerging 'smart' technologies.

In general, the national data available to analysts is meant to support monitoring. Measures are high-level in nature and permit central government and other organisations to see which areas are performing better or worse against predefined benchmarks. However, to the extent that what gets measured defines what matters, there remains a heavy emphasis on formal care provision. This is not the sole source of care in an area and while there are legitimate grounds for setting quality benchmarks, particularly in formal care (for safeguarding and to justify expenditure), some indicators may simply be symptoms of pressures elsewhere in the system. This is arguably the case for delayed transfers of care.

Elsewhere, data gaps hinder a deeper understanding of the wider care system (which is increasingly important as a concept under the Care Act 2014 and the trend of integration and community service provision). Examples of data gaps include the level of unpaid care (as the counterpart to formal care) and the extent of self-funders in a particular area, both of which vary across England. A lack of understanding of these elements of the wider care system makes it difficult to establish, from a monitoring perspective,

how the system is really performing. Rather, current indicators risk focusing on how selected elements of the system are performing. As the case studies make clear (see the next section), it is important that national indicators are able to keep pace with a more modern concept of care, that goes beyond social care and 'late-stage' provision.

As well as substantial variation between areas, there is substantial variation within areas. This is quite clear when considering the composition of counties but aspects of the analysis point to this elsewhere, too. Some areas show marked differences in financial circumstances such as combinations of high house prices but low home ownership (housing wealth is concentrated in relatively few people), possibly paired with high rates of income deprivation. Planning on the part of commissioners is complicated further by patterns of internal migration at different ages around the country. Who moves and what their demographic and socio-economic characteristics are represent critical questions for resource allocation. This is part of a wider need to better understand individuals' life courses to identify the most effective intervention points in order to evaluate interventions and plan (appraise) for new care models. Areas should take an increasing interest in how cohorts evolve (e.g. how risks accumulate and how they might be mitigated) if they are to design such care models.

While care planning is not necessarily the primary purpose of central government (though there is arguably a role to support planning and build capacity/capability), the data analysed in this section only point to possible explanations as to why outcomes and circumstances are as they are, and within-area variation may mask pockets of deep need, even if an area looks to be performing well on average. With many candidate explanations, it is not straightforward to identify candidate solutions without deeper local knowledge. Consequently, the research comprises both of this data analysis and qualitative analysis. The qualitative analysis presented in the next section involves case studies of four local areas to elicit more information about how local circumstances relate to the headline figures assessed in this section, what the data do (or do not) show, and how this affects areas' ability to anticipate and plan for future care needs.

Section 3 – Understanding Local Care Economies

The 'top down' view of a local area presented through publicly-available data is likely to provide part of the picture of the changes and circumstances facing the local care economy. More detailed analysis of local circumstances through dialogue with local policy makers gets under the skin of these data. In particular, it provides validation or challenge of the picture provided by the 'top-down' data view and, as importantly, an opportunity to understand:

- The specifics of the local area;
- the key issues that local policy makers know and have to deal with daily, but which are hidden from those monitoring from the centre; and
- 'on the ground' opinion of what data is needed for more effective policy and planning.

By improving understanding of the different challenges that localities face, we sought to assess:

1. The extent to which the available data adequately and fairly reflect the 'on-the-ground' situation in different areas;
2. even if the available data can meaningfully reflect local circumstances, whether the focus of existing measures properly reflects the outcomes that matter; and
3. the extent of data gaps that inhibit both effective monitoring/evaluation and effective decision-making, particularly for the longer term.

In doing so, the aim is to inform recommendations about how to improve understanding of local variations that might render 'one-size-fits-all' policies unhelpful, and address data gaps to support better policy making in the round.

Case Study Interviews

The four local authorities selected to serve as case studies were: Brighton and Hove City Council, Essex County Council, Leeds City Council and Nottingham City Council.

The areas represent a mix of administrative geographies (two unitary authorities, a non-metropolitan county and a metropolitan borough). They also cover, in some form, four of the six clusters identified in the previous section: Young Urban Centre (Brighton and Hove, with proximity to London; and Nottingham, in the Midlands), Old Industrial Hub (Leeds, in the north), and a mix of Developed Commuter Belt and Rural Heartland (Essex).

Each case study comprised an interview involving council representatives and members of the project team which took place in June 2018. Interviewees were sent a preliminary briefing note that presented the results of the data analysis for their area together with a standardised set of questions to guide the discussion. The briefing note presented comparisons to the England average, the average for that area's cluster and statistically similar areas identified in the cluster analysis. The purpose of the briefing notes was to provide an overview of each area compiled from national publicly available data. This could be thought of as simulating how analysts in, say, central government are able to understand the features of different areas and what they might conclude from such an analysis.

Each briefing note set out:

- The current and project demographic structure of the area and how it compares to that for England as a whole;
- supply conditions as measured by the incidence of unpaid care of varying amounts (from the 2011 census) and the structure of the local care market (care homes and workforce);
- various outcome measures including:
  - the relative contributions of local authority, NHS and client funds to local authority-provided social care;
  - the proportion of requests for support from new clients that go unmet;
  - delayed transfers of care; and
  - unit costs of provision.

Where possible, the note also provided a possible narrative to explain the figures or highlight apparently unusual features.

Interviewees were invited to validate our data analysis to establish whether the narratives were consistent with their local understanding of the area. Moreover, the interviews were an opportunity to help further explain features of the data and to highlight characteristics that are either more difficult or not possible to observe in such data. That is, we wished to gauge the (in) completeness of the local picture implied by the data and the role/necessity of local knowledge to understand local circumstances.

More qualitative aspects of the interviews covered topics such as:

- the extent to which existing data reflect the outcomes of interest in social care;
- whether the available data are helpful for benchmarking and comparisons given the diversity of local circumstances;
- local efforts to transform service provision and the viability of new/alternative care models; and
- the role of data and evidence at a local level, the nature of evidence gaps and local efforts to fill those gaps.

In this way, the interviews sought to better understand the challenges that local decision-makers face, and how they were faring in this regard.

These areas face different challenges:

- **Brighton and Hove** is a city near London with a young population. It is a coastal city and also may share some characteristics with other coastal towns.
- **Essex** is demographically somewhat older than England as a whole with its population spread across a range of area types. Essex faces a relatively greater problem in terms of ageing and, as highlighted in the interview, identifies disability as a particular challenge.
- **Leeds** is a large city area with substantial diversity, especially with respect to disadvantage/deprivation. Leeds is also a city that has been something of an early adopter as far as embracing (open) data and data-led solutions are concerned.
- **Nottingham** is an inner-city area with a low healthy life expectancy, creating care needs earlier in people's lives, which has implications for its immediate health and care priorities.

A summary of the data analysis undertaken in respect of each locale and the points raised by representatives of the four local authorities interviewed is provided at Appendix II.

Key Themes and Findings

What follows here, is an analysis of the key themes and findings that emerged from our case studies and we cover each in turn in the following sub-sections:

1. Adult social care services are part of a wider ecosystem of local provision: a renewed emphasis on prevention, healthy ageing and measures to better facilitate independent living is vitally important.
2. National public data are consistent with the local picture but only tell a partial story.
3. The focus of national data collection may be increasingly at odds with local efforts and initiatives.
4. There is a role for intelligent benchmarking and areas are generally good at sharing knowledge.
5. There are substantial challenges to assembling data and evidence for person-centred approaches.
6. Action in non-institutional settings and prevention is difficult to evidence.
7. Councils have finite resources and limited capacity to analyse data and evidence.
8. New technologies afford great opportunities but areas also need to get the basics right.
9. Culture and partnerships are vital to effective working.

Adult social care services are part of a wider ecosystem of local provision: a renewed emphasis on prevention, healthy ageing and measures to facilitate independent living is vitally important

The Care Act (2014) defines, as a primary responsibility of councils, a general duty to promote individuals' wellbeing. In the interviews, all councils made this point, stressing that state-funded social care is just one component in a wider ecosystem of formal and informal provision. Moreover, social care is often the outcome of a wide range of other decisions and investments elsewhere in the system, such as public health and housing. As one council pointed out, *the performance of social care is often a consequent indicator of pressures elsewhere in this wider system*. Similarly, as research by the IFS shows, reductions in social care spending on people aged 65 and over since 2009/10 are associated with increased use of A&E services (Crawford, Stoye and Zaranko, 2018). This underscores the interconnectedness of service provision in local areas.

Interviewees emphasised that their principal and overarching **obligation in this field is to prolong individuals' independence and wellbeing for as long as possible**. Prevention is vital to achieving this and it is also a critical long-term route to financial savings and sustainability. However, effective prevention requires a deep appreciation of the wider system. This is not straightforward in practice. The NAO (2017) has judged the progress of integration of health and social care so far to have been 'slower and less successful than envisaged and [it] has not delivered all of the expected benefits for patients, the NHS or local authorities'. Moreover, integration of health and social care is just one aspect of the system that councils must now contend with. Reflecting their greatly expanded duties under the Care Act (2014), councils must work to an even wider concept of provision and integration, spanning the entire local healthy and caring economy.

To intervene at critical points and take full advantage of local resources, the interviewees said that councils' duties **required the involvement of a wide range of public services as well as other providers such as those in the voluntary sector**. The need for joint working both within the council and across a range of organisations was a common theme of our discussions, as was the challenge

of effective joint working. This is **especially the case when supporting people in need of multiple services**. Such people comprise a client group with complex needs and, often, chaotic histories. There should be much to be gained in terms of effectiveness and efficiency if interventions can be better targeted at critical points, and particularly for these intensive service users. However, this shift to joint working (a necessity of an approach that centres on personalised support) is in stark contrast to the traditional model of service-oriented provision. Our interviews suggested **a general desire to work better together but that effective communication and coordination across organisations remained challenging in practice**. Similar challenges were observed in various areas' work to bring data together.

Finally, local authorities' general duty to promote wellbeing extends their responsibilities beyond those who make direct use of council services. In principle, local authorities should be supporting *everyone* in their area to live independently, healthily and safely. It is also in councils' interests to support everyone in a preventative sense. This is because once individuals start to need such services and are 'in the system', they have already accumulated a certain level of risk and are more likely to need more support in the future. Efforts to prolong the period before services are needed is also prudent risk management.

National public data are consistent with the local picture but only tell a partial story

All **four councils recognised the features of their areas as identified in the analysis of publicly available data**. None of the headline messages were inconsistent with interviewees' own understanding of their local areas. While the interviewees did note a focus on older people in the analysis (a reflection of the *largest* population in need), they also drew attention to **other concerns in their areas that were not always visible in headline data** and were critical elements of the planning agenda.

Box 5: Concerns raised by individual areas

Brighton and Hove City Council	Those with multiple complex needs such as those at the intersections of issues such as mental health, substance misuse and homelessness. Possible under-reporting of care because not everyone was necessarily identifying as a carer in the traditional sense. This may be particularly the case for multiple complex needs.
Essex County Council	Disability, especially learning disabilities and autism. Greater longevity is also sustaining care needs, increasingly into old age. Also, dual diagnosis.
Leeds City Council	Headline measures and averages mask wide variations across the area, including deep pockets of deprivation/disadvantage.
Nottingham City Council	Low average healthy life expectancies bring forward the need for support and possibly elongate the overall period of need.
Multiple	People who have yet to come into direct contact with council services, whether because of a lack of current need or because they are self-funders.

Multiple complex needs were highlighted as a concern in Brighton and Hove, particularly relating to mental health, substance misuse and homelessness. These needs are complex in themselves (and individually more prevalent in Brighton and Hove) and magnified by cases in which people have more than one need. Such people use multiple services and, while they are likely to be a relatively small group, there are benefits to identifying these people to assemble a more tailored package and consider the most appropriate skills needed to provide effective support (whereas more of the current old-age population can perhaps be serviced with more orthodox packages of care). This emphasises the value of an integrated individual-level dataset for the purposes of analysis and planning to better understand the prevalence and coincidence of needs and conditions.

Brighton and Hove City Council also mentioned that it was possible that the **number of carers in the area could be under-reported**. The example given was a historical one of a service supporting carers of people with substance misuse problems. These are intensive caring roles but the carers might not have identified themselves as carers in the traditional sense. This also had implications for estimates of the level of care need in the area because this was a case where services were engaging with a carer whose client was not necessarily known to the social care system.

Essex County Council cited dual diagnosis (a combination of mental health problems and substance misuse) as an issue but raised disability as one of its most pressing challenges. This particularly relates to learning disabilities and autism. Some concern was also expressed about those with autism falling through the cracks by not being identified or supported effectively. Disability is a lifelong/cross-agency issue and the council is increasingly interested in being able to **understand pathways of need over the lifecycle from pre-birth to end-of-life**. This should help to avoid fragmented approaches to provision by helping to devise whole-life support strategies and/or intervening effectively at earlier stages. This includes better signposting to universal services as needed. Disability in Essex is also **more and more pertinent owing to increased longevity. People with disabilities are living longer, leading to sustained care needs and more are moving into the older age group**. This is increasing the complexity of need in the older age group over time.

While Leeds City Council found the high-level picture we assembled to be unsurprising, it was noted that circumstances vary greatly across the area. This is particularly the case with respect to disadvantage/deprivation, of which there are some deep pockets in Leeds. Such **disparities are often masked in aggregate/average figures**. The Leeds case study in particular stressed the **need to understand an area at an even more local level**. This was especially the case when compared to data collection efforts by colleagues in health, who routinely collect data for smaller areas. Interestingly, Essex County Council's experience lends support to this from the opposite direction. As a twelve-district county, there is much variation in circumstances but, for Essex, locally-conducted analysis of differences in advantage/disadvantage with respect to social care were not as significant as had been previously thought.

Nottingham City Council's concerns were different still, highlighting relatively low average healthy life expectancies as a feature of the local population. In practice, this means that people need support at a younger age than in many other parts of the country, and an earlier need for services may prolong the period over which people need care. Nottingham's case is an example of how health inequalities lead to a different kind of pressure on the local area, thereby impacting the optimum design and investment in its care infrastructure.

Given the duty to promote wellbeing for all, multiple councils highlighted the **need to better understand those who have not (yet) drawn directly on council services**. This concerns both people who do not have a current need for such services (but may benefit from information, assistance or advice to stay that way) and **especially self-funders who have a need but may interact with organisations other than the council**. Understanding of the latter was felt to be important in areas with higher proportions of self-funders to better understand local care market conditions and dynamics. This also reflects a more general point that **existing data collection favours aspects of the system that directly involve the public sector**. This leaves potentially significant knowledge gaps in some areas about how people are (or are not) receiving the support they require. In other areas, such as Nottingham City Council, there was greater confidence that aggregate figures based on interactions with local authorities represented the bulk of the population using care services because there are relatively few self-funders there.

Box 6: Low rates of self-funders in Nottingham City

Because of the complexity of pathways and systems, not all outcome measures are easily related or strongly correlated to available data on demand, supply or contextual factors. One example of this from our case studies is a set of derived metrics on the breakdown of local authority expenditure by source. In our analysis, we found that Nottingham had a very high proportion of financial resources coming through the NHS to fund adult social care. One possible reason put forward to explain this is the relatively low level of self-funders in the city. Those in need of care must receive it from the local authority. Moreover, because rates of self-funders are so low, it is more likely that NHS Digital figures for Nottingham represent (almost) the entire population in receipt of care services. Public data are less likely to reflect the true structure of the care system in areas with many self-funders.

The focus of national data collection may be increasingly at odds with local efforts and initiatives

The general view from case study participants was that the national data we had compiled was quite typical of what councils themselves analysed. However, it was noted that in many respects the **national data reflect an increasingly outdated or 'old-fashioned' concept of social care provision**. State-funded social care provision is increasingly understood as one component of a local support network or ecosystem. In line with prevailing practices in other areas, all four councils are taking an increasingly person-centred or 'strengths-based' approach to care. Such an approach seeks to make best use of local resources as well as the individual's own assets (social networks, etc.) to help them support themselves. This seeks to shift conversations away from transactions and entitlements towards ways in which to enable a better quality of life for them in accordance with their individual expectations and aspirations.

By tailoring provision to an individual's needs, this approach is consistent with councils' general duty to promote wellbeing. However, the approach also represents a significant departure from the traditional configuration of support oriented to individual services (i.e. functionally). The traditional model caters less well for people who either need or would benefit from multiple services. Siloes of this type also make it difficult to allocate resources efficiently and effectively.

Nottingham City Council emphasised the challenges of shifting the paradigm away from institutionalised care towards community support and said that **existing data were not so helpful when considering how to do things differently**.

For person-centred care and, indeed, prevention to be effective, councils **need a much better understanding of when and how people interact with the care ecosystem**. Councils stressed the importance of understanding people's 'journey':

- for individual monitoring/tracking, to record how people are using services and accessing support as well as to inform action at critical points; and
- in aggregate, for evaluation and appraisal to understand and alleviate system pressures, including through care model redesign.

Some interviewees noted that the **data needs are very different between the traditional services-oriented model of care and the modern person-centred, ecosystem-wide model**. To a large extent, existing headline measures implicitly reflect the former, focusing mostly on flows within system components such as social care. The impression was that this view of care provision is becoming increasingly divorced from how support is provided locally because of the failure to track flows between different parts of the system. The **value of the Short and Long Term Support (SALT) return and other data collection risks waning over time** and it is important to keep pace with local developments and how care is delivered. This may be especially important given both the costs to councils of compiling the data and the fact that such submissions focus exclusively on public provision, ignoring other support channels. The latter is of increasing relevance when support is provided by a range of services and providers, possibly under increasingly varied institutional arrangements.

The interviews also suggested that **headline measures tended to be weighted more towards the 'too late' part of the system** (i.e. focusing more on outcomes in care than on preventative measures further upstream). This, too, may be a relic of a more traditional view of social care. However, such indicators still have a role to play as safeguarding measures to help ensure the wellbeing of vulnerable people in this support phase. Nevertheless, there is some apparent tension between the stated (and accepted) goals of the system in terms of ensuring people stay independent for as long as possible; and the focus of many headline measures on outcomes for those in care. Councils still felt a somewhat mechanistic drive to keep systems populated with the process-oriented outcomes of the traditional model even though the focus of their transformative efforts was increasingly elsewhere.

There is a role for intelligent benchmarking and areas are generally good at sharing knowledge

Areas do engage in benchmarking both with neighbouring areas and 'similar' areas but noted that there were often **local idiosyncrasies that need to be borne in mind to avoid naïve comparisons across indicators**. Such local knowledge is key to understanding differences and acting accordingly. ADASS was seen as a particularly important network and Nottingham City Council mentioned its strong East Midlands network as well as regional challenge and peer events. The strength of such networks is such that finding good practices and sharing knowledge is not especially difficult. Nevertheless, Nottingham City Council did warn against simplistic benchmarking that would inevitably miss out on local challenges. **This has implications for one-size-fits-all policies and, in particular, future funding formulae fixed at a national level**.

There are substantial challenges to assembling data and evidence for person-centred approaches

For person-centred approaches to work, there needs to be data and evidence at an individual level. This is vital for all three of the purposes of data set out in Section One:

1. **Monitoring:** at an individual level, frontline staff need to be able to respond or intervene appropriately to provide support - this requires the individual's history and a record of past interactions with services but, also, some sense of their strengths, expectations and aspirations against which to benchmark success.
2. **Evaluation:** analysts and strategists need to be able to assess flows through the system and its components to better understand the dynamics of the system, sources of pressure and 'what worked' among past interventions.
3. **Appraisal:** ideally, analysts and strategists should be able to conduct modelling and scenario exercises to explore the potential impacts of future developments and interventions. This requires an understanding of the dynamics of the local system, including the (micro) characteristics of the local population.

Box 7: Anticipated advantages of integrated data

The hope of individual-level integrated datasets is that they will permit a wide range of data-driven activities that are not currently possible in a systematic way across an area. Existing datasets by individual service only show people who make use of specific services. A linked dataset would show how people use different services over time - from benefits to housing, health and social care. In this way, the dataset can plot the course taken by individuals: their 'journey' and outcomes.

Such a dataset should have immediate benefits to frontline staff by providing a single resource to understand individual client histories and develop/coordinate appropriate responses across services.

An integrated dataset is also a rich source of information for analysis, permitting evaluation/assessment work to better understand the system impact of interventions. The dataset could also, in time, permit more sophisticated strategic analysis and modelling, for example, to:

- conduct risk profiling and develop early warning indicators of greater need;
- devise interventions and mechanisms to help reduce risks at critical points; and
- better understand cohort effects as people progress through the life course; for example, conduct modelling and scenario analysis; for example, to consider how interventions might dynamically alter the future profile of needs

The latter would be a significant advance on what councils are currently capable of in terms of demand forecasting, which relies largely on continuation of past trends (likely impacts if current trends continue) and assumptions about the future prevalence of conditions (rather than the scope for adjusting that prevalence).

All four councils we interviewed highlighted the importance of an **individual-level integrated dataset** that spans all relevant touchpoints in the system and would also, ideally cover the entire population of an area. Such datasets are seen as **vital future tools for local planning** and could, for example, shed further light on Brighton and Hove's concerns about multiple complex needs. It would go far beyond what is possible through existing (commercial) population segmentation information sources. In turn, this might **help to reconfigure provision in a way that caters to previously unidentified client groups**. The existing system is largely designed for certain client groups. However, the level of development of such datasets varies by area and, even so, areas are generally focusing on monitoring for now.

Box 8: Initiatives to develop individual integrated datasets

Brighton and Hove City Council	The Sussex and Surrey Integrated Dataset (SSID) is an initiative of two STPs: Surrey Heartlands Health and Care Partnership and Sussex and East Surrey STP. The SSID is in the early stages of development and, in the meantime, Brighton and Hove is making efforts to identify how existing data held by organisations can be used.
Essex County Council	Digital transformation programme underway but implementation of electronic shared care records is proving challenging in an area that straddles three different STPs.
Leeds City Council	The Leeds Data Model is an operational integrated dataset that links various health and social care data together.
Nottingham City Council	There have been early efforts to match records by NHS number.

The consensus among councils was that **the necessary data are available in principle - albeit new/different data may be required to effect a thoroughgoing pivot to prevention and, with that, enable healthier ageing for populations at large**. However, because existing data sit with different organisations, there are **significant practical and technical challenges in bringing the data together.** This presents a coordination problem for local decision-makers and applies to many datasets, not just those that might eventually form an individual-level integrated dataset. The significant technical challenges of combining data held in different IT systems might also lead to further problems in future if national data integration becomes an eventual goal to permit England-level population analysis.

In social care, and especially in pursuing a strengths-based approach, there is substantial diversity in the type of support offered by different providers. There are also many more community providers than in other service areas. Many of these providers are small and reliant upon low-paid workers and/or volunteers, and **the nature of such services means they are often harder to monitor**. For Leeds City Council, there was also a question about the proportionality of data collection burdens: how extensive recording requirements can reasonably be for Leeds' Neighbourhood Network Schemes, for example.[6] Leeds also stressed the importance of not allowing evidence to obstruct practice. There is, then, a balance to be struck between the reporting burden on the frontline (which could be offset, at least in part, by providing analysis back to these people) and information for management and strategic commissioning. In this regard, Leeds City Council has been endeavouring to reduce bureaucracy at the frontline by, for example, cutting down on the length of assessment forms.

6 Leeds Neighbourhood Network Scheme (overview): http://www.opforum.org.uk/nns/

Action in non-institutional settings and prevention is difficult to evidence

An appreciation of the wider system of local services also requires an appreciation that such a system is inherently more complex. It is easier to attribute outcomes to actions when considering individual system components such as social care in isolation and especially over shorter time periods. This risks incentivising decision-makers and providers to focus more on short-term actions rather than activities with longer-term preventative pay-offs. The greater complexity of such analytical problems combined with **data limitations mean that progress has generally been slow to justify and prioritise interventions**.

These problems extend to funding for community provision such as Leeds' Neighbourhood Network Schemes. It is important to be able to measure local impacts and effectiveness but the challenge remains being able to do this without creating overly bureaucratic reporting requirements. Moreover, the **diversity of provision in the community may not be adequately summarised into strategic-level datasets**. For example, there is no straightforward, objective way to assess the relative value of coffee mornings versus post-hospital visits - both are context-specific. In lieu of well-established evaluation procedures, community provision has, to date, benefitted from understanding councillors.

As a challenge, evaluation and justification of preventative measures also extends to the provision of information, advice and assistance to those not currently in touch with council services. Essex County Council noted the challenges in providing effective information to people who do not (yet) have a need for services. At best, it was feasible to commission evaluations of the accessibility and usability of such resources rather than their effectiveness *per se*. In general, councils are equipped to monitor and evaluate their programmes but less equipped and resourced to carry out more fundamental reviews and research into future effective service models.

A key theme from all of our case studies is that the **data needs of a modern, person-centred care system are quite different to those of the traditional services-oriented model of delivering care**. Nevertheless, much of the existing indicator framework continues to reflect the legacy of the traditional model. This emphasises flows within individual services such as adult social care. The impression is that the headline view of care provided by this framework is increasingly divorced from the realities of provision on the ground. Unless national indicators can keep pace with developments in care models, their value will wane over time.

The case studies also echoed a feeling that headline measures that reflect the traditional ways of working are overly weighted towards the 'too late' part of the system. Delayed transfers of care is a notable example of such an indicator which received substantial attention when rates climbed in 2016/17. The rate is certainly one important measure of performance and would fall the following year. However, the risk is that an undue focus on this indicator narrows attention to the processes that directly relate to transfers of care. In the more recent concept of care as a wider system, this detracts from efforts to improve the system upstream, to avoid admissions to hospitals and other services.[7]

7 As an indicator that has received considerable attention, the quantitative analysis did consider area-level data on delayed transfers of care. However, the analysis revealed relatively little in the way of regional patterns that could be easily explained by other factors and without local knowledge. Consequently, no detailed findings are presented in this report.

Councils have finite resources and limited capacity to analyse data and evidence

The councils we interviewed felt that more effort continues to be expended ensuring data quality or simply validating process/throughput measures than in carrying out analysis. This extends to possible differences in the interpretation of coding in data returns. **Lack of funding was also cited as a reason why intelligence and analytics were not better developed**.

> #### Box 9: Variations in outcomes through coding differences
>
> One indicator we presented to councils was the percentage of new requests for support from new clients to local authorities that led to no services being provided. These figures came from NHS Digital (2017). We found wide variation in these figures across local authorities from fractions of a percent up to 80-90%. The response from some interviewees was that differences in the interpretation of coding guidance across areas might explain such variation rather than underlying differences in 'true' performance.

Analysis is another area where a lack of coordination can pose problems through unintentional duplication of effort. In large organisations there is a risk that similar pieces of work are carried out, possibly leading to difficulties in corroborating findings. A related concern is **ensuring that data and analysis tools are fit for purpose and, similarly, do not duplicate functions across organisations**. Leeds City Council has funded various locally-developed tools but is conscious of the need to avoid re-inventing the wheel and to find ways to cater to both frontline staff and commissioners. The councils we interviewed were either actively recruiting data analysts or already had such staff in place. We are also aware of other councils looking to do the same. This signals the **growing importance of data analysis to councils in delivering all services, and not just social care**.

Ultimately, we found that councils are generally equipped for evaluation but few have the resources to commission more fundamental research and analysis, and **central government should explore how it might better support them in this regard**.

New technologies afford great opportunities, but areas also need to get the basics right

For technology to enable new models of care, local areas need to target digital infrastructure investment with healthy ageing and independent living borne firmly in mind, proactively invite innovators and the developers of new products and services to collaborate with them in order to identify the scope for technology solutions to underpin new (better) ways of working and enabling older age cohorts, and **better understand individual's behaviour with respect to technology**.

The councils we interviewed did not comment in-depth upon the extent to which they plan to invest in and/or support, for example, autonomous vehicle, 5G or 'smart city' initiatives to help facilitate healthy ageing and independent living. However, a strategy is being developed by the West Essex and East Hertfordshire Digital Innovation Zone at present which aims to boost economic growth, job quality as well as health and wellbeing services, and in a positive example, a study commissioned by Essex County Council indicated that older citizens were in fact *more* digitally active than had previously been assumed. This presents a greater opportunity to take advantage of digital solutions in the area to help people organise and plan their own support. Meanwhile, Brighton and Hove City Council already includes telecare as a measure

in its indicator dashboard and sees great potential given the city's well-developed broadband infrastructure.[8] Paired with a strong asset base for innovation (two universities, a medical school and a teaching hospital), the council saw significant potential to make use of technology to support and empower older people and their carers more generally.

Councils also mentioned the possibilities that might come from **building partnerships with universities to explore the potential for new data science techniques to support the evolution of next generation public services** – including artificial intelligence. However, notably, these were considered *adjuncts* to good practice and pathways at this time, and areas said that getting the basics right remained their priority.

Culture and partnerships are vital to effective working

Institutional barriers remain an obstacle to truly integrated services. This is the case for both provision and data sharing. Leeds City Council in particular highlighted the importance of culture and partnerships to ensure effective working across agencies. All areas highlighted the **need for better collaboration with other sectors** (academia and the private sector) to develop new solutions and provide better services. As a strength, Brighton and Hove City Council placed particular emphasis on its voluntary and community sector as a good foundation for local support and provision. Of the four case study areas, Essex County Council faced an unusual challenge in coordination because it straddles three STPs. One example of this is in differing approaches to implementing electronic shared care records across the STPs.

Summary

The case studies confirm the view that national data broadly reflect conditions in local areas but that these aggregates fail to pick up local idiosyncrasies. While benchmarking has its uses, differences in circumstances require local knowledge to properly contextualise indicators and avoid naïve comparisons. Without this local knowledge, it is not possible to identify effective policy options.

The case studies also highlight how councils' responsibilities and the demands placed on them have changed over time. This shift is marked by the Care Act (2014) which has placed a general duty on local authorities to promote individuals' wellbeing. This duty greatly extends councils' remit beyond simply those in receipt of traditional public services to all residents of an area. To carry out this duty effectively, councils must consider how best to support and prolong healthy ageing and independent living. Preventative measures to manage demands on an already stretched social care system are also vital as a route to maintaining/improving performance and achieving sustainability (including financial sustainability).

However, the vision of an integrated local system to support people to thrive entails a radical departure from the traditional model of public service provision. It requires councils and other public bodies to understand and cater for people who do not (yet) draw directly on formal services. Some of these people have no current service need and it is in councils' preventative interest to ensure that this remains the case for as long as possible through, for example, the provision of information, assistance and advice. Other people, such as self-funders, have service needs but make use of alternatives to council provision. It is still in councils' interest to provide support if appropriate and, possibly, in anticipation of changes in these people's circumstances. Both groups represent substantial knowledge gaps because they do not interact with public services (which are the locus of traditional data collection).

[8] Ofcom figures for 2017 show that almost three-quarters of premises had ultrafast broadband connectivity.

Even for data that are routinely collected, the concern is that the emphasis remains on measures associated with that traditional, service-centred, model of provision. The modern concept of person-centred, ecosystem-wide provision is a bottom-up, individualised model. That model stands in marked contrast to the current set of national indicators that largely emphasises the operation of (flows within) individual system components/services. Moreover, our interviews suggested that measures tended to be weighted more towards the 'too late' part of the system, long after prevention is truly viable. In these respects, the current indicator framework risks falling behind - both in how provision should be measured but, also, in how it is now provided.

Person-centred models of care have very different data needs to earlier approaches, both to understand what is happening in an area but also to design and provide services. Effective provision requires a deeper understanding of how individuals navigate the system and what constitutes a successful outcome given their individual circumstances. In this regard, all councils highlighted the need for an individual-level integrated dataset that tracks people's touchpoints (their journey) through the system of public services. The view is that the necessary data exist, in principle, but are spread across a range of organisations. Whether this view underestimates the extent to which personal data controlled by commercial entities about individuals 'upstream' of formal service usage could add value to publicly controlled datasets and help facilitate prevention and/or earlier intervention was not something our interviewees had considered in any depth.

Outside of formal settings, for example in the community, there are concerns about the balance between the need for data and the reporting burden on providers. Analytically, it is also not clear how such provision can be adequately summarised at a strategic level to reflect performance (outcomes) rather than throughput (output).

There are significant practical and technical challenges to data collection and integration. Institutional barriers to integration should not be under-estimated both between public services and with the private sector and academia. This extends to the potential for new data, analytical techniques and technologies although, for now, getting the basics right remains the priority.

A further concern about indicators failing to keep pace with the realities of service provision is that they become less helpful when considering future service change. The inherent complexity of system-wide analysis and current data limitations mean that progress has been slow to justify and prioritise interventions, especially preventative measures. While ongoing efforts to assemble integrated datasets should help address this, there are concerns of a lack of analytical capacity in councils to usefully interrogate such data. Resource constraints were highlighted as one reason for this and that central government might have a role to provide support in this regard.

Conclusion

We explored the scope to utilise available data to facilitate care insight and better plan and shape the provision of care at a local level. Our research found that existing national-level monitoring indicators are not keeping pace with the way in which local areas understand and wish to manage state-funded care provision. Whilst our case studies point toward the potential for significant improvements in data-driven care planning to result from the integration of health and care at the local level, they also make plain the inadequacies of existing data sets, if the aim is to move from a service-based model of care to one that is truly person-centred and responsive to individual needs and aspirations.

Our research suggests that local authorities are incentivised to prioritise monitoring whilst under-resourced to undertake fundamental research and analysis that might otherwise result in improved 'business intelligence' about the populations they serve. However, of critical importance to effective care planning for the future is appraisal as a capability, and the data and evidence required places a heavy need on understanding the fundamentals of the wider health and care ecosystem if public bodies are to intervene to best effect. This is currently regarded as an important gap that is liable to impact the introduction of new models of care and will only be partially overcome through integration of health and care at the local level.

Finally, our analysis points to the limitations of an approach to policy-making at a national level which, at present, fails to recognise that local areas are underpinned by distinctive 'care infrastructures'. To that end, our overall findings point towards the wider implications of our growing and ageing population for both infrastructure planning and economic development. If the aim is to help bring about a step-change in prevention, healthy ageing and independent living, the wider public sector needs to invest in understanding, planning and developing caring economies as distinct from health and adult social care services, and the range of Government departments should support the same.

Key Findings

1. **National social care policy-making needs to acknowledge local differences:**
   local areas are underpinned by different 'care infrastructures' and therefore differ across a range of characteristics which impact care risk profiles in different ways and to differing extents. Future funding mechanisms/formulae and new delivery models need to reflect the relative strengths and weaknesses of different areas – there are clear limitations to one-size-fits-all approaches to adult social care.

2. **Prevention, healthy ageing and independent living are vitally important:**
   councils' principal and overarching obligation in this field is to promote and prolong individuals' independence and wellbeing for as long as possible. Prevention, healthy ageing and independent living are vital to achieving this and are also a critical long-term route to financial savings and sustainability.

3. **National data reflect an increasingly outdated or 'old-fashioned' concept of social care provision:**
   existing ('monitoring') data are unhelpful when considering how to do things differently. For person-centred care to be effective, councils need a much better understanding of when and how people interact with the wider care ecosystem. The data needs are very different between the traditional service-oriented model of care and the modern person-centred, ecosystem-wide model. The value of the Short and Long Term Support (SALT) return and other data collection risks waning over time. Headline measures also tend to be weighted more towards the 'too late' part of the system.

4. **New models of care require more granular data and the resources to analyse it:**
   our population is growing and ageing but a deeper understanding of demographic change is necessary to understand trends in care over time that go beyond rudimentary projections of population size. In particular, a deeper appreciation of individual circumstances and motivations, the changing incidence of health conditions in different places, and movements of people in different age cohorts between areas would be advantageous. Moreover, disparities are often masked in aggregate/average figures – there is often a need to understand an area at an even more local level than national data sets render feasible at present.

5. **There are critical gaps in publicly available data about the care ecosystem which continue to hamper planning as well as provision:**
   information about unpaid care remains sparse, for example, but there is some evidence to suggest that provision is increasing and favouring more intensive care; this may put financial pressure on households in the short-term as well as reduce households' ability to accumulate savings and thus financial insurance to cover their future care costs. At the same time, there is a need to better understand those who have not (yet) drawn directly on council services. This concerns both people who do not have a current need for such services (but may benefit from information, assistance or advice to stay that way), and especially self-funders who have a need but may interact with organisations other than the council. Existing data collection favours aspects of the system that directly involve the public sector – although it is important not to over-burden others unduly with data collection.

6. **Appraisal as a capability is of critical importance to effective care planning for the future:**
   an area's demand profile in respect of care should be seen as something that can be reshaped through effective prevention and earlier intervention. However, the anticipated impact of such measures is challenging to model, and budgetary constraints therefore tend to result in short-termism at present. Lack of funding was also cited as a reason why intelligence and analytics were not better developed.

7. **State-funded adult social care services are but one element of a wider 'care ecosystem' - the range of Government departments need to recognise the impact that their policies and investment decisions have upon local care infrastructures:**
   where central and local government talk of national planning policy and local plans to deliver the housing stock we need, for example, they must take steps to ensure that new communities are designed for age and mobility as well as bring about 'generational balance'; examine what policy levers they might introduce to expedite material adaptations to homes and communities that are designed to facilitate independent living; and contemplate the workforce implications for health and care provision where (and in the form) it will be needed. Where Ministers enthuse about 5G pilots, driverless cars and 'smart cities', public funds deployed to stimulate related innovations should read-across to planning and developing the digital, transport and future safeguarding infrastructure upon which new models of health and care might rely. Where the UK's Industrial Strategy acknowledges the need to improve upon regional economic disparities, the Government needs to better understand the impact of different care infrastructures for local economic development prospects – for example, the extent to which labour market participation and sub-regional productivity may be impacted by a growth in unpaid care.

8. **Local authorities in some areas are building partnerships with universities to explore the potential for new technologies and data science techniques to support the evolution of next generation public services** – including Artificial Intelligence – but, for now, getting the basics right remains the priority. Additional funding is needed to prevent adult social care from falling behind health in this important respect.

Recommendations

Like developed economies right around the world, our population is growing and ageing, but where and how demographic changes are taking place are critically important. Local differences will result in a range of risks and opportunities for the public and private sectors as well as civil society over the years ahead but, in particular, public bodies need to plan ahead and contemplate mitigation strategies, then, proactively invest in measures that reflect the strengths and weaknesses of local 'care infrastructures'.

We explored the scope to utilise available data to evolve public policy and better plan and shape the provision of care at a local level - the recommendations which flow from our key findings are as follows:

- The Government should publish an impact assessment with its forthcoming adult social care green paper detailing the implications of any proposals to raise new funds for adult social care and/or alter local government funding formulae for different parts of the country - both in the interests of transparency and to better support social care commissioners and providers to plan ahead.
- The Government should explore, as a matter of urgency, how it might incentivise investment by the public and private sectors but, also, communities and individuals in a range of measures, products and services designed to facilitate prevention, healthy ageing and independent living.
- The Government should support commissioners, providers and innovators to solicit a much better understanding of when and how individuals interact with the wider care ecosystem than is currently possible using the traditional data collection methods from which standard 'monitoring' data is derived.
- The Government should invest in a new national data analytic capability to improve care insight for commissioners, providers and business and, thereby, support the appraisal as well as product/service design activities needed to expedite the introduction of new care models.
- The ONS should improve upon the data it collects, curates and publishes where it impacts upon care insight to better enable others to plan and develop caring economies; in particular, it should ensure that changes to the census result in improvements to data about unpaid carers and internal migration amongst different age cohorts.
- The CQC should require and provide access to improved data concerning self-funders - whether they are in receipt of domiciliary or residential care services - to better facilitate care insight for commissioners, providers and business.
- The range of Government departments should be required to publish details of the ways in which their policies and investment decisions align with and/or contribute to the development of caring economies to ensure that they are designed to positively impact local care infrastructures.
- The Government and pertinent funding councils should invest in partnerships between councils, universities and business to explore the potential for new technologies and data science techniques – including machine learning and artificial intelligence - to support the evolution of next generation care services and insight.

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Appendix I – Cluster Summaries

	IL+	DCB	YUC	RH	R	OIH
Share of area's population aged 65+, 2018 (%)	9.6	19.6	14.3	24.3	22.5	17.8
Projected change in share of area's population aged 65+, 2018-30 (pp)	2.5	3.8	2.7	4.9	4.5	3.5
Share of people aged 65+ living along, 2018 (%)	12.9	3.9	6.0	3.8	4.2	4.8
Projected change in share of people aged 65+ living alone, 2018-30 (pp)	4.6	1.7	2.6	1.6	1.8	2.2
Internal in-migration of those aged 65+ as a share of the area's population aged 65+, 2016 (%)	1.4	2.3	1.7	2.7	2.1	1.2
Internal out-migration of those aged 65+ as a share of the area's population aged 65+, 2016 (%)	2.8	2.3	2.3	2.3	1.7	1.2
International in-migration of those aged 18-64 as a share of the area's population aged 18-64, 2016 (%)	3.6	0.9	2.0	0.5	0.6	1.0
Proportion of population living in rural areas (%)	0.0	20.0	1.7	75.0	34.5	5.6
Projected change in GVA, 2018-30 (%)	22.6	18.1	18.7	17.8	16.5	16.3
Projected change in employment, 2018-30 (%)	6.9	4.6	4.8	4.2	3.1	3.0
Difference between mean and median pension income, 2015-16 (%)	37.0	23.8	16.5	22.1	15.4	11.4
Average house price, 2017 (£'000s)	602	326	320	274	170	141
Share of home ownership among households with household reference person aged 65+, 2011 (%)	44.9	79.8	72.4	79.4	76.0	69.9
Share of council rental among households with household reference person aged 65+, 2011 (%)	27.2	6.6	14.3	5.1	8.3	13.5
Share of other social rental among households with household reference person aged 65+, 2011 (%)	17.7	8.1	6.7	8.2	8.1	10.0
Share of private rental among households with household reference person aged 65+, 2011 (%)	7.7	3.3	4.3	4.8	5.1	3.7
Proportion of premises connected to superfast broadband (%)	53.3	42.9	27.2	77.5	84.3	34.0
Proportion of premises connected to ultrafast broadband (%)	40.4	49.9	69.0	7.1	7.4	60.1

	IL+	DCB	YUC	RH	R	OIH
English indices of deprivation, 2015, average income deprivation score	0.195	0.094	0.147	0.090	0.156	0.190
English indices of deprivation, 2015, average IDAOPI score (income deprivation affecting older people index)	0.317	0.111	0.178	0.107	0.162	0.210
English indices of deprivation, 2015, average employment deprivation score	0.125	0.079	0.109	0.080	0.141	0.160
English indices of deprivation, 2015, average health deprivation and disability score	0.164	-0.637	-0.102	-0.622	0.367	0.639
English indices of deprivation, 2015, average housing and services score	31.5	20.0	24.7	24.1	18.4	17.0
English indices of deprivation, 2015, average living environment score	40.5	13.5	23.2	18.9	21.8	21.3
Proportion of census respondents providing 1-19 hours of unpaid care, 2011 (%)	4.7	7.1	5.9	7.7	7.1	6.4
Proportion of census respondents providing 20-49 hours of unpaid care (%)	1.3	1.2	1.3	1.2	1.6	1.6
Proportion of census respondents providing 50+ hours of unpaid care (%)	1.7	2.0	2.1	2.2	3.0	3.0
Beds per '000 aged 75+	64	97	91	92	109	106
Median beds per care home	15	24	18	28	25	27
Number of areas in cluster	**15***	**70**	**45**	**86**	**57**	**51***

Key:	IL+	DCB	YUC	RH	R	OIH
	Inner London Plus	Developed Commuter Belts	Young Urban Centres	Rural Heartland	Remote	Old Industrial Hubs

Note(s): City of London and Isles of Scilly excluded owing to limited data. Manchester manually reclassified to Old Industrial Hubs (from Inner London Plus). Original cluster definitions left as is.

Source(s): ONS (2016) 'Subnational population projections for England: 2014-based projections', MHCLG (2016) '2014-based household projections in England, 2014 to 2039', ONS (2018) 'Population estimates for UK, England and Wales, Scotland and Northern Ireland', Department for Environment, Food & Rural Affairs (2016) 'Rural urban classification', CE multi-local area projections, HM Revenue and Customs (2018) 'Personal incomes statistics for the tax year 2015 to 2016', HM Land Registry (2018) 'UK House Price Index, January 2018', Ofcom (2017) 'Connected Nations 2017', MHCLG (2015) 'English indices of deprivation 2015', CQC (2018) 'CQC care directory data, 1 February 2018', CE calculations.

Appendix II – Case Study Summaries

Brighton and Hove City Council

Summary Data Analysis

1. The cluster analysis identifies Brighton and Hove as a '**Young Urban Centre**', alongside much of London as well as, amongst others, Bristol, Oxford and Reading:
   - there is a relatively **high proportion of younger people** (aged under 65): almost 87% projected for 2018 compared to closer to 82% for England as a whole.
   - official projections expect there to be relatively stronger growth in this younger population between 2018 and 2030: 4.7% in Brighton and Hove compared to 3.4% for England.
2. Whilst official projections suggest similar growth **in the number of older people** aged over 65 in both Brighton and Hove and England as a whole (around 28.5%):
   - in Brighton and Hove, that **growth is distributed relatively evenly across narrower age bands** (65-74, 75-84 and 85+): between 25% and 35%.
   - in England, the growth is more concentrated among older age bands: close to 40% among 75-84 year olds and over 50% for those aged 85+.
3. In **care provision**:
   - there are relatively **low rates of self-reported unpaid care** provision in Brighton and Hove, which likely reflects the lower proportion of older people.
   - however, Brighton and Hove also has an **above-average ratio of care home beds to people aged 75+**.
4. In the **care home sector**:
   - Young Urban Centres tend to have relatively higher proportions of smaller care homes (of fewer than 20 beds). Compared to these Young Urban Centres, Brighton and Hove has **a lower proportion of small care homes** (of fewer than ten beds), closer to the England average, and a similar proportion of somewhat smaller care homes (of fewer than 20 beds).
   - Brighton and Hove has **a relatively low proportion of larger care homes** (of 60 beds or more) compared to other Young Urban Centres and England as a whole.
   - somewhat unusually, **both workforce turnover and vacancy rates are high** in Brighton and Hove suggesting a combined difficulty to retain and replace staff. In other, similar areas, higher turnover rates seem to be paired with lower vacancy rates.
5. NHS and client contributions represent a relatively larger proportion of Brighton and Hove's social care expenditures than in many other areas.
6. In Brighton and Hove a higher than average proportion of **requests for support from new clients** are met.
7. Unit costs for Brighton and Hove lie below the average for Young Urban Centres but above the average for England as a whole.

Validation

Interviewees confirmed that, broadly speaking, the data analysis provided by the research team offered an accurate portrayal of the situation in Brighton and Hove.

Interviewees suggested that an apparent higher ratio of care home beds to older people aged 75+ was due to the indicator excluding those aged 65-74, some of whom also have care needs. Furthermore, greater numbers of care beds in some areas may be for people placed from outside the area. The indicator does not take this into account.

In explaining the low rate of unmet requests for support in Brighton and Hove, interviewees suggested that this might reflect differences in how areas interpret the guidance and coding of requests for support because the variation in results seemed too wide to be due to underlying differences in performance.

Explanation

A particular concern in Brighton and Hove is the prevalence of people with multiple complex needs - for example, mental health, substance misuse and homelessness. National data identify that these problems are individually more prevalent in Brighton and Hove. Brighton and Hove have good information on individual groups and are deepening their understanding of prevalence and coincidence of needs and conditions through a Multiple Complex Needs Joint Strategic Needs Assessment to inform future commissioning and provision.

Evidence Gaps

While the goal of public service provision (and the duty under the Care Act 2014) is to keep people living independently for as long as possible, the feeling was that headline statutory social care measures were loaded towards the 'too late' part of the system. Statutory social care collections are perhaps increasingly 'old-fashioned' in this regard, particularly in an age of integrated health and care with people making use of multiple services.

Brighton and Hove Council alongside local partners have undertaken some predictive analysis and risk stratification. However, this has been limited by lack of integrated data.

Further data integration is required to inform development of new ways of working. Integrated data can assist the council and its health and care partners to have a better understanding of individuals' journey through health and care services and support identification of cohorts for targeted preventative interventions to delay or reduce the onset of care needs.

Local Initiatives

The integrated data initiative that is relevant to Brighton and Hove is the Sussex and Surrey Integrated Dataset (SSID). The SSID is modelled on the Kent Integrated Dataset (KID) but hopes to go further than population level analytics to enable local GPs to target interventions to their patients. The SSID is a joint initiative of two STPs (Surrey Heartlands Health and Care Partnership and Sussex and East Surrey STP). The scale of the SSID will support Brighton and Hove to track flows in and out of neighbouring areas as well as bringing benefits of economies of scale. Whilst the SSID will support broader regional analysis it should also enable actionable insights to inform local delivery. However, the size of the initiative also brings coordination costs from such a large body of organisations, and perhaps a slower rate of progress than smaller projects.

Efforts to develop the SSID are still in their early stages. In the interim, the Council plans to appoint a specialist Data Integration Project Manager to review availability and value of existing datasets in the city to conduct locally focused work linking health and social care data. This will support a better understanding of demand across health and care and inform work to strengthen preventative approaches, improve service user experience and control costs.

Essex County Council

Summary Data Analysis

1. Cluster analysis identifies Essex as being **a 'Mixed' locality** predominantly comprising Developed Commuter Belt and Rural Heartlands. Within it there are two 'Young' Urban Centres and a Remote district (Tendring).
   - The relative make-up of the county is most similar to Gloucestershire and West Sussex.
2. The **challenge for meeting the care needs for the future population in Essex may be greater than for England as a whole**, with it being particularly challenging in particular districts
   - official population projections show the population aged 65+ in Essex will grow at a similar rate to England as a whole, but with relatively more of the growth in Essex concentrated in the elderly population (aged 75+).
   - while the 65+ population in Essex is projected to grow by just under 30% over 2018-30, Braintree and Uttlesford are expected to see especially high growth, of 35-40% over the same period.
3. **While net migration of older people in and out of the county has been balanced, that breaks down to net out-migration of those aged 65-74 and net in-migration of those aged 75+. The latter will contribute to the future growth in the older population in need of care.**
4. In **care provision**:
   - **rates of self-reported unpaid care provision are slightly higher than for** England as a whole and similar to comparable areas.
   - across Essex, rates of providing unpaid care **broadly coincide with the relative age profile of the district**.
   - Essex has a **marginally lower level of care home provision** than England as a whole and similar shire counties.
5. In **the care home sector**:
   - Essex has proportionally more smaller care homes and large homes than England.
   - the **size profile of the care home sector varies greatly** within the county (e.g. more than half the homes in Basildon and Colchester are small operations (with fewer than 10 beds).
   - both **vacancy and turnover rates are higher for Essex than for England** as a whole. Vacancy rates are also higher than in the comparator areas
6. NHS and **client contributions represent a relatively larger proportion of social care expenditures in Essex than in England, though client contributions in Essex represent a smaller proportion than for many other similar areas**.

7. The proportion of requests for support that lead to no services being provided is lower in Essex than for England as a whole.
8. The rate of **delayed transfers** in Essex is **below the England average**.
9. **Unit costs for Essex are higher than the England average for both nursing and residential care for those aged 18-64 while the reverse is the case for care of the older population**.

Validation

The interviewee confirmed that, broadly speaking, the data analysis provided by the research team offered an accurate portrayal of the situation in Essex.

Explanation

The Council highlights the unintended consequences of a national policy and media focus upon older people, the NHS and delayed transfers of care. This has arguably led to an approach to target setting and evidence gathering which emphasises cost, volume and procurement as the preferred means of commissioning and, with that, less focus on public sector interventions designed to address disability and, especially, learning disabilities and autism.

This is a priority issue for the council. Because disability is a lifelong issue, the Council is eager to address a fragmented approach to provision. It now seeks a lifecycle model and approach to disability from pre-birth through to end-of-life. This would enable whole-life support strategies and effective intervention. Cohort effects are also relevant here because greater longevity means that adults with disabilities need support for longer. Moreover, as they enter the old-age population, the composition of need in that age group will change.

Evidence Gaps

The general importance of understanding the wider picture and to configure services more holistically is also stressed, in line with the duties under the Care Act 2014. Data collection continues to reflect the old, inward-looking model of care, focusing on provision by the time people need specific services. In contrast, the modern model of support and commissioning puts the citizen at the centre with a focus on prevention but also support to carers, and the role of assistive technology, information/advice and support for healthy lifestyles and public health.

This modern model understands system pressures as symptoms of problems elsewhere. For example, current care needs are at least in part a reflection of earlier investment decisions, possibly through other services.

From an indicator perspective, Essex County Council notes a tendency for measures to continue to focus on process and thus incentivise process/performance management. This also applies to the county's historical approach to care home procurement (tendering, contracting and then performance management). A more hands-off approach to market shaping and engagement has perhaps been less successful for learning disabilities with concerns about the large number of small providers, suggesting a more fragile market.

Otherwise, Essex County Council appears somewhat unusual in having been able to commission quite a lot of research into alternative support models. This sets it apart from other councils interviewed, who have tended to focus their resources on more routine evaluation work. For example, digital transformation of adult social care is ongoing in Essex and, encouragingly, recent commissioned research suggests that older people are in fact more digitally active than had been previously thought. This increases the scope and potential for digital solutions in the county.

Local Initiatives

Coordination challenges vary across responsible bodies, with digital transformation complicated by Essex County Council's membership of three STPs. For example, each STP is pursuing a slightly different solution to electronic shared care records. An example of good partnership working has been Essex County Council's efforts to improve its performance in delayed transfers of care. Through the design of an integrated hospital discharge model that ensures continuity of care staff from the community into hospital and back out again, performance has steadily improved. The impression is that the necessary data for individualised support are available, in principle, but the institutional challenge was finding ways to bring those data together.

The interview also discussed the potential for new technologies and predictive tools from data science but as an adjunct to good practice and pathways. Work in this area is currently experimental and includes a pilot with the University of Essex into applications of AI for decision-making. Getting the basics right is seen as being as important as adopting new ways of working.

Leeds City Council

Summary Data Analysis

1. Cluster analysis identifies Leeds as **an 'Old Industrial Hub'** alongside, among others, Sheffield and Newcastle upon Tyne.
   - the **population of Leeds is at the younger end of this group** with an estimated 84% of the population aged under 65. Of that younger population, a substantial number are students. Some 12% of the total population of Leeds is aged 19-24. This compares to an England average of around 7.5%.
2. Overall, the **population of Leeds is projected to grow more slowly than for England as a whole** with faster growth in the younger population and slower growth in the older population:
   - nevertheless, substantial double-digit growth in the old-age population is expected in Leeds over 2018-30 leading to a more aged population over time.
   - This suggests a *relatively* lesser but still substantial challenge for meeting future care needs.
3. Net, internal migration contributes to population growth in Leeds:
   - **younger people are more likely to move in and older people are more likely to move away as they approach or pass retirement age**.
4. In care provision, **comparatively low rates of both unpaid care and care home provision** in Leeds would seem consistent with a relatively lower proportion of older people in the area.
5. In the **care home sector**:
   - the care market in Leeds may be **relatively more resilient** insofar as it has less reliance on smaller care homes (of fewer than ten or 20 beds) and **relatively more larger care homes**.
   - Leeds appears to have relatively high turnover in the social care workforce indicating possible **difficulties in retaining staff** but also a relatively low vacancy rate suggesting **no great difficulties in recruitment**.

6. Currently, **NHS and client contributions meet a relatively smaller proportion of social care expenditures in Leeds compared to England, Old Industrial Hubs as a group, as well as many similar areas**. Seemingly, more expenditures are met by the local authority.
7. The **proportion of requests for support from new clients that lead to no services being provided is higher in Leeds than for England as a whole** and many similar areas.
8. Leeds has **relatively low rates of delayed transfers of care**. Those delays attributable to social care are also quite low.
9. Unit costs for 18-64 provision in Leeds are comparable to the England average but on the high side among similar areas. **Nursing costs for over 65s are high but residential costs are seemingly low**.

Validation

At a high level, the picture for Leeds was considered unsurprising, but our interviewee stressed that the headline figures mask substantial variation across the area, particularly with respect to poverty and disadvantage. Differences in income/wealth also likely apply to patterns of migration in and out of Leeds (though there is limited information from conventional national sources to judge the extent of this). This has implications for the nature and composition of need and means across the city and how it can be planned for.

It was also noted that discussions locally had highlighted a discrepancy between the size of the GP registered population in Leeds and that reported in ONS data. The former is greater than the latter, with possible implications for how Leeds is able to understand its current population and plan future provision.

The data analysis suggested relatively low workforce vacancy rates in Leeds compared to other areas, but workforce capacity was mentioned in the interview as a persistent risk. Concerns include the availability of nurses for nursing homes and homecare workers in certain areas (a problem which extends to more affluent towns within the district).

While unit costs for over 65s appeared relatively high for nursing and low for residential care when compared to similar areas identified in this research, the interviewee argued that costs were not so different when using the CIPFA list of similar areas.

Explanation

Leeds needs to be understood at a more local level as it seems to be in health in order to appreciate pockets of affluence as well as pockets of profound need. Health outcomes at a sub-area level are stark in their differences and it is possible that the same is true vis-à-vis social care. With poverty and deprivation so acute in areas of Leeds, it is understandable that the city is targeting such areas. However, target areas for investment do not necessarily coincide with areas where those aged 65 and over are in particular need at this time.

Evidence Gaps

Leeds is adopting a strengths-based approach in the area, to make better use of community assets and to build a culture of shared outcomes and ownership. This marks a shift away from more transactional/entitlement-based views of services to enabling and supporting people to take care of themselves. However, because provision under a more strengths-based approach is necessarily more diverse and decentralised, it poses new challenges for case management

and local intelligence. How to focus more on peoples' journeys, aspirations, experiences and outcomes whilst evidencing value for money and ensuring good system performance is something that Leeds is now grappling with.

The necessary shift in culture also requires a shift in mindset about the value of data. Historically, efforts to do with data have focused on data validation/quality and compliance with conventional metrics (e.g. throughput of the system based more on volume than output/outcomes). As part of this, Leeds City Council faces a challenge as to how to collect adequate data without imposing too much of a burden on small providers who are often reliant on low-paid staff or volunteers. The proportionality of reporting requirements was a key theme and the council is trying to reduce bureaucracy where it can; for example, by reducing the length of assessment forms. Importantly, evidence must not obstruct practice on the frontline.

Even if the data can be collected, a further strategic concern is how to develop an appropriate data product for commissioners. It is not, for example, straightforward to objectively trade-off data concerning coffee morning attendance against post-hospital visits. The needs of the individual matter. This further complicates the ability to demonstrate the effectiveness and value for money of community initiatives like the Neighbourhood Networks Scheme.

Local Initiatives

Operationally, Leeds City Council would ideally spend more resource on data analysis rather than data collection, but issues of data quality persist. Investment in pertinent tools (many of them developed locally) represents a significant opportunity, but it is important to ensure that efforts are not needlessly duplicated and that there are appropriate tools and data products to meet the needs of both frontline staff and strategic commissioners.

A practical concern is that bringing together various and disparate IT systems will be a technical challenge but also a cultural one to build staff's confidence in the value of integrated systems. There was also some discussion about the scope for smart cities, in to which there has been heavy investment, with NHS and academic involvement. The interviewee admitted that there might be some potential for elements of this to enable data collection, possibly individualised, but also noted that it was still to be seen how this could be best achieved. Data integration along the lines above is the most immediate challenge.

Nottingham City Council

Summary Data Analysis

1. Cluster analysis identifies Nottingham as a '**Young Urban Centre**' but the city also bears some resemblance to '**Old Industrial Hubs**'.
   - similar areas to Nottingham include Leicester, Birmingham and Bristol.
2. Nottingham has **a young population** with 88% aged under 65 (82% for England)
   - while Nottingham is projected to grow somewhat slower than the England average, more of that growth will be in the younger population.
   - the growth in the old-age population in Nottingham will be more broad-based than in England as a whole, where higher growth will be concentrated in older age groups.

- nevertheless, **double-digit growth in the old-age population (29% in the over 65s over 2018-30) will still present a substantial challenge to care planning** in Nottingham.

3. In terms of care provision, despite a relatively young population:
   - there is somewhat **more emphasis on intensive unpaid care** of 50+ hours per week.
   - the **ratio of care home beds to people aged 75+ is high** - especially given the young population of the city.
4. In the care home sector:
   - like other Young Urban Centres, Nottingham has **a high proportion of smaller care homes** of fewer than 20 beds (accounting for 55% of care homes).
   - more unusually, Nottingham also seems to have **a smaller proportion of larger care homes** of 60 beds or more (7% compared to 12% for England).
   - while **vacancy rates in the workforce are low** in Nottingham (suggesting no serious difficulties in recruitment), **turnover rates are high** (suggesting retention challenges).
5. NHS contributions meeting an relatively large proportion of expenditures in Nottingham.
6. The **proportion of requests for support from new clients that go unmet** are:
   - higher in Nottingham than England and Young Urban Centres for those aged 18-64.
   - somewhat higher in Nottingham than for England for those aged 65+ but a little below the average for Young Urban Centres.
7. While Nottingham has relatively **high rates of delayed transfers of care, only a small proportion is attributable to social care**.
8. Unit costs for 18-64 provision in Nottingham are similar to the England average while 65+ provision lies somewhere between the averages for Young Urban Centres and Old Industrial Hubs.

Validation

The interviewees confirmed that, broadly speaking, the data analysis provided by the research team offered an accurate portrayal of the situation in Nottingham.

Explanation

Nottingham City Council noted a relatively low healthy life expectancy in the city as a particular challenge when compared to other areas. This creates an earlier need for services among the population and may elongate the window of need. In some sense, Nottingham currently faces more of a health problem than other areas.

The characteristic of a relatively low healthy life expectancy means that simplistic benchmarking inevitably fails to identify local challenges. This has implications for the design of funding formulas at a national level.

Nottingham City Council also note a very low number of self-funders in the city. Given that public data (like the Short and Long Term Support – SALT - return) generally focus on interactions with local authorities, the figures for Nottingham are arguably less skewed than for areas with much higher rates of self-funders.

Care homes with typically small numbers of beds on average are not a surprising feature of the care home market in Nottingham and likely reflects a historical legacy of limited space in an inner-city area which also compounds the difficulties of building large new homes. From a demand/market perspective, Nottingham may not be particularly attractive to care home providers because of its low rates of self-funders. Self-funders generally face higher prices than those paid by local authorities, making care markets with few self-funders less attractive. Limited space is also an issue because care homes now need to be larger to remain financially viable.

Evidence Gaps

Nottingham City Council echo the views of others that a lot of data on the area already exists but that accessing, combining and analysing the data from across a wide range of organisations is a significant practical challenge. Interviewees emphasise the importance of working with their local population to improve health outcomes so as to avoid individuals entering the system (at which point, they accumulate further risks and needs). This raises questions about how data can address these more upstream concerns to support healthy ageing.

Local Initiatives

While a lack of self-funders is seen as a challenge, Nottingham is pursuing a 'strengths-based' approach to care with the aim of moving away from residential care and towards supported living. This is possibly more viable in Nottingham owing to a relatively high proportion of council housing in the city. High owner occupancy makes it more difficult for councils to intervene. Equally, a densely-populated inner-city affords opportunities for effective home care, and Nottingham City Council has 'zoned' the city with named lead providers taking responsibility in a zone. From a workforce perspective, Nottingham arguably faces greater recruitment challenges in home care owing to a vibrant city centre with many opportunities for non-care work.

In terms of integrated data, Nottingham is starting to link records using NHS numbers. However, this remains a challenge because of the different IT systems in operation across the sector, presenting a substantial technical barrier that must be overcome. Nottingham considers there to be more scope to track people through the system (so is still in the early stages) but notes limited public-sector infrastructure to support such efforts. The interviewees drew a parallel between the critical importance of (and thus investment in) business intelligence in the private sector and the continued lack of appropriate public-sector intelligence to do the same for service provision. Here, the interviewees highlighted a possible role for centralised funding/investment and coordination (i.e. at scale) to facilitate more analysis-based interventions by local government. There was also some uncertainty about the extent to which the new Digital Innovation Hubs might be focusing on bringing health and care data together.

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Royal Patron: Her Majesty The Queen

Office address: Gillingham House, 38-44 Gillingham Street, London, SW1V 1HU