

An analysis of key forces likely to affect Adult Social Care services in the West Midlands 2023-2035

An initial report to inform the development of future scenarios by
the West Midlands Association of Directors of Adult Social Services

31 March 2023

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Document control

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1. Introduction

This report presents a high-level overview of the contextual factors that WM ADASS participants identified as being potentially significant for the future of adult social between now and 2035.

It is intended to be impressionistic rather than comprehensive, and to inform the development of future scenarios by the same participants. We expect that participant views on the significance of various factors, and how they might interact, will continue to develop through this process, and also that new factors may come to be identified.

The nature of the scenario process is a learning, engaging and evolving one. It is also focused on the contextual environment, as described below, so we do not seek to present here expert insights into the structure or operation of the social care sector itself. Rather, as through the whole process, we aim to support the emergence of new insights into what may drive or constrain the choices that the sector may wish to make.

The core purpose of these scenario-based explorations is to inform future choices and to increase the potential for them to be better choices.

Context

It is estimated that in the next 25 years, the number of older people over the age of 85 will double to 2.6 million¹. Although an aging population does not immediately mean that the need for health and social services will increase, there has been an increase in the numbers of people over the age of 75 reporting long-term health conditions and the likelihood of being diagnosed with more than two or more long-term conditions has increased in the older population². Neurological conditions such as dementia are the major drivers of social care linked to long-term conditions³. The complexity of these conditions, and the increased social care needs linked to them, suggests changes in population need that national and local policy makers will need to factor in to plans for effective future service delivery⁴.

Across the UK, an estimated 4.7 million provide unpaid and invaluable support to ill, older, or disabled family members or friends, some of the most vulnerable individuals in our society⁵. They play an

¹ <https://www.health.org.uk/publications/our-ageing-population#:~:text=population%20is%20ageing,-In%20the%20next%2025%20years%2C%20the%20number%20of%20people%20older,for%20health%20and%20social%20care>.

² <https://www.health.org.uk/publications/our-ageing-population>

³ <https://www.who.int/news-room/fact-sheets/detail/dementia>

⁴ <https://www.scie.org.uk/prevention/social-care>

⁵

<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/socialcare/articles/unpaidcare>

integral part in the health and social care system, with the work of unpaid carers estimated to equate to £530 million per day and £193 billion per year⁶. In the Midlands, the same estimates are £80 million per day and £20.3bn since the beginning of the pandemic⁷.

In a 2019 report, the Association of Directors of Adult Social Services (ADASS)⁸ stated a desire for the Government to prioritise adult social care by taking the following actions:

- *Short-term funding, to prevent the further breakdown of essential care and support over the course of the next financial year.*
- *Long-term funding and reform to enable the creation of care and support for the population who need it and create a social care system that is truly fit for the 21st century.*
- *A long-term plan for adult social care which includes the creation of a support system that links public services including the NHS and supports resilient individuals, families and communities.*

ADASS also highlighted the opportunity to support the reform of the social care system, and to bring in a new era in which all of the population are able to live the best lives they can⁹.

When looking at the workforce trends in the West Midlands, reports from Skills for Care suggests that almost one quarter of the adult social care workforce are employed on zero-hour contracts¹⁰. In addition, the overall workforce is made up of approximately 84 per cent female workers, with an average age of 44 years. Approximately 26 per cent of the workforce is aged 55 years or over, 25 per cent of the workforce had Black, Asian and minority ethnicity and 14 per cent were of non-British nationality¹¹.

'In the context of an uncertain future, WM ADASS wants to ensure that we continue to provide high quality, personalised care to people who currently, or might in future, draw on care and support. We would like to create space for our current and future leaders to explore potential scenarios and policy options for adult social care to ensure that we are prepared and can make a success of any eventuality.'

[byageanddeprivationenglandandwales/census2021#:~:text=1.-,Main%20points,over%2C%20in%20each%20country%20respectively.](https://www.adass.org.uk/media/7587/how-to-sort-social-care-once-and-for-all-191219-final.pdf)

⁶ <https://www.carersuk.org/media/bgolg5u2/cuk-carers-rights-day-research-report-2022-web.pdf>

⁷ <https://www.carersuk.org/media/gi1b4oup/unseenandundervalued.pdf>

⁸ <https://www.adass.org.uk/media/7587/how-to-sort-social-care-once-and-for-all-191219-final.pdf>

⁹ <https://www.adass.org.uk/media/7587/how-to-sort-social-care-once-and-for-all-191219-final.pdf>

¹⁰ <https://www.skillsforcare.org.uk/Adult-Social-Care-Workforce-Data/Workforce-intelligence/documents/Regional-summaries/Regional-summaries-West-Midlands.pdf>

¹¹ <https://www.skillsforcare.org.uk/Adult-Social-Care-Workforce-Data/Workforce-intelligence/documents/Regional-summaries/Regional-summaries-West-Midlands.pdf>

It is in this challenging context that West Midlands ADASS asked the Strategy Unit to assist in the development of a range of future based scenarios that will be used to explore the following focal question:

What are the critical building blocks for a resilient social care system in 2035?

The intention is that the scenarios to be developed will be useable both at regional level to inform an ongoing improvement programme and at local level as a tool to engage wider partners and stakeholders.

Three stages are planned, and this report addresses the first.

Analysis of the Contextual Environment

The first stage of this work focused on identifying potential driving forces of the future of social care. It was important to identify and explore the driving forces within the contextual environment that could impact the WMADASS over the next 12 years. This impact could either be directly associated or mediated through the transactional environment (see Figure 1).

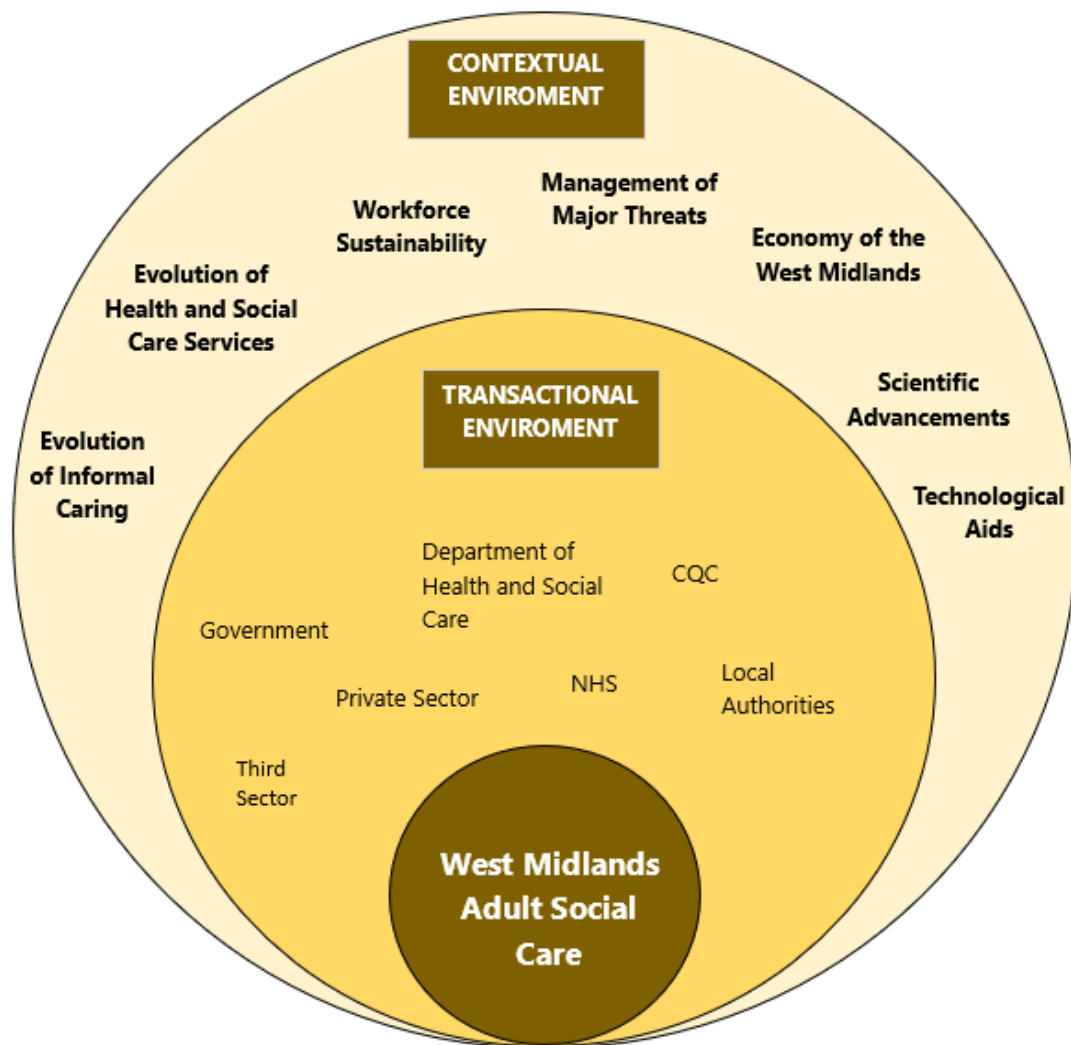


Figure 1: Diagram of contextual environment for West Midlands Adult Social Care¹²

The analysis for this has involved:

- a) A Delphi processⁱ with WM ADASS leaders and nominated associates to identify the relevant factors within the contextual environment, requesting that they grade each factor (1-7 grading system) against perceived degree of uncertainty and potential future impact over the next 12 years.
- b) Desktop research relating to the highlighted factors identified through the Delphi analysis. These were deemed the likely driving forces within the contextual environment over the next 12 years.

¹² Based on the model in - <https://sloanreview.mit.edu/article/using-scenario-planning-to-reshape-strategy/>

The driving forces identified in Figure 1, have been developed through the analysis of the responses of participants to the Delphi process. That process identified 141 relevant trends and uncertainties, and these were collated into 44 factors across 5 categories (see Table 1). Full descriptions can be found in Appendix 1- Factor descriptions).

Table 1: Factors in the contextual environment.

Ref.	Trend/Uncertainty	Ref.	Trend/Uncertainty
POLITICAL		ECONOMY	
P1	Immigration policy	Ec1	Affordability of staff
P2	Social care pay and benefits	Ec2	Workforce travel costs
P3	Focus of political attention	Ec3	Provider energy costs
P4	Retirement and pensions policy	Ec4	Innovation cost/benefit
P5	Funding timescales	Ec5	State of UK economy
P6	Social care funding	Ec6	Care market dynamics
P7	CQC regulation	Ec7	Affordability of independent living
P8	Changes to social care operating model	Ec8	Interest rates
P9	Changes to scope of social care provision	Ec9	The West Midlands economy
P10	Social care as a profession	ENVIRONMENT	
P11	NHS reform	En1	Food and water security
P12	Higher education policy	En2	Epidemic/pandemic
SOCIAL		En3	Extreme weather
S1	Population age profile	En4	Energy security
S2	Attitudes toward social care careers	En5	Air quality
S3	Population health & wellbeing	En6	Migration
S4	Extent of informal caring	En7	Environmental responsibility
S5	Loneliness	En8	Physical environment and crime
S6	Public expectations of social care	TECHNOLOGICAL	
S7	Family structures	T1	Digitalisation
S8	Openness to technology	T2	Intelligence-led care
S9	Work-life balance	T3	Medical advancements
S10	Local social capital	T4	Scientific breakthroughs
		T5	AI and robotics

For each of the factors above, Delphi participants were asked to also assess the following:

- a) The potential impact of the factor over a c.10-year timeframe. This was assessed on a scale of 1-7 where 1 = low impact and 7 = high impact.
- b) The degree of uncertainty around the potential impact of the factor over a c.10-year timeframe. This was assessed on a scale of 1-7 where 1 = low uncertainty and 7 = high uncertainty.

The results of both assessments were combined and plotted on an Impact/Uncertainty matrix (see Figure 2) and used to identify a set the contextual research themes shown in Figure 1, above. These do not purport to be a complete summary of all relevant factors, rather they reflect the content of

the Delphi process. It is expected, however, that other themes may emerge through the scenario development process.

The function of these themes was to enable scenario participants to stretch their thinking around the range of eventualities that could be produced over 12 years through the interactions between these factors. An initial half-day workshop was held to support this.

Scenario Development and Deployment

A half-day workshop with WM ADASS leaders and nominated associates will create a set of relatable future scenarios. This report serves as the starting point for that task.

A final half-day workshop in which WM ADASS leaders and nominated associates will have the opportunity to immerse themselves in the scenarios developed, identifying potential impacts that the scenarios would have on the WM Social Care services, workforce, and funding, while considering how this impact could be maximised or mitigated.

A second report will be completed at this stage, comprising the scenarios and initial reflections on them. A simple toolkit to support further local engagement around the scenarios will also be created at this stage.

ⁱ The Delphi method uses multiple rounds of questions sent to a collection of experts in a specific field, to work towards a mutual agreement or consensus opinion.

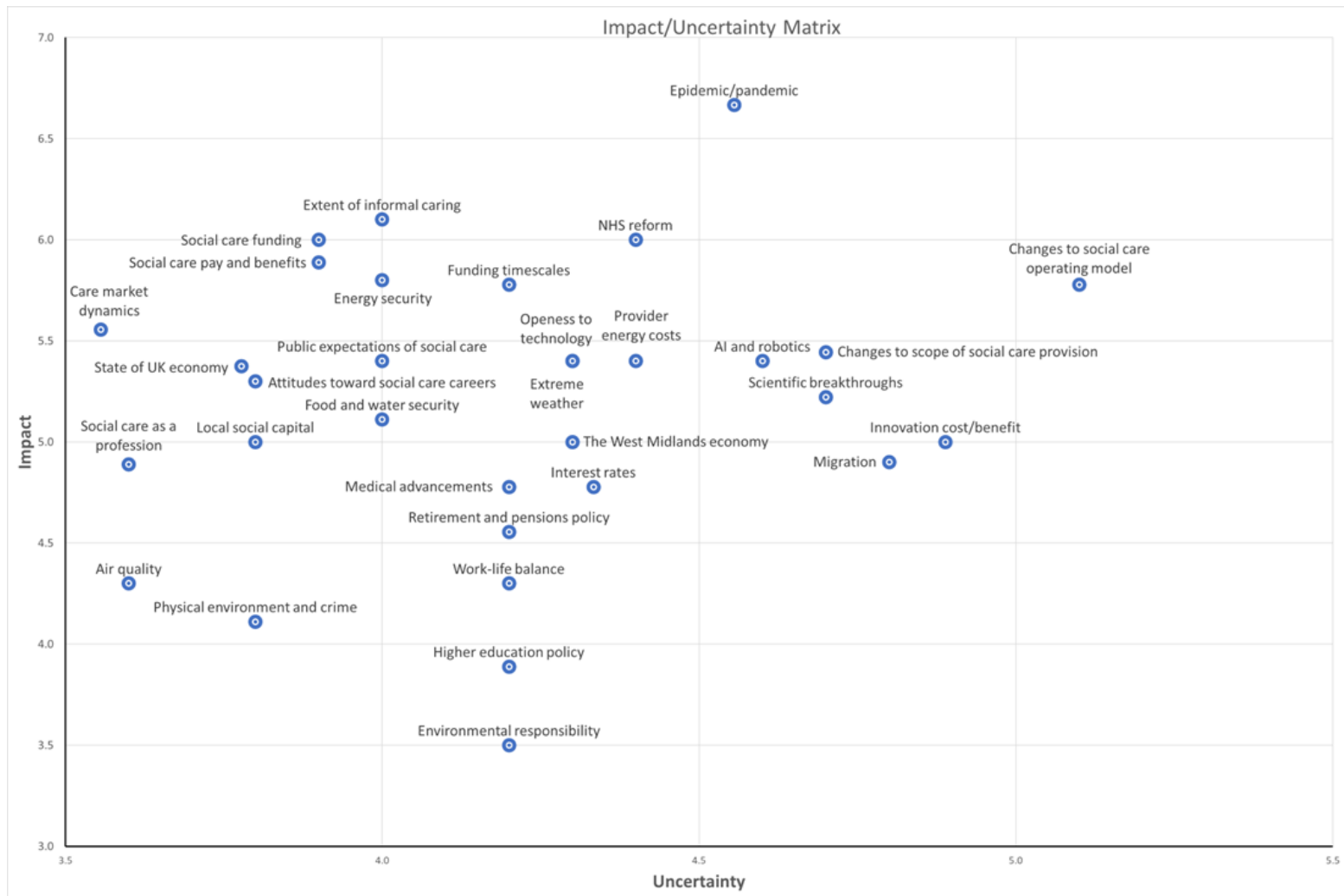


Figure 2: Impact/Uncertainty Matrix

2. How might the model of health and care provision evolve?

This section considers ways in which social care could evolve in the coming years, particularly in terms of its funding and operating model, NHS reform, care market dynamics, public expectations of social care, and energy security in the UK. Some of the potential developments in each of these areas are discussed below.

NHS Reform

Through the *Build Back Better: Our Plan for Health and Social Care* programme, the Government has set out measures to integrate health and social care¹³. The rationale for this was to successfully integrate the planning, commissioning, and delivery of services. Some of the policies include:

- £300 million to integrate housing and support options into local and healthcare strategies
- £150 million of additional funding for further digitisation across social care to support independent living
- £500 million for the social care workforce e.g., training, wellbeing measures, opportunities
- Practical support service that aids minor repairs and changes in peoples' houses
- £25 million to support unpaid carers
- Around £5.4 billion extra funding for social care.

With the development of ICSs, there is an opportunity for further integration of health and social care services through focussing what works for their service users, their staff, and how budgets can be allocated more efficiently. However, the paper does not provide clarity on how policy can be translated into practice. There is uncertainty, then, around how different ICBs will make decisions, involve local communities, and create meaningful working relationships with system partners, and there are also likely to be widely differing cultural and relational dynamics between partners in different systems.

Social Care Funding

Demand for social care services is expected to increase in the UK due to its ageing population with complex needs. By contrast, social care workers are among the lowest paid in the UK, impacting recruitment and retention¹⁴. The Health Foundation estimates that 600,000 more staff members will

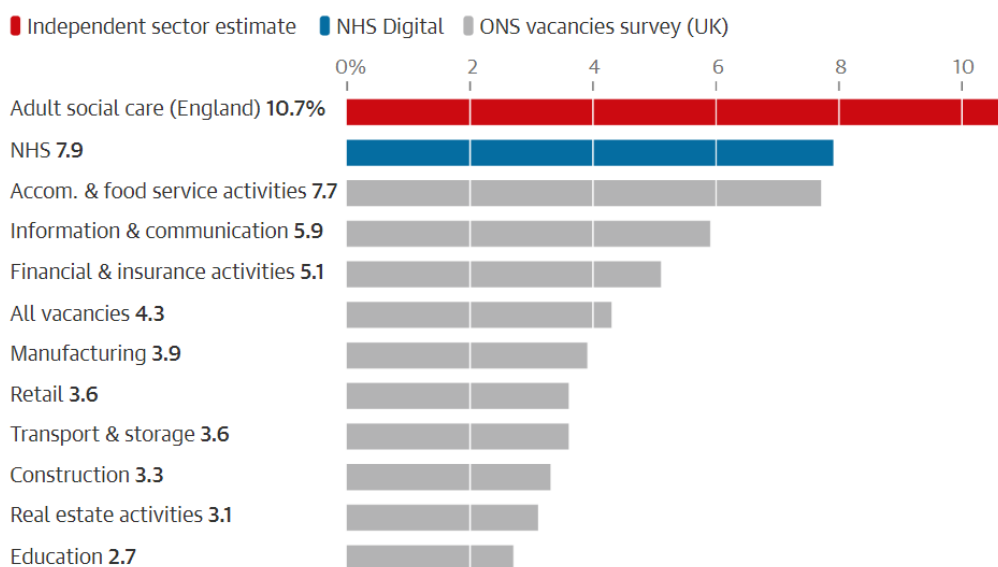
¹³ <https://www.gov.uk/government/publications/health-and-social-care-integration-joining-up-care-for-people-places-and-populations>

¹⁴ <https://www.communitycare.co.uk/2018/10/30/majority-social-workers-looking-leave-job-within-next-16-months-says-new-research/>

be needed by 2030/31 to meet the care needs of the population¹⁵. Alongside this, evidence suggests that the social care workforce has reduced in size for the first time in almost a decade¹⁶. This deficit points towards a lack of equilibrium between the huge demand for social care services and the short supply of social care workers, creating high turnover and vacancy rates, further impacting the care received by service users in the future.

The adult social care sector has a higher vacancy rate than the NHS and many other sectors

Adult social care vacancy rate in comparison with the NHS and the wider economy, 2021/22



Guardian graphic. Source: Skills for Care estimates, NHS Digital and ONS: Vacancies and jobs in the UK

Figure 3: Vacancy rates in Adult Social Care

Source: <https://www.theguardian.com/society/2022/oct/11/englands-social-care-workforce-shrinks-for-first-time-in-10-years>

When looking at government expenditure on adult social care, there was a £99 million difference between the levels from 2010/11 and 2019/20 despite the increase in demand for services¹⁷. This has led to unmet needs, where support packages can only cover basic personal needs, limiting an individual’s ability to actively participate in society¹⁸. A lack of funding puts the responsibility on

¹⁵ <https://www.health.org.uk/news-and-comment/consultation-responses/fabian-society-inquiry-roadmap-to-a-national-care-service>

¹⁶ <https://www.theguardian.com/society/2022/oct/11/englands-social-care-workforce-shrinks-for-first-time-in-10-years>

¹⁷ <https://www.kingsfund.org.uk/audio-video/key-facts-figures-adult-social-care>

¹⁸ <https://publications.parliament.uk/pa/cm5803/cmselect/cmcomloc/19/report.html>

unpaid carers to support people that are unable to access care. Also, where low fee rates are offered by local authorities this can put pressure on the market, limiting pay increases and training for staff.

In 2019/20 total expenditure on adult social care was only £99m more than in 2010/11, despite increasing demand for services
Annual total expenditure adjusted to 2019/20 prices

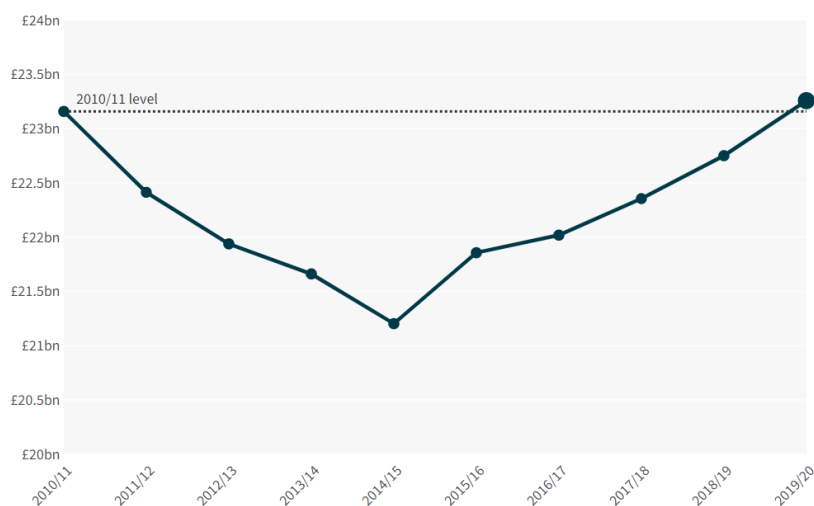


Figure 4: Expenditure comparison on Adult Social Care 2019/20 to 2010/11

Source: <https://www.kingsfund.org.uk/audio-video/key-facts-figures-adult-social-care>

Funding decisions taken over many years have affected the financial viability of social care providers, with many social care leaders reporting that providers in their area had closed, stopped trading, or handed back contracts, impacting the delivery of care. The CQC has highlighted the worsening of services within mental health, learning disability and autism¹⁹. It is estimated that an addition £9bn a year by 2024/25 will be required to deliver high-quality care and enable local authorities to pay care providers and its staff.

Changes to Social Care Funding and Operating Model

In September 2021, the government introduced a cap on lifetime social care costs from October 2023, and set it at £86k²⁰. However, the proposed amendment to the Care Act in November 2021 implies that means-tested support does not contribute to an individual's progress towards the social care cost. This means that the protection against high costs would greatly reduce, affecting mostly older people and some working-age adults that have modest levels of income. Those in the

¹⁹ <https://www.cqc.org.uk/publications/major-report/state-care>

²⁰ <https://www.gov.uk/government/consultations/operational-guidance-to-implement-a-lifetime-cap-on-care-costs/operational-guidance-to-implement-a-lifetime-cap-on-care-costs#:~:text=On%207%20September%202021%20the,personal%20care%20over%20their%20lifetime.>

Northeast, Yorkshire and Humber, and the Midlands would see the biggest erosion of their protection against large costs due to the amendment²¹. Many people may end up paying more for their care because state support is largely means-tested. The Government announced that it would make the means test for accessing local authority services more generous through the Minimum Income Guarantee (MIG) which rose by 3.1% in April 2022²². These measures, funded by a new health and social care levy will increase government funding for social care costs in the short term but significant uncertainty remains about the shape and sustainability of the long-term model.

There are plans to improve innovation, care and support planning, as well as the digital connectivity within the operating model. However, there have been no measures to provide users' choice and the control of publicly funded care service²³. To combat disjointed, the Government has tasked 42 integrated care systems to join health, care and other services. However, this is subject to variation in how each system is structured and functions, and how this evolves over time, including as influenced by the Hewitt Review and other drivers²⁴.

Care Market Dynamics

The social care sector is primarily funded by public authorities. Just 10% of care homes for older people are actually run by local authorities or the NHS, 76% are for profit, and 14% are non-profit²⁵. Private providers offer a range of services such as residential care, home care, and specialist care for people with disabilities. Funding constraints on local authorities have led to many providers losing business or prioritising service users that pay more, creating discrepancies in the delivery of care to all. This causes supply issues - e.g. there is a reported need to invest in 75,000 new care home beds by 2030 but this may only happen in affluent localities which has many self-funders²⁶. The strict regulations and quality standards act as a barrier for many new providers in the context of budget constraints and workforce challenges. Furthermore, private care providers are also required to adapt their services to cater to UK's ageing population needs, as well as keeping up to date with newer technologies, which may drive competition in the market. Informed by these dynamics, the social care sector in the UK has undergone significant consolidation and this has raised questions over

²¹ <https://ifs.org.uk/publications/does-cap-fit-analysing-governments-proposed-amendment-english-social-care-charging>

²² <https://www.gov.uk/government/publications/social-care-charging-for-local-authorities-2022-to-2023/social-care-charging-for-care-and-support-local-authority-circular-lacdhsc20231>

²³ <https://www.kingsfund.org.uk/blog/2022/05/reform-adult-social-care-some-progress-nowhere-near-enough>

²⁴ <https://www.kingsfund.org.uk/blog/2022/05/reform-adult-social-care-some-progress-nowhere-near-enough>

²⁵ <https://www.health.org.uk/news-and-comment/consultation-responses/fabian-society-inquiry-roadmap-to-a-national-care-service>

²⁶ <https://www.kingsfund.org.uk/publications/whats-your-problem-social-care>

market dominance and a lack of diversity within the sector. There is potential for this trend to accelerate, even to become a dominant influence on the sector, or for changes in funding to change the dynamics.

Public Expectations of Social Care

The health and social care sector has faced unprecedented challenges during the pandemic, reconfiguring its services to accommodate social distancing, infection control guidance, switching to online consultations for GPs and outpatient services, etc. As COVID-19 took over, this led to a backlog in providing routine care for patients in terms of waiting times, quality, and the delivery of care. Many needs went unmet with 400,000 people in England still awaiting a needs assessment²⁷. The pandemic led to high death rates in care homes, restrictions on friend and family contact, and pressures on the care staff. Such events have influenced the public’s perception of the social care sector.

When compared to other public services such as the NHS, administrative services, courts and legal system, the police, and the education system; social care services scored the lowest amongst public satisfaction²⁸.

Figure 4: High levels of satisfaction were reported for the NHS

Levels of satisfaction in public institutions, UK, March 2022

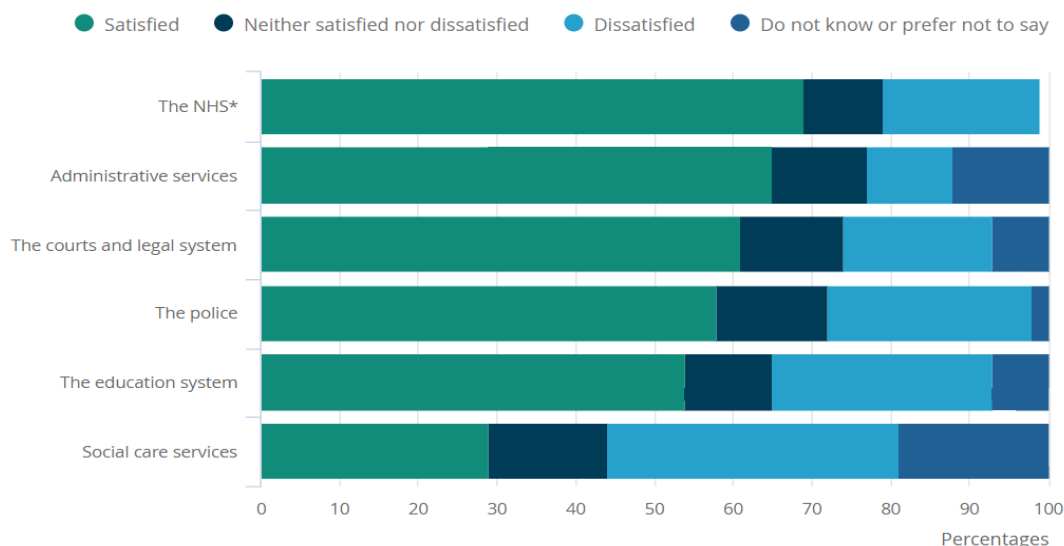


Figure 5: Levels of satisfaction in public institutions, UK, March 2022

Source: <https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/bulletins/trustinggovernmentuk/2022>

²⁷ <https://www.adass.org.uk/snap-survey-nov21-rapidly-deteriorating-social-services#:~:text=The%20survey%20by%20the%20Association%20of%20Directors%20of,lack%20of%20staff%2C%20despite%20record%20growth%20in%20provision%3B>

²⁸ <https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/bulletins/trustinggovernmentuk/2022>

The main reasons for such dissatisfaction are reported to be that the pay, working conditions and training for social care staff are bad (59%), people don't get the social care they need (59%) and social care is not affordable to those who need it (44%)²⁹. Higher levels of dissatisfaction over time could lead to more radical changes, of potentially very different kinds, in the social care model.

Questions asked: 'From your own experience, or from what you have heard, how satisfied or dissatisfied are you with social care for people who cannot look after themselves because of illness, disability or old age?'

Very and quite satisfied Neither satisfied nor dissatisfied Don't know Very and quite dissatisfied

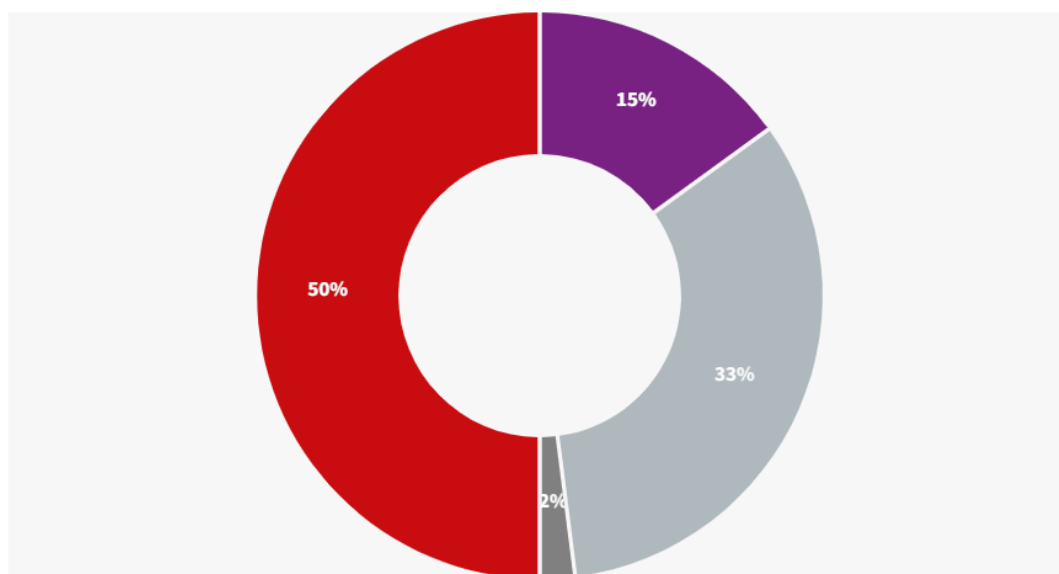


Figure 6: Satisfaction levels with Social Care and Social Care services

Source: https://www.kingsfund.org.uk/publications/public-satisfaction-nhs-social-care-2021#footnote1_s8rbntl

In 2021, 80% of respondents agreed that the NHS faced a 'major' or 'severe' funding problem, for which the most popular choice of additional funding was stated to be a separate tax for the NHS³⁰. Alongside this, a survey revealed that confidence in Government policies for social care in England is as low as 7%³¹.

Energy Security

Energy security can be described as the uninterrupted availability of energy sources at an affordable price for the care sector. Electricity prices in the UK have risen by 66.7% and gas prices by 129.4% in

²⁹ https://www.kingsfund.org.uk/publications/public-satisfaction-nhs-social-care-2021#footnote1_s8rbntl

³⁰ https://www.kingsfund.org.uk/publications/public-satisfaction-nhs-social-care-2021#footnote1_s8rbntl

³¹ <https://www.health.org.uk/publications/long-reads/public-perceptions-performance-policy-and-expectations>

the last year, which has driven overall inflation rates³². As costs have risen, 48% of adults said that they found it very or somewhat difficult to afford energy bills, and c.50% of adults in the UK said stated that they are using less fuel because of inflated costs.

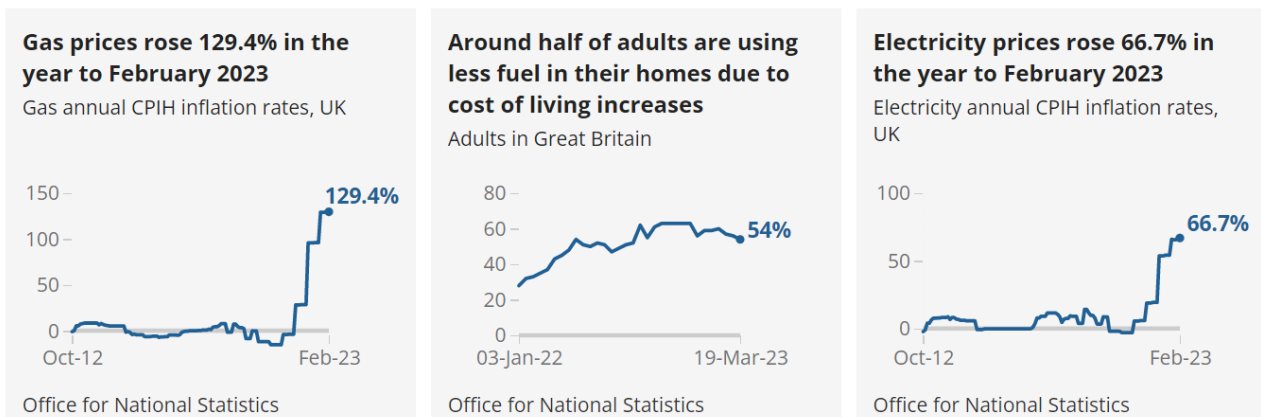


Figure 7: Energy price rises

Source: <https://www.ons.gov.uk/economy/inflationandpriceindices/articles/costoflivinginsights/energy#:~:text=Electricity%20prices%20in%20the%20UK,of%20the%20annual%20inflation%20rate@sa>

Inflation has also impacted the social care sector, compounded by buildings that are not updated with energy saving technologies, e.g. insulation, triple glazed windows, and/or solar panels. Care homes have not benefitted from the energy price cap or the £400 energy rebate, leading to a 683% increase in energy costs between August 2021 and August 2022 for the social care sector³³. Based on market rates and 454,933 CQC registered beds, rising energy prices are estimated to have cost the social care sector over £2bn per annum. This impacts profit margins and further deteriorates the sustainability of the sector. This has led to care homes reducing staff, the quantity and quality of food, or increasing their fees for residents from between 5-15%³⁴ to balance out their energy costs. For staff providing domiciliary care, high fuel costs are impacting recruitment and retention in the social care sector³⁵.

Recently, the Government launched a new scheme to support the care sector. Under the energy bill relief plan, the government pledged to cap energy costs for non-domestic customers at an expected

³² <https://www.ons.gov.uk/economy/inflationandpriceindices/articles/costoflivinginsights/energy#:~:text=Electricity%20prices%20in%20the%20UK,of%20the%20annual%20inflation%20rate>

³³ <https://www.carehome.co.uk/news/article.cfm/id/1675920/care-england-energy-costs-social-care#:~:text=To%20secure%20energy%20supply%20from,over%20%20C2%A32bn%20per%20annum>

³⁴ <https://www.itv.com/news/2022-08-31/care-homes-warn-theyre-cutting-back-on-food-as-cost-of-living-compromises-care>

³⁵ <https://research.senedd.wales/research-articles/fuel-prices-and-the-cost-of-living-making-a-bad-situation-worse-for-unpaid-carers-and-domiciliary-care/>

£211 per MWh for electricity and £75 per MWh for gas. This applied to fixed-price contracts that were agreed since 1 April 2022 and all flexible tariff contracts³⁶. However, this may only be the first step, with Care England's chief executive urging the government to waive VAT on energy costs for care homes³⁷. With such circumstances, it is important to evaluate the sustainability of the social care sector, as energy sources are required by hospitals to run services, operate equipment and save lives.

These dynamics have arisen, in part, through the unexpected conflict in Ukraine and its knock-on impacts, and they illustrate the benefits of considering a wide range of eventualities in longer-term thinking.

³⁶ <https://www.gov.uk/guidance/energy-bill-relief-scheme-help-for-businesses-and-other-non-domestic-customers>

³⁷ <https://www.communitycare.co.uk/2022/09/22/care-sector-unsustainable-without-more-support-despite-energy-bills-package-warn-providers/>

3. What technologies might influence how social care services are provided?

Digital transformation has the potential to significantly impact social care services, providing people with greater independence and control over the care they receive. Recognising its potential, the Department of Health and Social Care committed to invest at least £150m from April 2022 in digital innovation³⁸. The pandemic, for instance, has had a transformative domino-effect on the utility of digital technology within the NHS. Lockdown rules have led to a shift towards the provision of care through newer technologies within adult social care, with consultations being held online and information being provided to service users through digital means. Overall, this section will explore some of the technologies that influence the social care sector, including its impact on the social care workforce, and the affect of public attitudes towards technology:

Technological Advancements

Assistive technologies such as artificial intelligence and robotics are already used in business. These technologies have the power to transform many aspects of social care services in terms of its provision and patient experience. They can be used to predict and manage conditions, encourage at-home care through remote monitoring, and allow early hospital discharge for patients. Digital technologies have the potential to alleviate challenges such as an ageing population with complex needs, social care funding, staff shortages, and health inequalities. There are several technologies that influence how social care services are provided in the UK. For instance:

- Electronic Health Records (EHRs) can help to improve the efficiency and accuracy of care by providing real-time access to patient records, reducing errors, and facilitating better communication between healthcare providers.
- Telemedicine enables healthcare providers to consult with patients remotely, using videoconferencing and other digital tools. This can help to increase access to care for people in rural areas or who have mobility issues and can also reduce the burden on hospitals and clinics.
- Wearable technology such as fitness trackers and smartwatches can help to monitor and track the health of patients, allowing for early detection of health problems and personalized care plans.
- Robotics and automation can help to streamline certain aspects of care, such as medication management and repetitive tasks, freeing up staff to focus on more complex care needs.

³⁸ <https://transform.england.nhs.uk/key-tools-and-info/adult-social-care-digital-transformation/>

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- Artificial intelligence (AI) can be used to analyse large amounts of health data, identify patterns, and make predictions about potential health risks. This can help to improve care planning and resource allocation.



Figure 8: Helping technologies

However, to utilise these technologies, the social care sector needs a supporting digital architecture such as open standards, secure identity, interoperability, integration across patient records, granularity in data collection are important for safely using technology.

Historically, social care workers have been resistant to remote consultations, however the pandemic required the workforce to adapt to newer technologies. A study found that incorporating AI-based technology into the existing models of social care provision could need concerted training to increase digital literacy in the workforce. Key considerations such as internet connectivity is important, alongside ethical questions such as data protection and security concerns when it comes to commissioning³⁹. Digital technology infrastructure is also dependent on enabling funding.

There is a lack of evidence around the perspective of technology providers and care commissioners. Incorporating AI-based technology into service delivery would require a proactive approach to addressing various social care needs but the current model of care would require a social care worker to have some short-term face-to-face contact with service users to build a meaningful relationship, which is not so readily enabled through remote working⁴⁰.

Openness to Technology

With the rise of patient-driven care, trust plays a key role in establishing whether patients will be willing to engage with newer technologies to help self-manage their conditions. This will be influenced by where trust is placed – with social care workers, with friends and family, or with news,

³⁹ <https://www.emerald.com/insight/content/doi/10.1108/JET-11-2019-0052/full/html>

⁴⁰ <https://www.birmingham.ac.uk/research/brace/projects/new-and-emerging-technology-for-adult-social-care.aspx>

media or other internet outlets. If society is more open to technology, social care providers may be more willing to adopt new technologies to improve the quality of care - e.g. telemedicine, telecare, remote monitoring can be used to support independent living, reducing hospital visits. Whilst there is less evidence in this area, policymakers may focus on these attitudes and use them to inform decisions around the implementation and use of technology in social care.



Figure 9: Support

Innovation Cost and Development

A review commissioned by NHSX revealed that the importance of digital technology in improving efficiency of services in the adult social care sector was largely supported among the workforce, though there was disagreement on the financial benefits of digital technologies. At an organisational level, the main barriers to adopting technology include budget pressures making organisations less likely to invest in newer technology, especially when the financial benefits are not obvious.⁴¹ Other barriers that affected the scaling and purchasing of technology included inconsistencies in systems and a lack of interoperability with technological advancements, the diverse nature of social care needs and how digital care technology can cater to them, as well as a case for resilient leadership in the adult social care sector to manage digital transformation⁴². On an individual level, the review found that while the pandemic increased opportunities amongst staff members to engage with

⁴¹ <https://transform.england.nhs.uk/key-tools-and-info/adult-social-care-digital-transformation/adult-social-care-technology-innovation-and-digital-skills-reviews/>

⁴² <https://transform.england.nhs.uk/key-tools-and-info/adult-social-care-digital-transformation/adult-social-care-technology-innovation-and-digital-skills-reviews/>

technologies, it may have created disparities in the use of technology with care workers and registered nurses using it less. Another individual barrier found was the gap in the digital skills of the frontline workforce, with some organisations that had adopted digital systems having higher confidence in their skills when compared to people with care and support needs and unpaid carers⁴³. It was revealed that age was a crucial factor that affected their confidence as younger groups demonstrated higher levels of digital confidence while older staff were more comfortable with asking for support and developing their skills.

The review also identified enablers to overcome these barriers included co-designing digital services with users and unpaid carers, digital technology suppliers bridging the gap between technology and adult social care, and care providers investing in upskilling the workforce which would require further funding⁴⁴.

⁴³ <https://transform.england.nhs.uk/key-tools-and-info/adult-social-care-digital-transformation/adult-social-care-technology-innovation-and-digital-skills-reviews/>

⁴⁴ <https://transform.england.nhs.uk/key-tools-and-info/adult-social-care-digital-transformation/adult-social-care-technology-innovation-and-digital-skills-reviews/>

4. What might affect the sustainability of the social care workforce?

Migration, working conditions (such as pay, progression and benefits), retirement and pensions policy, and hybrid working can all have a significant impact on the sustainability of the social care workforce in the UK. Each of these factors can affect recruitment and retention rates, as well as the overall quality of care provided to vulnerable individuals.

Migration Trends

The social care workforce was over 1 million workers in 2019⁴⁵. Whilst most are British nationals, migrant workers make-up a significant minority of the sector. In 2020, 1 in 4 social care workers were born outside of the UK, mostly from regions outside the EEA⁴⁶. Out of this, 38% of nurses were migrants, 12% from EEA countries, and 24% of care workers were migrants born outside the UK. They come from a broad range of countries including Nigeria, the Philippines, India, Poland, and Romania. With the number of people over 80 anticipated to double in size (over 5 million by 2037), care needs are steadily rising⁴⁷. Overall, it is likely that immigration can potentially help alleviate difficulties caused by inadequate public funding and staff shortages⁴⁸. This also brings risks as migrant workers in low paid positions may be exploited.

In the UK, long-term immigration in the year ending June 2022 was largely driven by non-EU nationals⁴⁹. Public attitudes on migration often allude that migrants place more strain on health and social care services than UK nationals but The Health Foundation suggests that health care utilisation among migrants is 40% lower than the UK-born population⁵⁰.

⁴⁵ <https://www.kingsfund.org.uk/projects/time-think-differently/trends-workforce-overview>

⁴⁶ <https://www.gov.uk/government/publications/review-of-adult-social-care-2022>

⁴⁷ <https://www.independentage.org/policy-research/research-reports/moved-to-care-impact-of-migration-on-adult-social-care-workforce>

⁴⁸ https://www.ridout-law.com/how-immigration-may-help-alleviate-staff-shortages-in-adult-social-care/?utm_source=rss&utm_medium=rss&utm_campaign=how-immigration-may-help-alleviate-staff-shortages-in-adult-social-care

⁴⁹ <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/bulletins/longterminternationalmigrationprovisional/yearendingjune2022#:~:text=Net%20migration%20for%20the%20UK%20in%20the%20year%20ending%20June%202022&text=This%20was%20driven%20by%20net,Immigration%20to%20the%20UK%20section.>

⁵⁰ <https://www.health.org.uk/news-and-comment/blogs/international-migrants-use-nhs-services-less-frequently-than-non-migrants#:~:text=Public%20discourse%20on%20migration%20often,those%20born%20in%20the%20UK>

Figure 1: Long-term immigration in the year ending June 2022 was largely driven by non-EU nationals

Number of non-EU, EU and British nationals immigrating into the UK, between the year ending June 2020 and the year ending June 2022

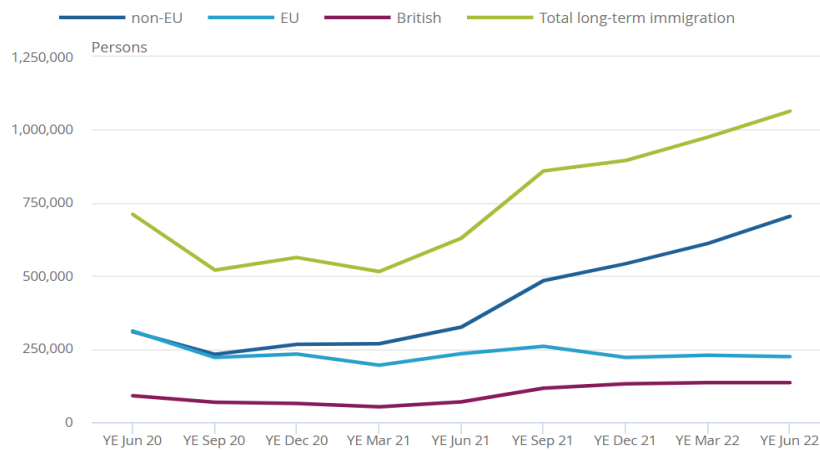


Figure 10: Number of non-EU, EU, and British nationals immigrating into the UK, between the year ending June 2020 and the year ending June 2022

Source: <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/bulletins/ongterminternationalmigrationprovisional/yearendingjune2022#:~:text=Net%20migration%20for%20the%20UK%20in%20the%20year%20ending%20June%202022&text=This%20was%20driven%20by%20net,Immigration%20to%20the%20UK%20section>.

It is suggested that this may be because migrants are younger and self-report better health than those born in the UK but this does not factor in the differences in access to social care, the health inequalities within the migrant population, and some of the cultural and linguistic barriers they may face which requires trained social care staff.

There remain significant uncertainties about the nature and scale of the migrant population that may come to the UK in coming years, and how this might impact both the demand for and supply of social care services.

Hybrid-Working

COVID-19 displayed the adaptability of social workers, where time was split between the home and the office. There is evidence to suggest that hybrid working can improve physical health as people are able to have a more active lifestyle⁵¹. The lockdown led to many social workers interacting remotely with colleagues and service users, with 21% of social workers opting to work from home every day whilst only 2% worked in the office on a full-time basis. Since the pandemic, hybrid working

⁵¹ <https://www.forbes.com/sites/bryanrobinson/2022/02/04/3-new-studies-end-debate-over-effectiveness-of-hybrid-and-remote-work/?sh=39dd698859b2>

is becoming even more popular with 92% of respondents working at home at least one day a week. Social workers who had hybrid working arrangements rated their employers more highly on organisational resilience⁵² but this may not be the case for other professions within the adult social care sector. While supervisors, managers, therapists, technicians, administrative assistants may be able to work remotely, social carers providing in-person care, registered nurses, therapists and other support staff (e.g. for cleaning, cooking and driving) are not able to access hybrid working in the same way.

Many industries in the UK have been piloting a four-day working week as studies indicate that this offers employees more workplace freedom, and an increase in job satisfaction which can be translated into employee retention⁵³. For the social care sector, there are many formal and informal carers that may benefit from this arrangement, although there would also be an impact on service delivery.

Retirement and Pensions Policy

The average age of the social care workforce has risen over an eight-year period, from 42.5 years in 2012/13 to 44.4 years in 2021/22⁵⁴.

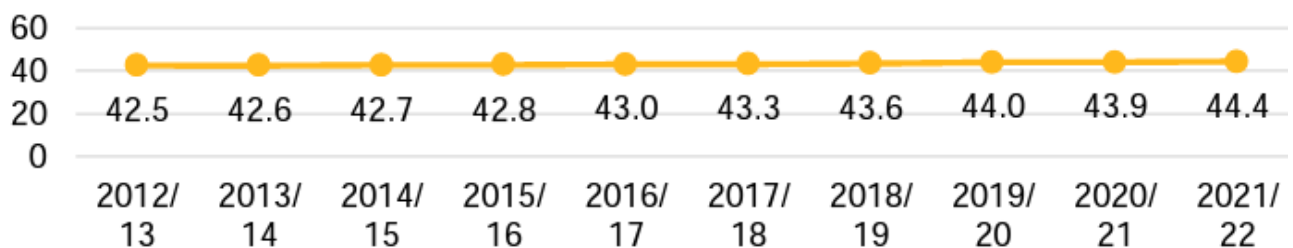


Figure 11: Average age trends of Adult Social Care workforce between 2012/13 and 2021/22

Source: <https://www.skillsforcare.org.uk/Adult-Social-Care-Workforce-Data/Workforce-intelligence/documents/State-of-the-adult-social-care-sector/The-state-of-the-adult-social-care-sector-and-workforce-2022.pdf>

The age profile of the adult social care workforce was more skewed towards older age ranges, with 28% of workers aged 55 and over, compared to 21% of the workers in economically active

⁵² <https://www.researchinpractice.org.uk/all/news-views/2022/october/hybrid-working-and-wellbeing-exploring-findings-from-the-sword-survey/#:~:text=Research%20findings%20show%20that%20flexible,more%20satisfied%20and%20less%20stressed>

⁵³ <https://labourlist.org/2019/01/could-a-four-day-week-solve-the-social-care-crisis/>

⁵⁴ <https://www.skillsforcare.org.uk/Adult-Social-Care-Workforce-Data/Workforce-intelligence/documents/State-of-the-adult-social-care-sector/The-state-of-the-adult-social-care-sector-and-workforce-2022.pdf>

population⁵⁵. This trend shows that workers aged 55 may retire within the next ten years, further creating a shortage of skilled social carers in the workforce. A qualitative study on the older social care workforce revealed that some participants felt age discrimination in play in relation to an individual's perceived career prospect as being 'too old' to progress⁵⁶.

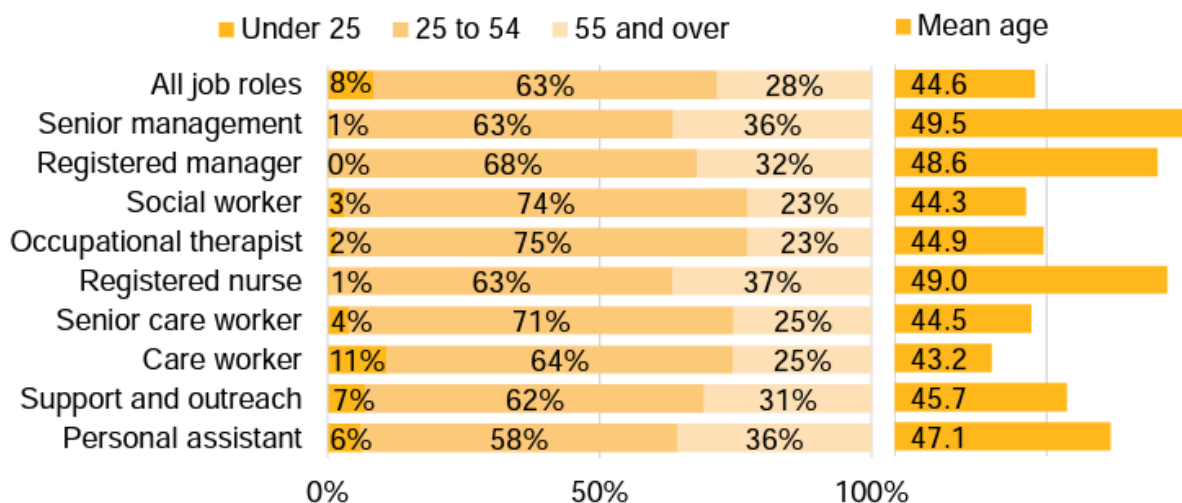


Figure 12: Estimated age bands/means of Adult Social Care workforce by selected job roles 2021/22

Source: <https://www.skillsforcare.org.uk/Adult-Social-Care-Workforce-Data/Workforce-intelligence/documents/State-of-the-adult-social-care-sector/The-state-of-the-adult-social-care-sector-and-workforce-2022.pdf>

The reinstatement of the pensions triple lock means that the state pension will increase alongside September's inflation rate of 10.1%, the biggest ever rise to state pension. This means that old social care workers that want to retire will receive £203.85 a week, which equates to around £10,600 a year. When compared to the amount sustained by the Retirement Living Standards, i.e., £12,800 a year, the state pension falls short⁵⁷. This factor, as well as the cost-of-living crisis may impact the choice of workers who may want to retire earlier. Apart from the auto-enrolled pensions policy, some social carers who are employed by local authorities are eligible to join the Local Government Pension scheme (LGPS) whilst others are able to access private pension schemes. However, it is worth noting that many social care workers face challenges in terms of low levels of contributions, inadequate provision for self-employed social care workers, and a lack of access to workplace pensions.

⁵⁵ <https://www.skillsforcare.org.uk/Adult-Social-Care-Workforce-Data/Workforce-intelligence/documents/State-of-the-adult-social-care-sector/The-state-of-the-adult-social-care-sector-and-workforce-2022.pdf>

⁵⁶ <http://eprints.lse.ac.uk/87980/>

⁵⁷ <https://www.armstrongwatson.co.uk/news/2023/01/triple-lock-state-pension-%E2%80%93-what-does-it-mean-pensioners>

Pay, Progression and Benefits

The pay and benefits received by social care workers in the UK is lower than other care professions, despite the important and demanding nature of their work. According to Skills for Care⁵⁸, the median hourly pay for care workers was £9.50, which is 54% lower than the Real Living Wage. In West Midlands, the average hourly pay rate is £9.20, which is lower than the national average rate.

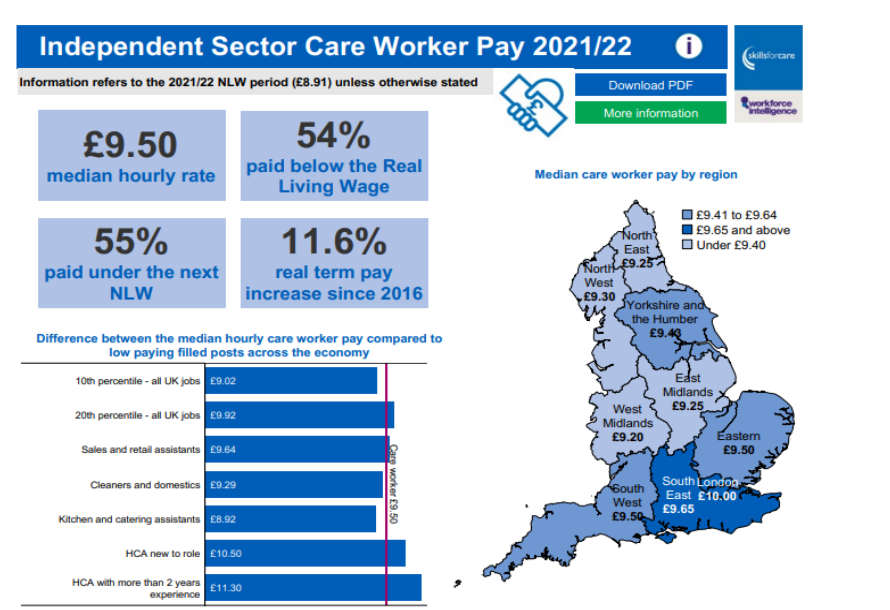


Figure 13: Independent sector care worker pay 2021/22

Source: <https://www.skillsforcare.org.uk/adult-social-care-workforce-data/Workforce-intelligence/publications/Topics/Pay-rates.aspx>

Such low pay can be demotivating for individuals, who are often required to work long hours and on zero-hours contracts, making it difficult to secure a stable income. Additionally, many workers are not paid for travel time or expenses, which exacerbates financial pressure. Whilst most social care workers receive benefits such as sick pay, holiday pay and pension contributions, those who are employed on a zero-hour contract or work for smaller care providers may be devoid of these benefits. According to a study, almost 25% of all jobs in adult social care are employed on zero-hour contracts⁵⁹.

⁵⁸ <https://www.skillsforcare.org.uk/adult-social-care-workforce-data/Workforce-intelligence/publications/Topics/Pay-rates.aspx>

⁵⁹ [https://www.zerohoursjustice.org/blog/quarter-of-all-jobs-in-adult-social-care-are-on-zero-hours-contracts#:~:text=Quarter%20of%20all%20jobs%20in%20adult%20social%20care%20are%20on%20zero%20hours%20contracts&text=Almost%2025%25%20of%20all%20jobs,the%20highest%20proportion%20\(35%25\).](https://www.zerohoursjustice.org/blog/quarter-of-all-jobs-in-adult-social-care-are-on-zero-hours-contracts#:~:text=Quarter%20of%20all%20jobs%20in%20adult%20social%20care%20are%20on%20zero%20hours%20contracts&text=Almost%2025%25%20of%20all%20jobs,the%20highest%20proportion%20(35%25).)

In terms of career progression, social care workers often face limited opportunities for advancement in their career which can be attributed to a lack of funding and resources, as well as a lack of clear career pathways and training opportunities. Additionally, social care workers may not have access to the same benefits and training opportunities as other healthcare professionals within the NHS. Working conditions such as being a zero-hours employee can lead to job insecurity, causing further stress and burnout amongst social care workers. According to a 2020 survey by the Unison Trade Union, 76% of social care workers reported feeling stressed at work⁶⁰.

Despite these challenges, there are some positive developments initiated by the government. For example, the government recently announced that it would invest £5.4 billion in social care over the next three years, which includes an increased pay for social care workers⁶¹. In addition to this, other initiatives such as the Social Care Commitment seeks to provide a framework for career development and professional standards.

⁶⁰ <https://www.unison.org.uk/content/uploads/2020/06/A-UNISON-Vision-for-Social-Care-June-2020.pdf>

⁶¹ [https://commonslibrary.parliament.uk/research-briefings/cbp-7903/#:~:text=In%20September%202021%2C%20the%20Government,social%20care%20\(charging%20refor ms\)](https://commonslibrary.parliament.uk/research-briefings/cbp-7903/#:~:text=In%20September%202021%2C%20the%20Government,social%20care%20(charging%20refor ms))

5. What scientific advances might affect population care needs?

Future medical as well as broader technological advances will likely impact the demand for care. For instance, technology which allows more people to live independently for longer and developments in the treatments for debilitating and life-limiting conditions, may shape the level and complexity of care required. In this section, some of the potential areas of advancement are discussed although there are high levels of uncertainty around the extent to which these technologies will be available across the population.

AI and Robotics

AI experts have predicted that almost 40% of household tasks could be completed by robots within a decade.⁶² Robotic household helpers can vacuum, tidy up, serve drinks, load the dishwasher and assist with the laundry. There have also been recent advances in robotic technology designed to assist people who have limited mobility with dressing.⁶³ Beyond assistance with daily activities, there are multiple companion robots which have been specifically designed to combat loneliness experienced by isolated older people. ElliQ for instance, can start conversations with its user and ask about childhood experiences and personal recollections as well remind people about medication and exercise goals.⁶⁴ With large companies as well governments making substantial investments into assistive technologies, these robots are set to become increasingly effective and sophisticated.⁶⁵



Figure 14: Supporting technologies in care

⁶² <https://www.bbc.co.uk/news/technology-64718842>

⁶³ <https://news.mit.edu/2022/robots-dress-humans-without-full-picture-0405>

⁶⁴ <https://www.theverge.com/2022/12/7/23497980/elliq-companion-robot-2-0-elderly-care-features-conversation-prompts>

⁶⁵ <https://www.gov.uk/government/publications/assistive-technology-research-and-development-work-2020-to-2021/research-and-development-work-relating-to-assistive-technology-2020-to-2021>

Exoskeletons

An exoskeleton is a robotic suit designed to restore or augment the movements of its user. Both rigid and soft wearable exoskeletons are already being adopted by people with different kinds of disabilities to facilitate walking and rehabilitation. The exoskeleton market is predicted to grow significantly and set to be worth more than £1 billion by 2030, with suits becoming ever more affordable, comfortable, and effective.⁶⁶ Additionally, exoskeletons are increasingly being adopted in industries to support workers who are required to lift and transport heavy objects thus reducing the number of work-related musculoskeletal disorders.⁶⁷



Figure 15: Exoskeleton example

Nanomedicine

Nanomedicine simply refers to the application of nanotechnology – the creation and manipulation of material at a nanoscale - in healthcare. The diagnostic and therapeutic potential of nanomedicine spans many areas, and it could become a crucial aspect in the treatment of a multitude of conditions.⁶⁸ Nanotechnology has already been used in the diagnosis and treatment of cancers and was also successfully applied to COVID-19 mRNA vaccines developed by Pfizer and Moderna.⁶⁹ New mRNA vaccines can be rapidly developed in response to emerging infectious diseases, which could prove crucial in the fight against future viral pandemics. Furthermore, companies, such as Moderna

⁶⁶ <https://www.grandviewresearch.com/press-release/global-exoskeleton-market>

⁶⁷ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9002381/>

⁶⁸ <https://www.britishsocietynanomedicine.org/what-is-nanomedicine/>

⁶⁹ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9576318/>

and BioNTech, are developing a range RNA-based drugs to combat a variety of infectious and non-infectious conditions.⁷⁰

Nanomedicine may also be pivotal in the future treatment of neurodegenerative diseases.⁷¹ One of the fundamental obstacles to developing a cure for diseases such as dementia, Parkinson's disease and motor neurone disease, is the inability to deliver treatments that can effectively cross the blood-brain barrier. Some of the leading researchers however are hopeful that nanoparticles could provide the solution.⁷² While cures for the conditions may not be on the immediate horizon, there are promising signs that the progress of several neurodegenerative diseases could be significantly slowed down by novel treatments. Results of a recent clinical trial showed that a drug called Lecanemab was able to slow down the cognitive decline of Alzheimer's patients by 27%.⁷³ Future developments in nanotechnology as a drug carrier across the blood-brain barrier could enhance the efficacy of new drug treatments as well as mitigate some of their side-effects.

Stem Cell Therapy

Stem cell therapy aims to promote the repair of damaged or diseased tissue using stem cells. These stem cells, which are essentially unspecialised cells, can be grown by researchers and manipulated into specific cell types which then can be implanted into a person. While stem cell therapy is already used to treat a limited number of conditions such as certain blood disorders, there is hope that this regenerative therapy can be applied more widely in treating cardiovascular disease, musculoskeletal and neurodegenerative conditions, and improving stroke recovery. A recent study using miniature pigs has produced promising results for a procedure growing more durable cartilage in the treatment of joint damage.⁷⁴ In preclinical trials, mesenchymal stem cells have reduced brain damage and helped to promote functional recovery in the treatment of strokes.⁷⁵ STEM-PD is a clinical trial which is currently being run by research teams in Sweden and UK which involves the transplantation of stem cell-derived dopamine cells into the brains of Parkinson's disease patients. According to the researchers, the "product has already been shown to be safe and effective at reverting motor deficits in animal models of Parkinson's disease".⁷⁶

⁷⁰ <https://www.pharmaceutical-technology.com/comment/rna-based-therapeutics/>

⁷¹ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8275379/>

⁷² <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9408920/>

⁷³ <https://www.yalemedicine.org/news/lecanemab-leqembi-new-alzheimers-drug>

⁷⁴ <https://www.nia.nih.gov/news/stem-cell-strategy-repairing-joint-damage-shows-promise-pig-model>

⁷⁵ <https://www.dvcstem.com/post/stem-cell-therapy-stroke>

⁷⁶ <https://www.cam.ac.uk/research/news/clinical-trial-for-new-stem-cell-based-treatment-for-parkinsons-disease-given-go-ahead>

Genomics

Technological advancements have led to the significant reductions in the costs of sequencing genomes. The NHS Genomic Medicine Service is expected to sequence 500,000 whole genomes by 2023/24 and could play a large role in the emergence of personalised medicine.⁷⁷ The expansion of genomic screening would enable many diseases to be detected early and for them to be eliminated, treated, or managed more effectively. Further developments in genomics could have a profound impact on the health of the population which will in turn impact care needs. Some conditions may become far more treatable than they are currently, drastically reducing care needs and potentially increasing the capacity for those individuals to care for others. In other conditions, earlier diagnosis and treatment may result in considerable increases in demand for care. For instance, people affected could live significantly longer with complex conditions which remain incurable but require high levels of complex care.

Gene Therapy

Gene therapy is a medical approach that seeks to prevent or treat conditions by adding, replacing or modifying a person's genes. One of the gene therapy techniques involves the use of non-harmful viruses, known as adeno-associated viruses (AAV), to carry genetic material to the appropriate cells. There are multiple clinical trials underway using this technique in the treatment of age-related macular degeneration.⁷⁸ Similarly, Zolgensma is a life-changing gene therapy available on the NHS to treat Spinal Muscular Atrophy which also uses virus-vector technology and there are hopes that gene therapies can be used to treat other muscular dystrophy disorders.⁷⁹ However, other techniques such as CRISPR-Cas9, a gene-editing system which can repair faulty genes, have also shown therapeutic promise.⁸⁰ In various studies using mice, CRISPR gene editing was effective in treating obesity, reversing diabetes⁸¹ and repairing heart tissue after severe damage.⁸² There is a broad range of other conditions for which gene therapies are undergoing clinical trials such as Parkinson's diseases, Huntington's disease, cystic fibrosis, haemophilia, sickle cell anaemia and a number of different cancers.⁸³

⁷⁷ <https://www.genome.gov/genetics-glossary/Personalized-Medicine>

⁷⁸ <https://www.aao.org/eye-health/tips-prevention/promising-new-treatments-amd>

⁷⁹ <https://muscular dystrophy uk.org/research/our-research/moving-closer-to-a-gene-therapy-for-duchenne-muscular-dystrophy>

⁸⁰ <https://www.nature.com/articles/s41392-023-01309-7>

⁸¹ <https://crisprmedicine news.com/news/crispr-fights-diabetes-and-obesity-by-changing-the-fate-of-fat-cells/>

⁸² <https://www.science.org/doi/10.1126/science.ade1105>

⁸³ <https://www.sciencedirect.com/science/article/pii/S0753332222007132>

Brain Implants

A neurotechnology company called Inner Cosmos have begun a human trial of a brain implant to treat depression. The penny-sized device targets the left dorsolateral prefrontal cortex by sending electrical pulses for 15 minutes each day, with the intention of modifying the connections between neurons and thus improve mood.⁸⁴ The implant can measure the level of neuronal activity in order to gauge the appropriate amount of stimulation that it delivers.

Given that up to 30% of people with depression do not respond to antidepressant treatments, there is a huge demand for new therapies. Another area of research in the treatment of mental health conditions is the use of psilocybin which is the active ingredient in magic mushrooms. The brain scans of depressed patients taking psilocybin in a double-blind randomized control trial, revealed that psilocybin boosted connectivity between the brain's networks.⁸⁵ The overall findings demonstrated that psilocybin was significantly more effective in improving symptoms than the existing antidepressant it was compared to in the trial.



Figure 16: Implant example

⁸⁴ <https://www.forbes.com/sites/charliefink/2023/01/10/inner-cosmos-raises-10-million-to-treat-depression-with-bci-implant/>

⁸⁵ <https://www.bbc.com/future/article/20220606-psilocybin-how-psychedelic-drugs-might-treat-depression>

6. How might patterns of informal caring evolve?

Informal care refers to the unpaid care provided to older and other dependent persons by an individual with whom they have a relationship. This may involve personal care or helping someone with the basic activities of daily living. Currently, one in five adults in the UK are providing unpaid care.⁸⁶ Previous analysis by the Strategy Unit has calculated the economic value of informal care in Herefordshire and Worcestershire at up to £1.5 billion annually⁸⁷ and for the Black Country at £2 billion annually.⁸⁸ This section explores some of the factors influencing the nature and extent to which the informal care of adults will be provided.

Ageing Without Children

According to the Office of National Statistics, “adult children are the most common providers of informal social care to their parents at older ages when care needs are greatest.”⁸⁹ Currently, almost a third of people aged 85 years and over receive informal care from their adult children and for more than half of these individuals, this is the only informal care they receive.⁹⁰ However, in the UK, the number of older people without adult children is increasing. By 2030, the number of people aged over 65 years without children will rise from 1.2 million to 2 million and this number is projected to double to 4 million by 2040.⁹¹ Existing data shows that people ageing without children are significantly more likely to require formal care at a younger age and at a lower level of need than those ageing with adult children.⁹²

⁸⁶ <https://www.carersuk.org/policy-and-research/key-facts-and-figures/>

⁸⁷ <https://worcestershire.moderngov.co.uk/documents/s29083/Item%206%20Economic%20Impact%20-%20Impact%20Study%20Phase%202.pdf>

⁸⁸ https://www.strategyunitwm.nhs.uk/sites/default/files/2019-02/Final%20Report%20NHS%20Economic%20Impact%20of%20NHS%20Spending%20in%20the%20Black%20Country_0.pdf

⁸⁹

<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/ageing/articles/livinglonger/implicationsofchildlessnessamongtomorrowsolderpopulation#what-are-the-informal-care-implications-of-high-levels-of-childlessness-for-future-older-pop>

⁹⁰

<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/ageing/articles/livinglonger/implicationsofchildlessnessamongtomorrowsolderpopulation#what-are-the-informal-care-implications-of-high-levels-of-childlessness-for-future-older-pop>

⁹¹ <https://www.awwoc.org/>

⁹² <https://www.awwoc.org/>

Older Carers

As the UK population gets older, an increasing number of people are providing informal care near the end of their working life and into retirement. Already, people in their 50s and 60s are the most likely to provide informal care.⁹³ As a result of the increases in the cost of living, and the inflationary damage to pension funds, 2.5 million people aged over 55 years are planning to delay retirement. Over two thirds of those (1.7 million) now expect to work indefinitely.⁹⁴ Additionally, according to research conducted by Standard Life, 15% of retirees over 65 years have decided to 'unretire' due to the cost-of-living crisis.⁹⁵ While this may have a positive impact on the workforce issue, it could mean that greater numbers of older people will have to cope with the demands work alongside informal caregiving. However, changes to the level of hybrid and flexible working since the COVID 19 pandemic could mitigate the impact of work on people's capacity to carry out informal care.

Poverty and Health

There is growing evidence that the physical and emotional demands of providing unpaid care have serious health implications. Public Health England have concluded that unpaid caring should be considered a social determinant of health. GP Survey analysis has found that carers are at a significantly greater risk of illness than non-carers and are specifically more likely to develop musculoskeletal conditions, heart disease and suffer general cognitive deterioration.⁹⁶ Sandwich carers, (individuals providing care for both dependent children and older or disabled relatives) are more likely to experience anxiety and depression with one in four reporting symptoms of ill health.⁹⁷ There are also strong links between unpaid care and financial stress. Carers UK have reported that 44% of working-age adults who are caring for 35 hours or more a week are in poverty.⁹⁸ Given that data from the Office of National Statistics has shown that people are increasingly living a larger proportion of their lives with disability and ill-health, there could be an increase in the number of

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<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/ageing/articles/livinglongerhowourpopulationischangingandwhyitmatters/2019-03-15>

⁹⁴ <https://www.financialreporter.co.uk/25-million-plan-to-delay-retirement-due-to-cost-of-living-crisis.html>

⁹⁵ <https://www.standardlife.co.uk/employer/guides-and-articles/articles/article-page/how-retirement-plans-changed-in-2022>

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https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/971115/Caring_as_a_social_determinant_report.pdf

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<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandwellbeing/articles/morethanoneinfoursandwichcarersreportsymptomsofmentallillhealth/2019-01-14>

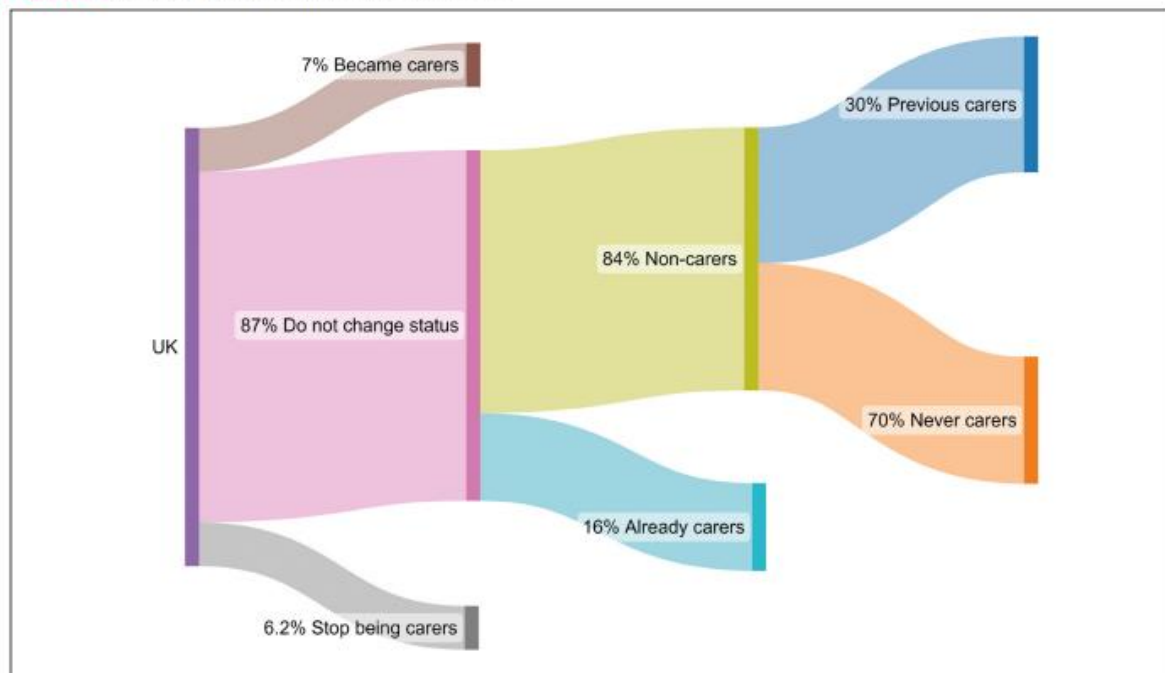
⁹⁸ <https://www.carersuk.org/policy-and-research/key-facts-and-figures/>

years that unpaid care will be required.⁹⁹ Given the health and financial burden of providing unpaid care, there are concerns regarding the capacity of people to sustain any increases in caregiving.

Social Attitudes

Research published by The Health Foundation reveals that the public’s perception of social care is pessimistic with 57% of respondents believing that the standard of social care is likely to get worse in the next twelve months.¹⁰⁰ Similarly, the British Social Attitudes Survey showed that just 15% of people are satisfied with social care.¹⁰¹ The negative perception of social care and media reporting of staffing shortages might influence people’s attitudes towards providing unpaid care as they seek to minimise their reliance upon social care services. Conversely, low public satisfaction levels could pressure future governments to significantly reform social care which in turn might reduce the demand for informal care.

Figure 1: Average unpaid caring status in the UK



Source: Authors' new calculations based on years 2010-2020 of Understanding Society

Figure 17: Average unpaid caring status in the UK

Source: <https://www.carersuk.org/media/bgolg5u2/cuk-carers-rights-day-research-report-2022-web.pdf>

⁹⁹ <https://www.kingsfund.org.uk/publications/whats-happening-life-expectancy-england>

¹⁰⁰ <https://www.health.org.uk/news-and-comment/charts-and-infographics/public-perceptions-of-health-and-social-care-expectations-tracker>

¹⁰¹ <https://www.kingsfund.org.uk/press/press-releases/british-social-attitudes-survey-reveals-record-level-dissatisfaction-social>

Changes to Who Provides Informal Care

The increased life expectancy for people living with certain conditions will likely change the nature of the informal care they receive and significantly, who will provide it. For instance, the life expectancy for people with Down's Syndrome (DS) is increasing and many people with the condition will live into their 60s and beyond. However, people living with DS are at a much higher risk of developing Alzheimer's disease as well as other health problems.¹⁰² As a result, more people with DS will outlive their parents but are likely to require significant levels of care as they age. While adult siblings are often identified as future caregivers, very little is known about their capacity and preparedness to take on significant care responsibilities.

¹⁰² <https://www.alzheimers.org.uk/about-dementia/types-dementia/learning-disabilities-dementia/downs-syndrome>

7. How might the nature and size of the West Midlands economy change?

The economy can be defined as the way we as a population make and spend money. The size of an economy can be measured at both national and regional levels, and can differ very much between levels¹⁰³. When looking at the economy, it is important to understand that until recently, the nature and consequences of the UK's economic geography were barely considered in mainstream economic thinking, preventing recognition of interregional productivity inequalities¹⁰⁴. This means that when looking at national economic performance, regional struggles were not always highlighted, resulting at times in a struggle to measure the scale and complexities of the challenges ahead¹⁰⁵. In this section, we explore factors that could contribute to changes to the regional economy of the West Midlands.

Economic Productivity and Growth

Productivity refers to how much output can be produced with a set amount of inputs. Productivity growth occurs when more measured output is produced from the same amounts of input previously used, or when the same amount of output is produced from a smaller amount of inputs¹⁰⁶. Productivity growth is recognised as one of the most fundamental drivers in improvements to living standards, allowing people to experience and have access to increased or better quality services and goods¹⁰⁷. Although, historically, productivity has grown at a steady rate, allowing for adjustments reflecting inflation to influence real rate wages and living standards, this altered with the financial crisis of 2008 leading to stagnation and the aptly named 'productivity puzzle'¹⁰⁸. The stagnation of productivity continues to be an ongoing issue nationally, and although it is common to have gaps within regional areas, the UK continues to see higher variations levels when compared to international standards¹⁰⁹.

¹⁰³ <https://ifs.org.uk/inequality/wp-content/uploads/2023/02/Levelling-up-economics-IFS-Deaton-Review-of-Inequality.pdf>

¹⁰⁴ <https://www.productivity.ac.uk/wp-content/uploads/2021/10/PIP010-Midlands-Productivity-Challenge-FINAL-070122.pdf>

¹⁰⁵ <https://ifs.org.uk/inequality/wp-content/uploads/2023/02/Levelling-up-economics-IFS-Deaton-Review-of-Inequality.pdf>

¹⁰⁶ <https://ifs.org.uk/inequality/wp-content/uploads/2023/02/Levelling-up-economics-IFS-Deaton-Review-of-Inequality.pdf>

¹⁰⁷ <https://www.birmingham.ac.uk/documents/college-social-sciences/business/research/wm-redi/wm-redi-project-docs/theme-2/productivity-report-in-the-west-midlands-2nd-edition.pdf>

¹⁰⁸ <https://www.birmingham.ac.uk/documents/college-social-sciences/business/research/wm-redi/wm-redi-project-docs/theme-2/productivity-report-in-the-west-midlands-2nd-edition.pdf>

¹⁰⁹ <https://www.health.org.uk/news-and-comment/charts-and-infographics/is-poor-health-driving-a-rise-in-economic-inactivity>

Ill-health is the largest reason behind increases in inactivity in 50–69 year olds

Change in number (1,000s) of 50–69 year olds who are inactive by reason for inactivity: UK, Q1 2020 to Q2 2022

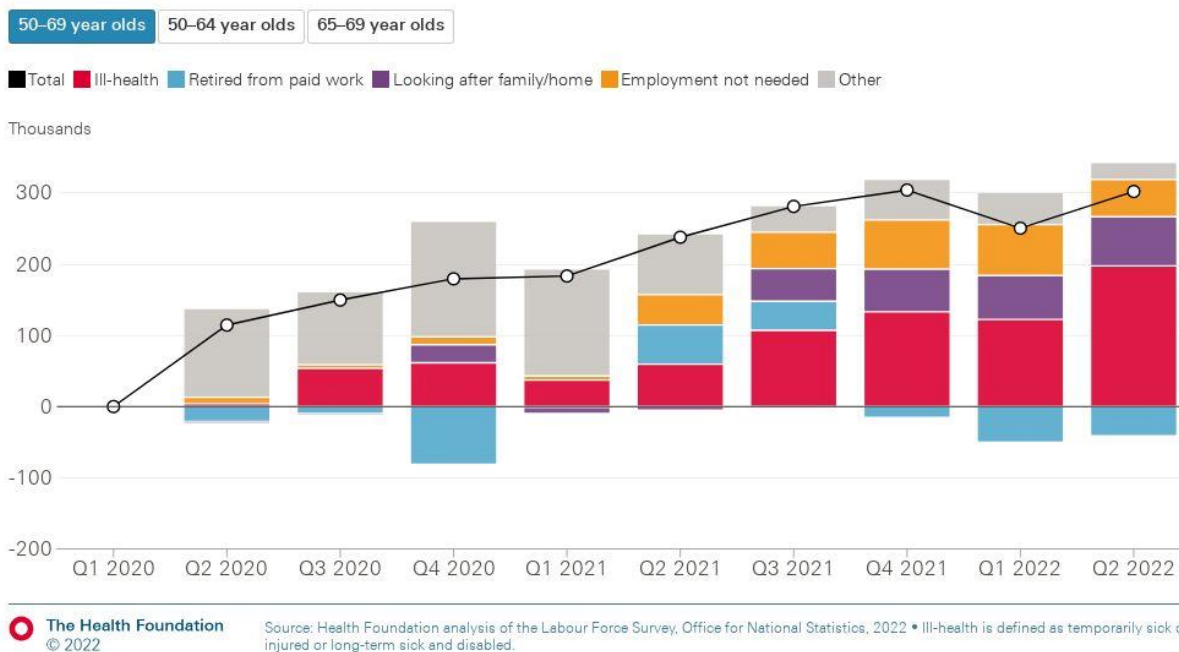


Figure 18: Economic inactivity factors in 50–69 year olds: Q1 2020 to Q2 2022.

Source: <https://www.health.org.uk/news-and-comment/charts-and-infographics/is-poor-health-driving-a-rise-in-economic-inactivity>

Another challenge facing productivity, is the increasing levels of economic inactivity in the working-age population¹¹⁰. Economic inactivity nationally has increased by around 700,000 since before the pandemic, including an estimated 300,000 individuals (50–69 year olds) who have a greater risk of never returning to work¹¹¹.

Inactivity due to ill-health has been increasing steadily last 10 years, however, this is now the single largest reason for inactivity within the working-age population. Over 3 million 50–69 year olds were classed as inactive at the start of 2022, and of that 3 million, approximately 1.6 million reported ill-health as the cause of their economic inactivity¹¹². This increase in inactivity and self-reported ill-health within this working-age population is concerning, as it contributes to the already restricted

¹¹⁰ <https://commonslibrary.parliament.uk/research-briefings/sn02786/>

¹¹¹ <https://www.health.org.uk/news-and-comment/charts-and-infographics/is-poor-health-driving-a-rise-in-economic-inactivity>

¹¹² <https://www.health.org.uk/news-and-comment/charts-and-infographics/is-poor-health-driving-a-rise-in-economic-inactivity>

labour supply and hinders attempts to recover economic productivity and growth nationally and regionally ¹¹³.

Projected increases in demand for care for adults aged 65 and over in England, 2018–2038

The number of adults aged 65 and over requiring social care support is projected to increase, with the largest increases in publicly funded care at home (61%) and privately funded care homes (67%)

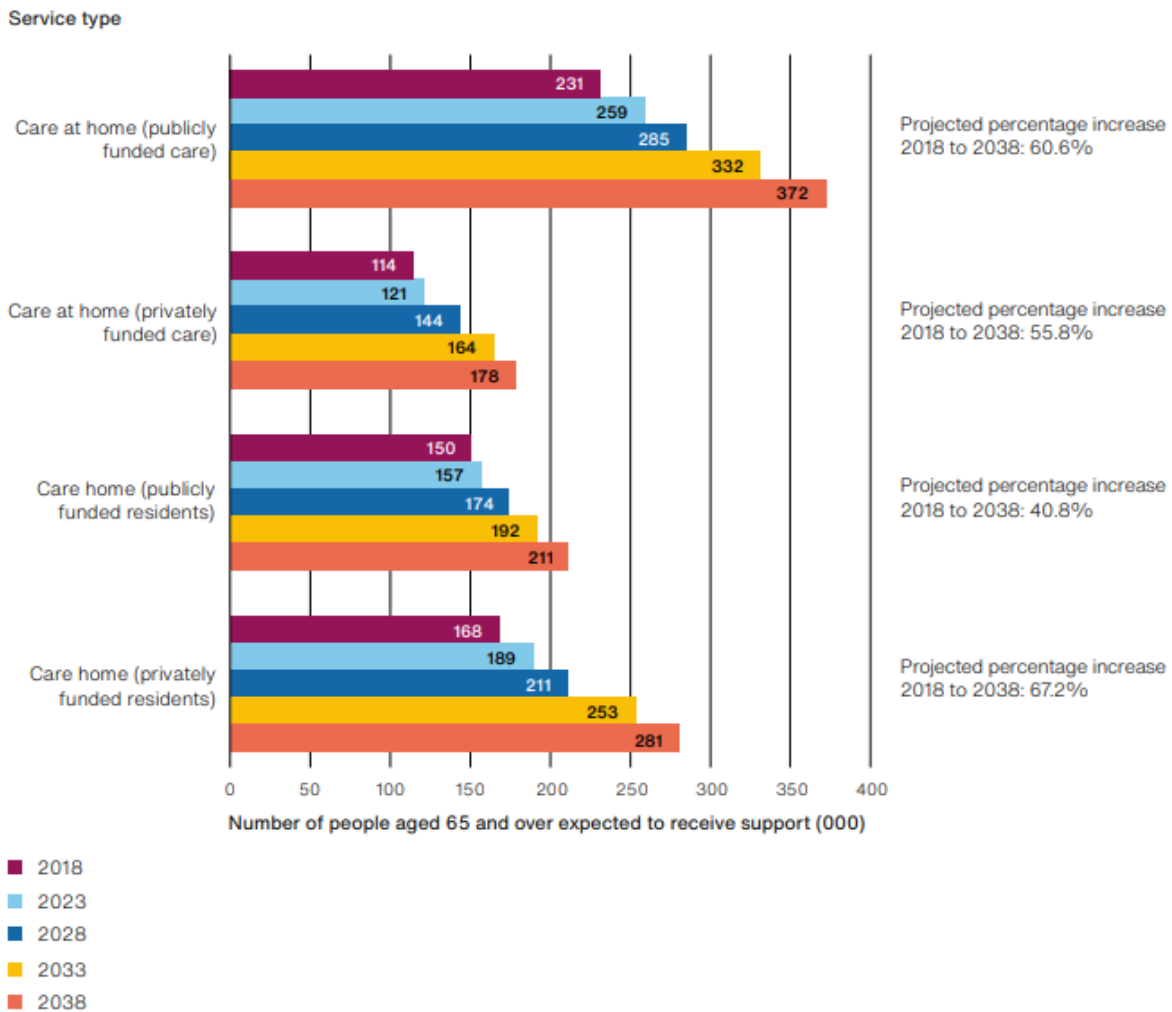


Figure 19: Projected increases in demand for care for adults aged 65 and over in England 2018-2038

Source: <https://www.nao.org.uk/wp-content/uploads/2021/03/The-adult-social-care-market-in-England.pdf>

Additionally, it is important to remember that the current age for retirement in the UK is 66 years old for both men and women, however, this is going to continue to gradually increase from May 2026, meaning that the potential loss of further active years within the working-age population is a real

¹¹³ <https://www.wmca.org.uk/media/5282/growing-the-social-economy-in-the-wmca-area-report-1.pdf>

threat and something does have the potential, in the long term, to alter productivity and economic growth ¹¹⁴.

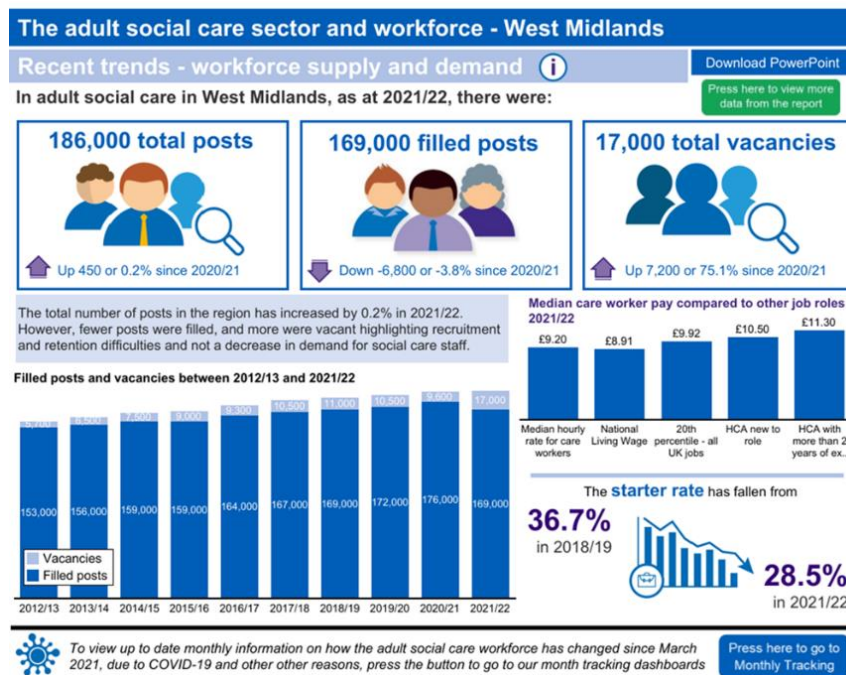


Figure 20: Summary of the adult social care sector and workforce in the West Midlands, 2021/22

Source: <https://www.skillsforcare.org.uk/adult-social-care-workforce-data/Workforce-intelligence/publications/national-information/The-state-of-the-adult-social-care-sector-and-workforce-in-England.aspx>

Focusing on the West Midlands, productivity was 11% below the national level in 2019 and seen to be 33% lower when regionally compared to the most productive area in the UK, London¹¹⁵. Furthermore, it was noted that the West Midlands had the largest inter-regional productivity gaps in the UK, with the most productive subregion producing 47% more per hour than the least productive¹¹⁶. Additionally, the West Midlands has one of the lowest employment rates recorded for a mayoral combined authority, and an unemployment rate of 5.7 per-cent which is above the national average¹¹⁷. This is something that needs to be considered when looking at future Social Care demand

¹¹⁴ <https://www.ageuk.org.uk/latest-press/articles/2023/3.5-million-people-aged-50-64-are-out-of-the-workforce-many-of-them-in-poor-health-and-with-few-savings-by-the-time-they-reach-state-pension-age/>

¹¹⁵ [https://www.birmingham.ac.uk/news/2023/closing-the-productivity-gap-in-the-west-midlands#:~:text=Productivity%20gaps%20across%20countries%20and,most%20productive%20region%20\(London\).](https://www.birmingham.ac.uk/news/2023/closing-the-productivity-gap-in-the-west-midlands#:~:text=Productivity%20gaps%20across%20countries%20and,most%20productive%20region%20(London).)

¹¹⁶ [https://www.birmingham.ac.uk/news/2023/closing-the-productivity-gap-in-the-west-midlands#:~:text=Productivity%20gaps%20across%20countries%20and,most%20productive%20region%20\(London\).](https://www.birmingham.ac.uk/news/2023/closing-the-productivity-gap-in-the-west-midlands#:~:text=Productivity%20gaps%20across%20countries%20and,most%20productive%20region%20(London).)

¹¹⁷ <https://www.productivity.ac.uk/wp-content/uploads/2021/10/PIP010-Midlands-Productivity-Challenge-FINAL-070122.pdf>

in the West Midlands and productivity levels within the sector. Social Care contributed approximately 4 per-cent, equalling to £5.2 billion of the overall West Midland economy¹¹⁸, employing 169,000 people in 2021/22¹¹⁹. The current forecast for demand sees an increase of 24 per-cent (45,000 extra posts) would be required by 2035. The current vacancy rate Adult Social Care is approximately 10.1 per-cent in the West Midlands, equalling to an estimated 17,000 vacancies across the sector¹²⁰.

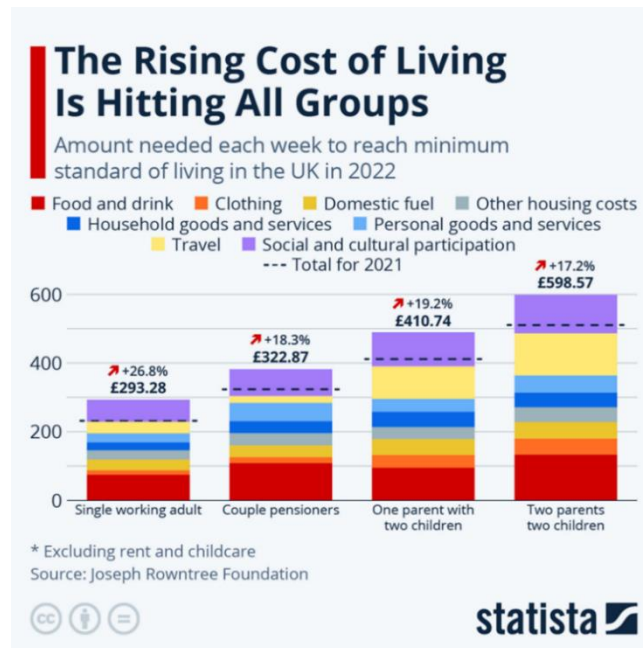


Figure 21: Amount needed each week to reach the minimum standard of living in the UK in 2022.

Source: <https://www.statista.com/chart/28259/cost-of-living-crisis-impacts-in-uk/>

Cost of Living and Sustainability of Business

The cost of living crisis refers to when the cost of every-day essentials increases at a more rapid rate than the average household income¹²¹. This means that there is a fall in household's disposable income, making finances strained and at times, unmanageable. This unfortunately, is what the UK population has been experiencing since late 2021 and are predicted to remain within until 2024¹²². Contributing to this living crisis are the significant increases in interest rates, energy prices, and inflation rates. A single working adult living in the UK needs to earn at least £293.28 each week in

¹¹⁸ <http://www.wm-adass.org.uk/media/ofalbawc/still-flipping-social-care-sep-22-f1.pdf>

¹¹⁹ <https://www.skillsforcare.org.uk/Adult-Social-Care-Workforce-Data/Workforce-intelligence/publications/regional-information/West-Midlands/West-Midlands.aspx>

¹²⁰ <https://www.skillsforcare.org.uk/adult-social-care-workforce-data/Workforce-intelligence/publications/national-information/The-state-of-the-adult-social-care-sector-and-workforce-in-England.aspx>

¹²¹ <https://www.instituteforgovernment.org.uk/explainer/cost-living-crisis>

¹²² <https://www.instituteforgovernment.org.uk/explainer/cost-living-crisis>

order to reach the minimum standard of living. This is a 26.8 percent increase since 2021, when the average adult needed £231.33 per week¹²³.

Higher interest rates means that as a population, we will borrow less and spend less. Because of this, the economy slows as businesses are not able to put up their prices to support their recovery or their growth¹²⁴. It also means that lenders will see more risks in investment opportunities from not only individuals, but also businesses, and both those parties will see significant rise in their monthly repayments compared to previous years¹²⁵. Combining this with the steep increase to inflation rates that has not been seen by the UK population in over 40 years, the current economic outlook is riddled with spouts of turbulence and challenge, resulting in uncertainty¹²⁶. While Government intervention and predicted market conditions have the potential to reduce current inflation and interest rates over the next year or so, overall living standards are forecast to reduce by 7 per-cent over the next two years¹²⁷.

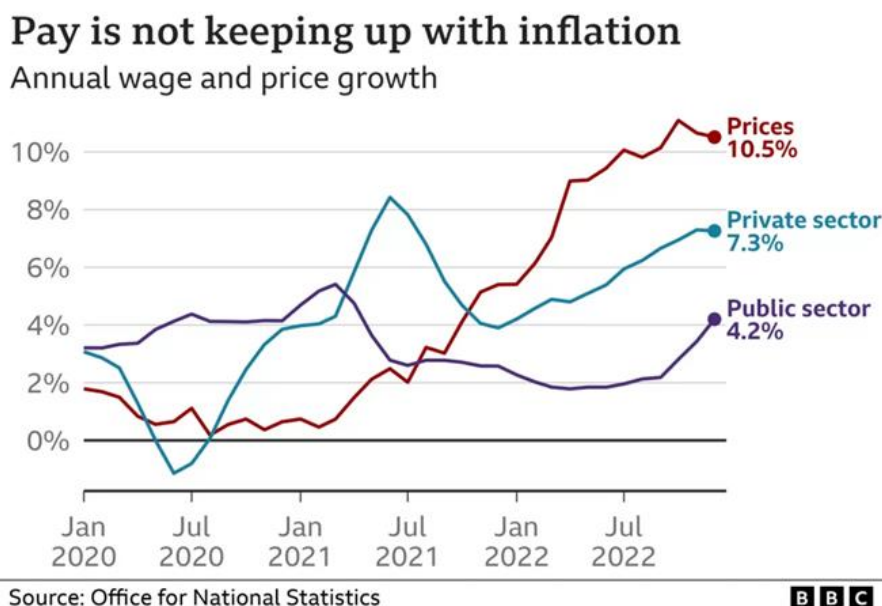


Figure 22: Annual wage and price growth, Jan 2020- Nov 2022

Source: <https://www.bbc.co.uk/news/business-64290162>

¹²³ <https://dmscdn.vuelio.co.uk/publicitem/5bb4b0e5-9959-4a6f-9e7e-cffb64618d2e>

¹²⁴ <https://www.bankofengland.co.uk/explainers/why-are-interest-rates-in-the-uk-going-up>

¹²⁵ <https://www.bankofengland.co.uk/explainers/will-inflation-in-the-uk-keep-rising>

¹²⁶ [https://www.birmingham.ac.uk/news/2023/closing-the-productivity-gap-in-the-west-midlands#:~:text=Productivity%20gaps%20across%20countries%20and,most%20productive%20region%20\(London\)](https://www.birmingham.ac.uk/news/2023/closing-the-productivity-gap-in-the-west-midlands#:~:text=Productivity%20gaps%20across%20countries%20and,most%20productive%20region%20(London))

¹²⁷ <https://www.reuters.com/world/uk/uk-still-faces-record-hit-living-standards-obr-predicts-2023-03-15/>

The average pay across sectors in the West Midlands is currently estimated to be £29,737 annually, and the current average energy bill in the West Midlands (under the cap) is estimated at £2,597¹²⁸. This means that at its current level, energy bills equal to approximately 8.7 per-cent of a person's pay. If the cap is removed in April 2023, like previously agreed by government, then energy bill increases are predicted at; low case being £3,893 equalling to 13.1 per-cent, central case being £6,469 equalling to 21.8 per-cent, and high case being estimated at £7,225, equalling to 24.4 per-cent of pay¹²⁹. Combining this with increased mortgage and rental payments as a result of the high interest rates, as well as fuel and grocery bill increases due to inflation, it is no wonder many feel that they are not managing financially. Moreover, it is important to note, that economic forecasting has consistently shown that the West Midlands is one of the hardest hit regions in the UK by the crisis, with many households taking home below the average pay estimation. Due to the industrial and demographic diversity of the region, this is no surprise, as the West Midlands has some of the most vulnerable economies in the country, in terms of sectoral composition and health vulnerability¹³⁰.

The effects that the cost of living crisis has and continues to have on the Social Care sector is multi-faceted, and complex. When looking at the workforce, lower banded jobs such as care workers, are seeing a reduction in their 'take home' pay as fuel prices and food prices continue to remain high¹³¹. Research suggested that a consequence of this reduction in 'take home' pay has been that many within the sector have begun to seek alternative positions closer to home to reduce their travel expenses, and with some exiting the sector completely as jobs in other industries such as retail have begun to close the gap on pay differences¹³².

¹²⁸ <https://blog.bham.ac.uk/cityredi/west-midlands-impact-monitor-28th-october-2022/>

¹²⁹ <https://blog.bham.ac.uk/cityredi/west-midlands-impact-monitor-28th-october-2022/>

¹³⁰ <https://www.midlandsengine.org/>

¹³¹ <https://www.economicsobservatory.com/how-is-the-cost-of-living-crisis-affecting-provision-of-social-care>

¹³² <https://www.caremanagementmatters.co.uk/cost-of-living-crisis/>

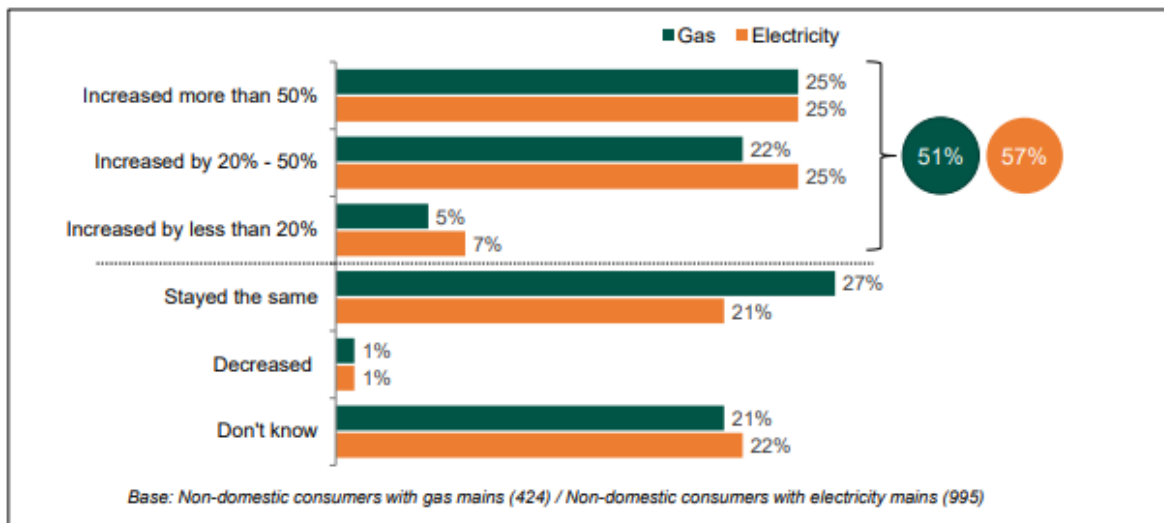


Figure 23: Change in price of gas and electric bills for businesses in the last 12 months.

Source: <https://www.ofgem.gov.uk/publications/non-domestic-consumer-research>

Research conducted by Ofgem, suggested that changes in the energy market, has seen 1 in 3 businesses struggling to pay their energy bills, with many anticipating the situation to worsen over the following 12 months¹³³. When looking at the West Midlands, reports suggest that over 8,000 businesses within the region are classed as high energy users, and of that, over 3,000 would be at risk of potential closure due to unaffordable energy prices¹³⁴.

The rises in energy wholesale prices have had a profound impact on the adult social care sector with many providers experiencing over 500% increases in their energy costs¹³⁵. Data suggested that for gas and electricity that would have cost £660 per bed per annum in August 2021; by August 2022 care providers were paying an astonishing £5,166 per bed¹³⁶. Reports suggest that for many care home providers, energy is the largest non-staff cost¹³⁷, with an estimated one third of care homes across the UK considering within the past year to close because of the crippling financial pressure they are under¹³⁸. When looking at the current capacity of care homes, there were an estimated 360,792 care home residents in early 2022, occupying 77.8% of care home beds. Approximately

¹³³ <https://www.ofgem.gov.uk/publications/non-domestic-consumer-research>

¹³⁴ <https://blog.bham.ac.uk/cityredi/west-midlands-economic-impact-monitor-30th-september-2022/>

¹³⁵ <https://www.careengland.org.uk/ofgem-investigation-professor-martin-green-interview-on-sky-news/>

¹³⁶ <https://www.qcs.co.uk/rising-energy-costs-of-683-threatens-the-future-of-care-services/>

¹³⁷ <https://careprovideralliance.org.uk/assets/pdfs/working-with-providers-to-understand-and-agree-costs.pdf>

¹³⁸ <https://www.theguardian.com/society/2023/mar/23/a-third-of-care-homes-in-england-have-considered-closing-due-to-rising-energy-bills>

125,954 (34.9%) of care home residents were classified as self-funders, compared with 234,838 (65.1%) state-funded residents¹³⁹.

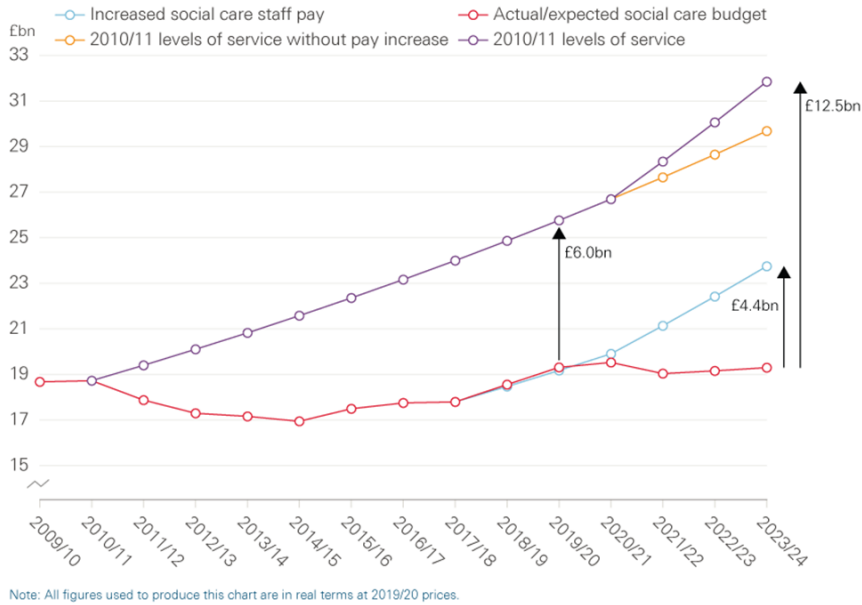


Figure 24: Social care funding gap 2023/24

Source: <https://www.health.org.uk/publications/long-reads/what-should-be-done-to-fix-the-crisis-in-social-care>

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<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/socialcare/articles/carehomesandestimatingtheselffundingpopulationengland/2021to2022>

8. What is the potential for unexpected major threats to the functioning of health and care services?

Modern society assumes that the systems surrounding their everyday lives will work reliably and collaboratively, maintaining the standards of living expected by the population¹⁴⁰. For the most part, evidence would suggest that this was true. However, this is something that is beginning to be challenged by the scientific community and policymakers, who are looking at the lessons learnt from historically disruptive events, and how they can be applied to support the planning needed to manage potential future threats. In this section, focus shall be made on the potential major threats that could impact the functioning of the health and care services¹⁴¹.

Epidemic Management

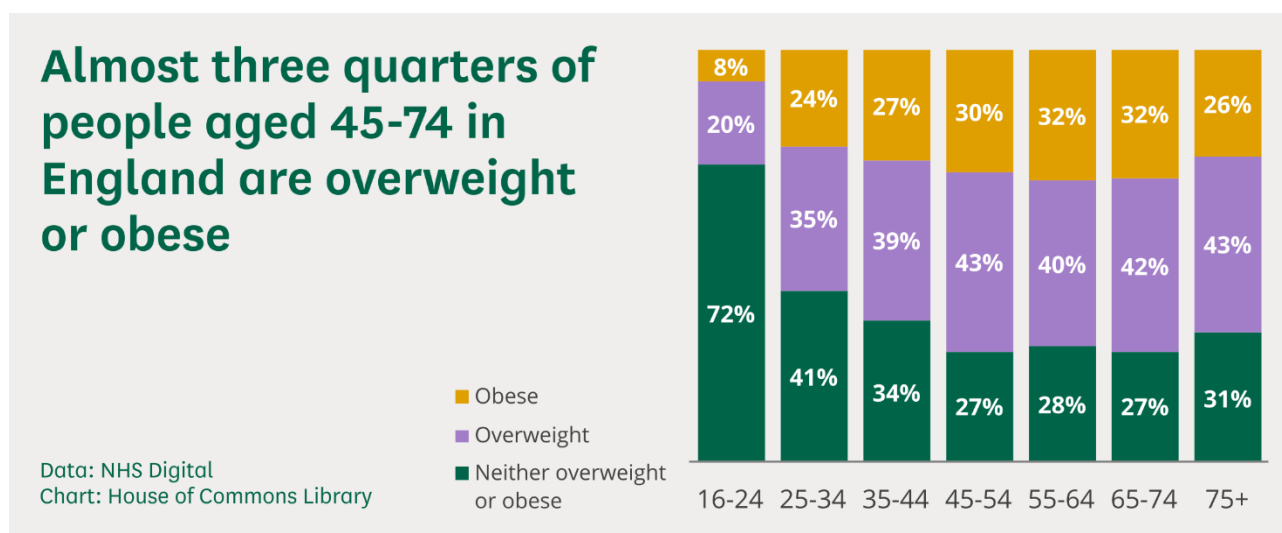


Figure 25: Prevalence of overweight and obesity by population age

Source: <https://commonslibrary.parliament.uk/research-briefings/sn03336/>

An epidemic is an unexpected increase in the number of diagnosed disease cases within a specific geographical area. It is important to understand that an epidemic does not need to be a contagious disease. An example of this could be something such as obesity, or a health-related behaviour such as smoking¹⁴².

¹⁴⁰ <https://www.scie.org.uk/files/care-providers/coronavirus/beyond/new-thinking-adult-social-care.pdf>

¹⁴¹ <https://www.kingsfund.org.uk/publications/vision-population-health>

¹⁴² <https://www.ncbi.nlm.nih.gov/books/NBK525289/>

In recent years the UK has consistently been ranked as one of the most food insecure nations in Europe and in the West Midlands, 16% of households are food insecure.¹⁴³ Food insecurity disproportionately impacts the most vulnerable groups in society and multiple studies have highlighted the ways in which COVID-19 amplified existing dietary health inequalities.¹⁴⁴ Unsurprisingly, food insecurity is closely linked to poor health outcomes; those suffering from financial insecurity are more likely to eat a higher proportion of ultra-processed foods, fewer fresh fruit and vegetables and a greater proportion of foods high in salt, sugar and saturated fats.¹⁴⁵ These dietary behaviours are associated with an elevated risk of an array of health conditions including obesity, type 2 diabetes, cardiovascular and liver disease as well as a range of cancers.¹⁴⁶ Furthermore, the additional stress of experiencing food insecurity in daily life is itself a significant health risk.

The UK is currently dealing with an obesity epidemic, with 25.9 per-cent of adults in England are obese and a further 37.9% are overweight but not obese¹⁴⁷. In addition, it was also found that adult obesity prevalence has risen from 13 per-cent in the last 27 years, with people aged 45-74 more likely to be overweight or obese than other age groups¹⁴⁸. This is not going unnoticed, with researchers and policy makers, bringing attention to its alarming implications when addressing health and social care demand. Research has suggested the people aged over 65 and are obese, are 25 per-cent more likely to use and need informal care¹⁴⁹. When an estimation was made on what the cost of this support would be, it was estimated at approximately £3.9 billion per year of informal care value is linked to obesity¹⁵⁰.

¹⁴³ https://www.birmingham.gov.uk/info/50279/food_revolution/2604/right_to_food_and_food_justice

¹⁴⁴ <https://foodfoundation.org.uk/initiatives/dietary-inequalities/>

¹⁴⁵ <https://www.nhsconfed.org/long-reads/why-preventing-food-insecurity-will-support-nhs-and-save-lives>

¹⁴⁶ <https://www.nihr.ac.uk/documents/2048-food-insecurity-health-impacts-and-mitigation/>

¹⁴⁷ <https://researchbriefings.files.parliament.uk/documents/SN03336/SN03336.pdf>

¹⁴⁸ [https://www.gov.uk/government/statistics/obesity-profile-update-july-2022/obesity-profile-short-statistical-commentary-july-2022#:~:text=Data%20from%20the%20Active%20Lives,to%202016%20\(Figure%201\).](https://www.gov.uk/government/statistics/obesity-profile-update-july-2022/obesity-profile-short-statistical-commentary-july-2022#:~:text=Data%20from%20the%20Active%20Lives,to%202016%20(Figure%201).)

¹⁴⁹ <https://www.pssru.ac.uk/pub/5820.pdf>

¹⁵⁰ <https://www.pssru.ac.uk/blog/the-hidden-costs-of-obesity-implications-for-long-term-care/>

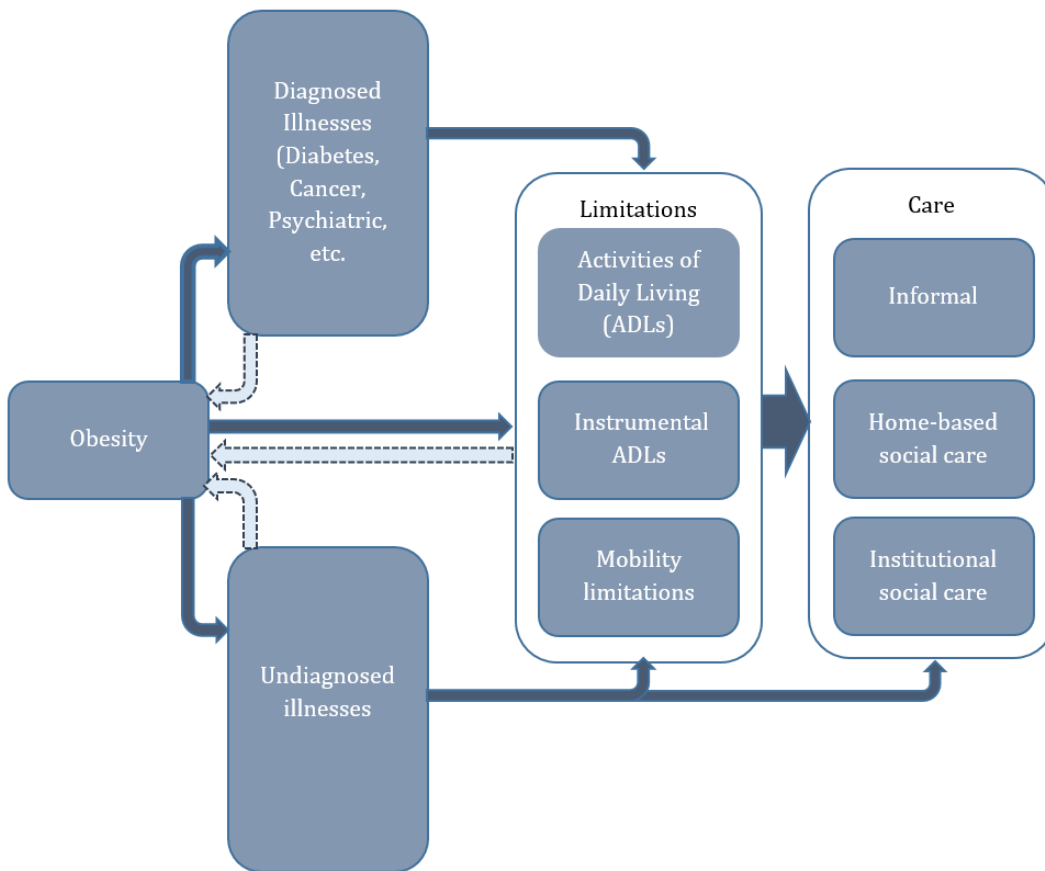


Figure 26: Relationship between obesity and long-term care

Source: <https://www.pssru.ac.uk/blog/the-hidden-costs-of-obesity-implications-for-long-term-care/>

Pandemic Prevalence

Pandemics are defined as large scale out-breaks of an infectious disease which can result in increased morbidity and mortality rates stretching over large geographical areas¹⁵¹. This means the growth rate rapidly increases, with daily cases continuing to be more than on the day before, and no sign of slowing. When an out-break of a disease is declared a pandemic, it does not have any connection to the population immunity or disease severity, but on its exponential rate of growth. Pandemics are known to cause significant social, economic, and political disruptions, and pushing populations into uncertainty and straining health and care services¹⁵².

¹⁵¹ <https://www.ncbi.nlm.nih.gov/books/NBK525289/>

¹⁵² <https://www.health.org.uk/publications/reports/adult-social-care-and-covid-19-assessing-the-impact-on-social-care-users-and-staff-in-england-so-far>

Traceable evidence of the impacts of climate change on human diseases

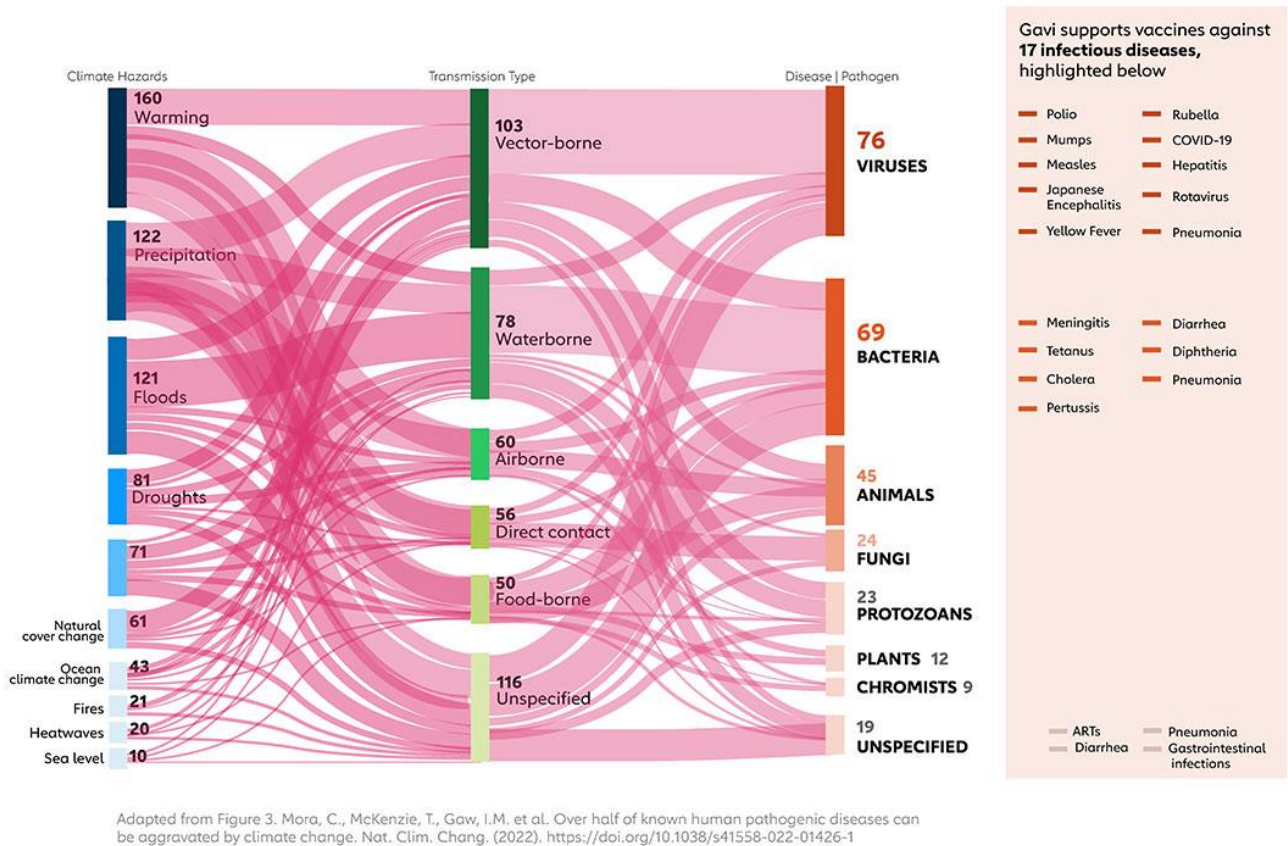


Figure 27: Traceable evidence of the impacts of climate change on human diseases.

Source: <https://www.gavi.org/vaccineswork/over-half-infectious-diseases-made-worse-climate-change>

Furthermore, research suggests that climate change and environmental disasters are impacting the prevalence of infectious diseases¹⁵³. Increased rainfall and raising temperatures, can expand the geographical range of disease vectors such as mosquitoes, ticks, and other animals, meaning that potential 'landlocked' or 'climate restricted' pathogens are finding their way in the new populations and areas¹⁵⁴. This has the potential to bring the human population into contact with diseases that had previously not been prevalent within their geographical area, highlighting concerns around the adequacy of new disease treatment and management by systems¹⁵⁵.

¹⁵³ <https://www.gavi.org/vaccineswork/over-half-infectious-diseases-made-worse-climate-change>

¹⁵⁴ <https://www.gavi.org/vaccineswork/over-half-infectious-diseases-made-worse-climate-change>

¹⁵⁵ <https://www.gavi.org/vaccineswork/over-half-infectious-diseases-made-worse-climate-change>

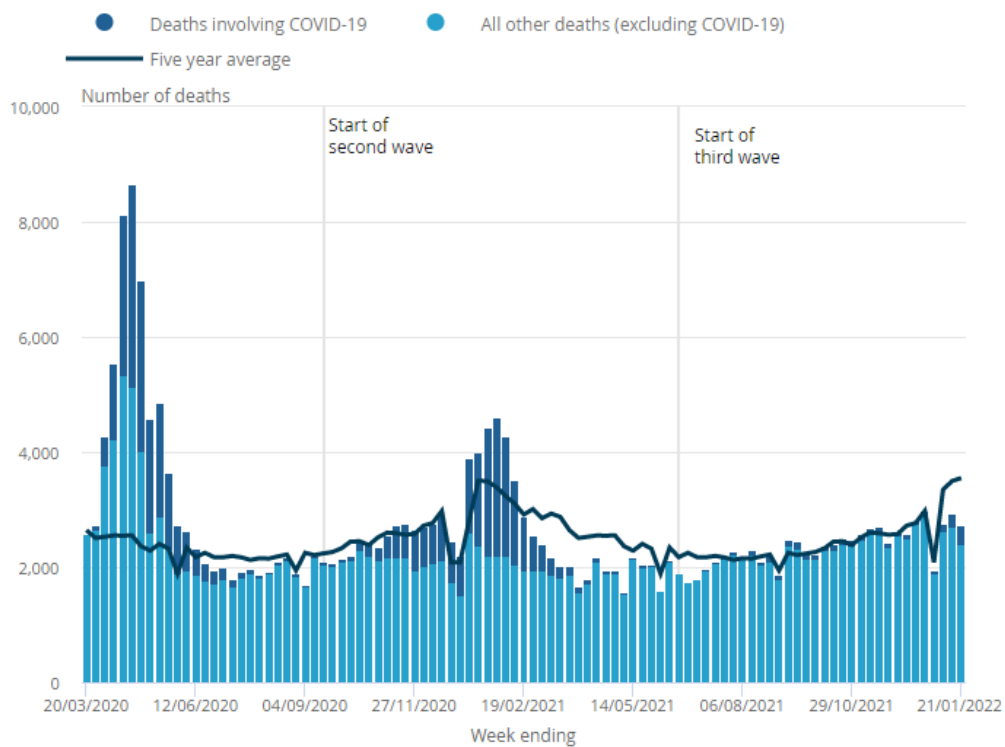


Figure 28: Number of weekly deaths of care home residents registered from 14 March 2020 to 21 January 2022, England

Source:

<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/articles/deathsinvolvingcovid19inthecaresectorenglandandwales/deathsregisteredbetweenweekending20march2020andweekending21january2022>

COVID-19 showed the extent of unrest, uncertainty, and disruption that a pandemic can cause. It has changed the health profile of the population radically. Overall, the number of people who have died from Covid-19 to end-July 2022 is 180,000, about 1 in 8 of all deaths in England and Wales during the pandemic. Social care workers are among the occupational groups at highest risk of COVID-19 mortality, with care home workers and home carers accounting for the highest proportion (76%) of COVID-19 deaths within this group. Although the COVID-19 pandemic has been the deadliest global viral outbreak in the last century, research has suggested that the probability of future pandemics with a similar impact rate has increased, equalling to 2 per cent in any year. This means that the likelihood of the current population experiencing another pandemic like the impact of COVID-19 in their lifetime, is 38 per cent¹⁵⁶.

¹⁵⁶ <https://www.gavi.org/vaccineswork/new-study-suggests-risk-extreme-pandemics-covid-19-could-increase-threefold-coming#:~:text=The%20researchers%20found%20that%20the,one's%20lifetime%20is%20about%2038%25.>

Environmental Disasters

Environmental disasters, as opposed to natural disasters, are catastrophic events within the natural environment caused by some form of human intervention¹⁵⁷. In most cases, environmental disasters are caused by human accident, error, and most commonly lack of foresight and understanding of consequence¹⁵⁸.

Health and care services are some of the worst hit systems when looking at environmental disasters. Research suggests that disasters such as climate change, extreme weather, and elevated pollution exposure, increase the demand for health and social services, at times causing issues with its overall ability to efficiently function¹⁵⁹. With a growing older population, and increased rates in the diagnosis of non-communicable diseases, the management of environmental disasters are costly, resource heavy, and time consuming for services. Moreover, different regions and populations are disproportionately affected by environmental disaster due to socioeconomic and health disparities. This means that individuals within the most vulnerable groups, and/or who live within the most deprived areas, are often more likely to require hospital care. The most vulnerable groups were identified as the elderly, children and the economically disadvantaged, by research that looked at the impact of temperature shocks in England¹⁶⁰.

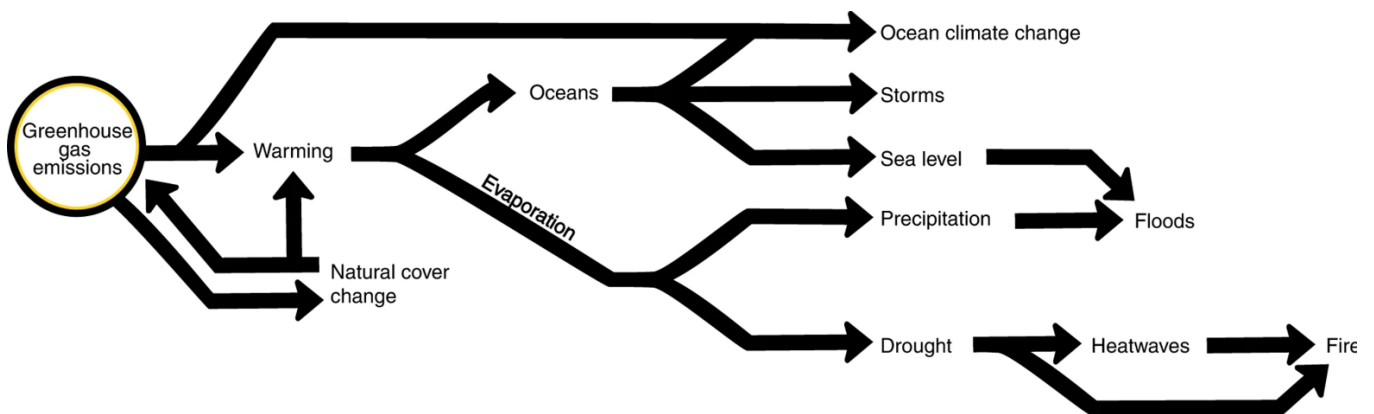


Figure 29: Climate hazard of the Earth's system affected by ongoing emission of GHGs

Source: <https://ceenergynews.com/energy-me/over-half-of-human-pathogenic-diseases-can-be-aggravated-by-climate-change/>

¹⁵⁷ [https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667\(21\)00255-3/fulltext](https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667(21)00255-3/fulltext)

¹⁵⁸ [https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667\(21\)00255-3/fulltext](https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667(21)00255-3/fulltext)

¹⁵⁹ <https://www.economicsobservatory.com/how-is-the-healthcare-sector-dealing-with-climate-change>

¹⁶⁰ <https://www.sciencedirect.com/science/article/abs/pii/S0264999322003431?dgcid=author>

Flooding has significant short-term and long-term health impacts and is something that has caused severe damage to the UK multiple times over the years ¹⁶¹. Floods have the ability to and have been known to cause immeasurable damages to homes, businesses, and properties, leaving communities helpless, homeless, and extremely vulnerable¹⁶². Other immediate health risk that needs to be considered in flooding, is the risk of drowning, hypothermia, and potential electrocution. Moreover, storms and flooding can cause wastewater overflow which can impact access to safe drinking water as well as potential rises in noroviruses, rotavirus and cholera due to the spreading of pathogens ¹⁶³. Extreme weather events cost the healthcare systems in England approximately £20.8 million annually¹⁶⁴.

Food Production and Security

The UN Food and Agricultural Organisation define food and nutrition security as “when all people, at all times, have physical and or economic and social access to sufficient, safe and nutritious food to meet their needs and food preferences for an active and healthy life.”¹⁶⁵ However, food security within the UK, is suggested to be declining, with the National Farmers’ Union warning of potential threats to agricultural sustainability and sector growth. Pressures due to labour shortages, avian influenza, increasing costs of energy, fuel, fertiliser and feed, as well adjusting to new sustainability regulations, threaten farmers’ capacity to maintain previous production levels. Furthermore, there are significant concerns about the number of UK farmers which could leave the agricultural sector altogether.¹⁶⁶

¹⁶¹

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/872710/Summary_of_findings_NSFH_January_2020_Final_for_DsPH_3_.pdf

¹⁶² <https://www.floodmanagement.info/what-are-the-negative-social-impacts-of-flooding/>

¹⁶³ <https://www.gavi.org/vaccineswork/over-half-infectious-diseases-made-worse-climate-change>

¹⁶⁴ <https://www.economicsobservatory.com/how-is-the-healthcare-sector-dealing-with-climate-change>

¹⁶⁵ <https://www.worldbank.org/en/topic/agriculture/brief/food-security-update/what-is-food-security/>

¹⁶⁶ <https://www.theguardian.com/business/2022/dec/06/uk-food-supply-crisis-farmers-nfu-fuel-fertiliser-feed/>

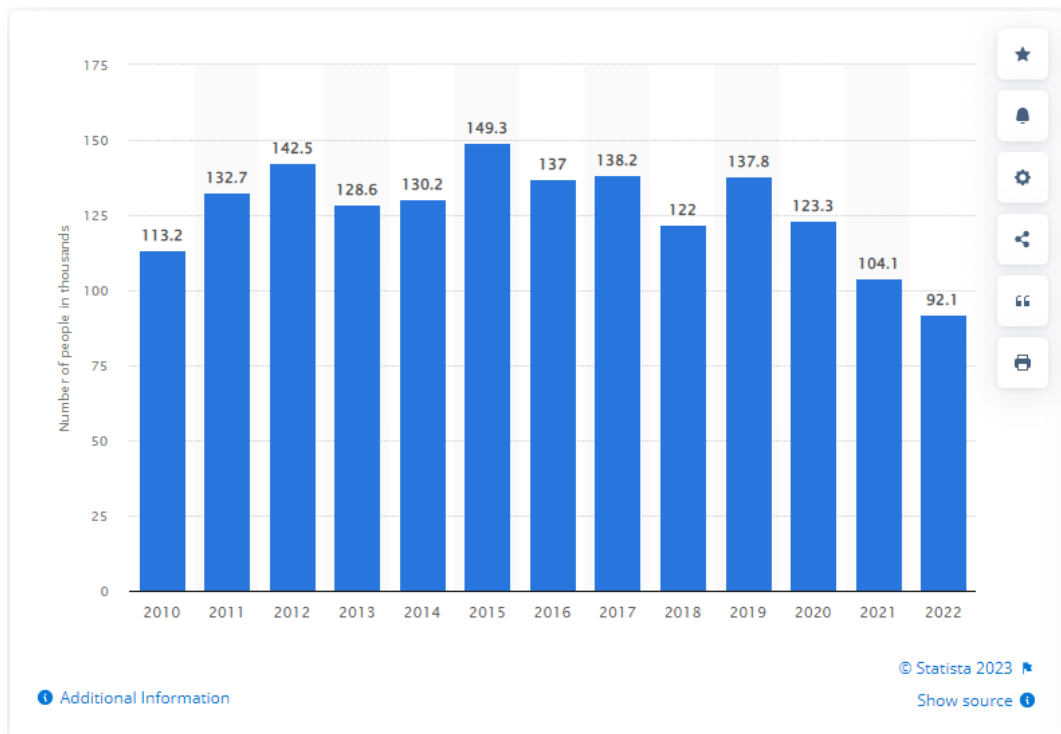


Figure 30: Estimated number of farmers in the United Kingdom from 2010 to 2022

Source: <https://www.statista.com/statistics/319325/number-of-farmers-in-the-uk/>

A suggested solution has been the use of vertical farming. Vertical farming consists of growing food in trays or pipes stacked on top of each other using soilless farming techniques and LED lighting. Some of the benefits of this technology is that it uses much less water than conventional farming methods, stays fresher for longer, is pesticide free and carries little risk of contamination.¹⁶⁷ Additionally, the supply is much more stable and predictable because vertical farming is not exposed to the same risks as conventional agriculture. Currently however, a fundamental problem is the associated energy requirements due to artificial lighting. Without significant development in the efficiency of solar panels or alternative technology to reduce lighting costs, it is unlikely that the growth of cereals and a wider range of vegetables will become cost-effective, limiting the potential of the technology to support improvement in population health.¹⁶⁸

¹⁶⁷ <https://www.theguardian.com/environment/2022/aug/17/indoor-vertical-farms-agriculture>

¹⁶⁸ <https://www.bbc.com/future/article/20230106-what-if-all-our-food-was-grown-in-indoor-vertical-farms>

Appendix 1- Factor descriptions

Ref.	Trend/Uncertainty	Description of potential impacts
POLITICAL		
P1	Immigration policy	Impacts working age population size and diversity, and also the nature and scale of demand
P2	Social care pay and benefits	Political decisions affect the level of the minimum wage, national pay settlements (and disputes) and the broader terms and conditions of social care employment
P3	Focus of political attention	Particularly in times of high demand, political focus can be on the short-term mitigation of demand rather than on longer-term approaches to alter the demand curve, such as a greater focus on preventative measures.
P4	Retirement and pensions policy	Change to the current approach to the pension triple lock, pension age or pension schemes may affect the demand for and/or affordability of social care services, as well as the age at which staff choose to retire.
P5	Funding timescales	Short term funding cycles drive short term decisions and make it harder to get the best value from non-recurrent/short notice funding
P6	Social care funding	Local authority decisions (e.g. adult social care precept) affect the level of supply and the sustainability of the market, and Government decision shape the overall policy framework (e.g. cost cap)
P7	CQC regulation	CQC inspections may impact quality, cost (e.g. staffing levels) and the administrative load carried by social care commissioners and providers
P8	Changes to social care operating model	Extent to which policy supports current or alternate models and scope of social care provision (e.g. an insurance-based model alongside or instead of publicly funded care), perhaps in response to failure to meet demand/quality expectations, other political priorities, the degree of national vs local control and/or the influence of private sector providers

Ref.	Trend/Uncertainty	Description of potential impacts
P9	Changes to scope of social care provision	Significant future changes to legislation such as the Health and Care Act affecting the responsibilities of social care providers regarding prevention, safeguarding, promotion of wellbeing and protection of liberty etc. What conditions are seen as primarily the responsibility of social care vs health (e.g. dementia, living with cancer, LTCs)?
P10	Social care as a profession	Greater professionalisation/regulation of social care work could impact the attractiveness of social care careers and public expectations of/trust in care services
P11	NHS reform	NHS restructuring and healthcare reform, including degree of formal integration with social care services. Changes might span the introduction of fees for services previously 'free at point of delivery', mandatory private insurance, potential increases or reductions in services provided.
P12	Higher education policy	Changes to tuition fees, the supply of places on specific courses and the modes of course delivery (e.g. apprenticeships, part-time options, salaried training) may impact the scale and nature of workforce supply.
TECHNOLOGICAL		
T1	Digitalisation	The extent to which supportive digital technologies (e.g. telecare) are available, affordable and acceptable to citizens and staff
T2	Intelligence-led care	Availability and accessibility of diverse data, qualitative and quantitative, relating to current/future need and expectations, provider market/performance, the design of new models of care - also the impact on individual choice of more publicly available data on services
T3	Medical advancements	Significant advances in the way major diseases and common conditions can be treated, managed and/or prevented. Impacting the demand and nature of care and changes to training of staff (and potential shift of activity from NHS to social care).
T4	Scientific breakthroughs	Major technological/scientific advances that could change the affordability and quality of factors such as food, energy, transport or affecting the nature/need of labour (household and paid).

Ref.	Trend/Uncertainty	Description of potential impacts
T5	AI and robotics	AI and robotics could have a broad impact on the provision of health and care services (e.g. assistive technology, diagnostics, surgery, home care and befriending, and data capture/analysis) and could continue to expand into new service areas. This might lead to a loss of existing roles, replacement of a scarce workforce and/or the emergence of new roles. To what extent (and how quickly) might both the workforce and patients adapt to and accept this technology? Will there be sufficient investment to support developments?
SOCIAL		
S1	Population age profile	Ageing population impacting the demand for social care services; changes in complexity of need impacting what/how services are provided; and working age profile and other factors impacting the size of workforce.
S2	Attitudes toward social care careers	Perception of social care as a career will impact recruitment and retention - influenced by media and political portrayals - as will pay levels relative to other jobs and how staff are treated (e.g. racism/exploitation from employers or clients).
S3	Population health & wellbeing	The health of the population will affect the level of demand for social care and the complexity of needs. Health will also impact the productivity and absence levels of staff.
S4	Extent of informal caring	Individual's willingness to provide informal care to family members /neighbours will impact the demand for formal social care. Influenced by need to work and availability of work, and the balance between working to pay care costs and caring to minimise care costs. Changes in the age/capacity of informal carers could also have an impact.
S5	Loneliness	Levels of isolation/loneliness will directly and indirectly impact the health of individuals affected and thus their demand for social care. The pervasiveness of loneliness may be driven by political, economic, technological, and cultural changes.

Ref.	Trend/Uncertainty	Description of potential impacts
S6	Public expectations of social care	Includes the extent to which it should be provided by the state, the community and/or the family; the reputation of care providers; the affordability of care; and the level of trust in care commissioners and providers (including evidence of the quality of care)
S7	Family structures	Impacts ability and willingness for family-provided care, and the nature/extent of that care
S8	Openness to technology	The willingness and ability of individuals to engage with technology used to help self-manage health. This may be influenced by media (and fake news) portrayals of the efficacy and safety of new technologies as well as the availability of formal and informal support in assisting adoption of technology.
S9	Work-life balance	The desire for non-linear/portfolio careers and flexible working/career breaks could increase. There could be further moves towards a 4-day week. Levels of career ambitions and the desire to progress at work may be impacted if other aspects of life have greater attention/provide more life-satisfaction. How much will training provision and roles (be able to) adjust to meet expectations? Could health and care work become attractive as an early or late stage career (as with Teach First)?
S10	Local social capital	The level of local social capital may vary over time, impacting the strength of local support networks (including family and friend support), the financial and volunteer resource available to the voluntary and community sector, and the loneliness/isolations felt by local people (magnified where there is anti-social behaviour). Models of care increasingly factor in community assets that depend on social capital. Changes in social capital could lead to changes in both the demand for and the supply of health and care services.
ENVIRONMENT		
En1	Food and water security	The availability, quality and affordability of food and water. Impacts on costs of care homes, cost of living and health of population and workforce.

Ref.	Trend/Uncertainty	Description of potential impacts
En2	Epidemic/pandemic	The frequency and severity of future epidemics or pandemics. This impacts the health of the population, capacity for informal care and demands for care but also how care can be provided during any epidemic/pandemic.
En3	Extreme weather	Climate-related weather events such as extreme temperatures during summer heat waves and increased risks of flooding etc. Direct health impact on vulnerable as well as the impact on how care can be provided.
En4	Energy security	The availability and affordability of energy. Fuel costs impacting travel costs for carers; costs of heating residential homes and costs to the vulnerable for their own heating and travel.
En5	Air quality	Main sources of air pollutants being transport, agricultural and industrial processes, household heating and power stations. Short and long-term health effects on the population.
En6	Migration	Mass movement of people driven by global factors; economic, political, demographic etc. as well as displacement due to conflict and climate-change. Impacting population density, diversity, languages spoken. Impacts on demand for care, workforce and attitudes towards social care and informal care.
En7	Environmental responsibility	The pursuit of carbon neutrality and energy sustainability. Influencing social care strategy e.g. decisions regarding transport, single-use plastics etc.
En8	Physical environment and crime	The physical environments in which people live and/or work can impact their physical and mental health and wellbeing. This includes the real or perceived safety of the environment (e.g. anti-social behaviour, violent crime, traffic), impacting both the demand for care and the willingness of staff to work in certain areas.
ECONOMY		
Ec1	Affordability of staff	Links to staffing levels, the quantity and quality of care provided and provider sustainability. Driven by policy on minimum wage levels, public sector pays settlements/disputes, pay levels in competitor sectors (e.g. hospitality, retail)
Ec2	Workforce travel costs	Sustainability of care work affected by costs of car ownership including fuel, tolls, charging zones, drive towards higher cost electric vehicles

Ref.	Trend/Uncertainty	Description of potential impacts
Ec3	Provider energy costs	Shaped by global politics and conflict, levels/sustainability of Government support, the value of the pound, etc.
Ec4	Innovation cost/benefit	Potential for technological/digital innovation links to costs of development and implementation relative to impact on care provision included any savings on workforce costs etc.
Ec5	State of UK economy	Economic growth or decline plays through to affordability of public sector funding both directly for social care provision and indirectly through benefit payment levels and the prevalence of poverty and ill health (with impact on demand for social care). Also influences resource available for innovation, preventative activities, and longer term transformation/demand mitigation
Ec6	Care market dynamics	Economy impacts provider sustainability and drives changes to the shape of the market including potential consolidation. Role of private investment in provider market (hedge funds, private equity, property speculators, etc.) drives focus of market towards self-funders, niche provision, specialist housing and puts pressure on reducing cost and raising prices
Ec7	Affordability of independent living	Ability to citizens to maintain the costs of independent living (mortgage/rent, energy prices, pay levels) impacts level of demand for social provision and publicly funded residential accommodation
Ec8	Interest rates	Level and stability of rates impacts investment decisions by providers as well as workforce cost of living/wage expectations linked to mortgages/rents
Ec9	The West Midlands economy	The nature and extent of changes to the West Midlands economy (including through infrastructure developments, changes in employing industries) could impact the nature and extent of demand, and the availability of the required workforce. Staff may be attracted to/from adjacent areas.



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Commissioning Support Unit**