Projecting future demand and expenditure for adult social care in Scotland
October 2022

Scottish Government plans for the National Care Service will involve significant investment in order to make the changes set out in the National Care Service Bill, and then further investment to make improvements to frontline care and to address unmet need (see our previous brief on the National Care Service for Scotland here).

However, even without the reforms proposed, expenditure on social care is likely to rise as a result of an aging population. This additional expenditure is from 'met need' i.e., individuals who currently receive social care as opposed to unmet need i.e., those with social care need who are not currently eligible for social care services, buy may become eligible through future reforms.

In this briefing, we set out the various methods used to try and project both future demand and expenditure of this met need in the adult social care system. We provide a basic estimate of projected future demand and expenditure for adult social care, as well as discussion of future factors that might improve this estimate.

Evidence review: *How has it been done before?*

Given the numerous factors affecting future demand for social care and subsequent uncertainty this creates, it can be difficult to project or forecast any future demand or cost for adult social care, and this may explain why the current research literature is relatively small.

One of the key difficulties in trying to estimate future demand is that in years to come, long-term demographic trends will place increasing demand on the social care system as the population ages and the prevalence of long-term health conditions rises. As well as this, ageing populations can also place strain on social care systems, particularly if there is proportionately fewer working age adults to fund it.

The majority of research into future met need of social care has been conducted for England and Wales.

One of the most commonly cited research papers is that of *Hu et al* (2020) which uses a macrosimulation model to estimate the future met need and expenditure on social care. A macrosimulation model is based on system aggregates (i.e. total of people supported and total cost of services) as a whole, as opposed to each individual component that would be used in a microsimulation (the amount of care each person uses, adjusted, and then aggregated up)

The Hu et al (2020) model uses the Care Policy and Evaluation Centre's (CPEC) long-term care model to project four key variables:

- the future number of older people with a disability,
- the future number of younger people with a disability,
- the future demand for long-term care services and disability benefits,
- the costs associated with meeting future demand and workforce required.

They use 2018-based population projections, provided by the ONS; 2011-based marital status and living arrangement projections and data from the English Health Survey; as well as data on use figures for various types of social care.

Using these data, they formulate two models, one for the older population i.e., those aged 65 and over, and for the younger, or working age, population i.e., those aged 18-64.

Their model produces projections, not forecasts, whereby they model based on assumptions about trends in variables such as future mortality rates, disability rates and the unit costs of care.

By simulating the impact on demand for care as a result of changes in demand drivers or policy changes the paper provides likely future levels of care and expenditure.

Their results estimate that the number of older service users in England and Wales i.e., those requiring community or residential care, will be required to rise from 664,000 in 2018 to over 1 million by 2038, a 55% increase over the 30-year period, to be able to keep pace with demographic changes over that time period.

For those younger service users i.e., those receiving learning disability support, physical support and mental health support, they estimate that the number will have to rise from 249,000 to 321,000 between 2018 and 2038, a 29% increase.

Net expenditure on social care is also expected to near double for those over 65, rising from £8.4bn in 2018 to £16.5bn by 2038 and from £9.6 billion in 2018 to £18.1 billion in 2038 for the working age population (18-64).

Another approach by Kingston et al (2018) uses a microsimulation approach to forecast the number of people aged 65+ with "years lived requiring care at different intensities between 2015-2035" in England.

They "simulate" future society's structure and care need using probabilities, based on longitudinal data[1] on sociodemographic factors, health behaviours, selected chronic diseases and geriatric conditions, and a measure of dependency.

They predict a significant increase in England in the number of individuals reaching 85+ years with higher levels of dependency, dementia, and comorbidity, with their results projecting a 91% increase by 2035, a substantial increase in the met need of social care.

Scottish context

There have been limited attempts to forecast future demand of adult social care in Scotland.

The Independent Review of Adult Social Care in Scotland, also known as the 'Feeley Review', estimates that the real expenditure on adult social care will grow by 2.2%-3.5% per annum till 2035. The lower bound estimate comes from the Scottish Government's Health and Social Care Medium Term Financial Framework, whilst the upper bound is from research by the Personal Social Services Research Unit.

In the recent National Care Service bill, as part of its Financial Memorandum, the Scottish Government also attempted to model the future demand for adult social care. Their estimates use demographic projections to predict an annual growth of 3% for the number of clients.

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[1] Longitudinal data is data collected about the same individuals over time.

Combining this with inflation figures from the Office for National Statistics[2], the estimate that expenditure on adult social care should grow from £3.8bn in 2020-2021 to £5.3bn by 2026-2027, assuming that inflation remains at 2% from 2024-25 onwards.

Elsewhere, there have been attempts to estimate demand for social care in Scotland's prisons, conducted by Alma Economics and commissioned by the Scottish Government[3].

The study makes use of two approaches. The first uses the Scottish Household Survey and the Scottish Social Care Survey to calibrate the level of social care provision in Scotland.

Calibrating these two surveys allows them to not only estimate the proportion of the population with social care needs, but also those who meet eligibility criteria for various levels of support.

Using these data, they then develop a probability model that estimates the percentage probability that a member of the prison population has social care support needs that would have been provided outside of prison. The model also controls for characteristics such as age, gender and deprivation.

The aggregate of these probabilities is then taken across the entire population to produce an estimate of the proportion of the prison population with social care needs.

The second method, whilst similar, utilises only the social care self-reporting element of the Scottish Social Care Survey, controlling for the same characteristics as method 1.

There are three variations of this method tested, the first is the same as method 1 but uses only the self-reported assessments to estimate probabilities whilst the second excludes the deprivation control.

For the third variation, they build on variation 2 and adjust for premature ageing based on evidence of the accelerated ageing of individuals in prison custody suggested by the literature. They therefore adopt a 10-year age differential between the prison and non-prison population i.e., individuals aged 50-59 in prison are assumed to be 60-69 outside of prison.

The study then compares the point estimates calculated in the above three methods to figures collected from existing data provided in the Scottish Prison Service's survey. Using these data, they estimate the share of people who require assistance in managing tasks such as moving around the prison, toilet use and dressing, among others, to calculate the share of individuals who have personal care needs.

They also compare to data collected in the SPS survey on the share of individuals in prisons with social care needs and data collected by a test of change screening site. Here individuals are considered to have social care needs if they self-report one or more of a number of related conditions such as alcoholism, dementia, and a physical disability, among others.

They use both their methodology and these existing data points to compare the accuracy of their model.

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[2] Inflation figures used in the Memorandum: 2020-21 (2.3%), 2021-22 (2.5%), 2022-23 (6.2%), 2023-24 (6.2%) and 2% onwards.
[3] See Scottish Government

Their results suggest a range of 7-10% of the prison population having social care needs in Scotland, which when compared to the existing data provided is within the same range of 8-13%, suggesting the models used are valid.

Whilst this model estimates care needs for only those prison, using this methodology for the entire population is plausible and could be used to estimate a range of future demands for adult social care.

Projecting future demand for adult social care

We have attempted to produce an estimate of future demand of social care based on basic macrosimulation model, similar to the approach used in both the Feeley Review and Financial Memorandum.

Our model utilises data on the number of people supported by social care, available via Public Health Scotland's social care insights publications[4]. We also make use of population estimates and projections produced by the National Record for Scotland[5].

Using this data, we estimate the average annual population growth per annum from 2021/22 – 2044/45 for both the working age population (18-64) and the older population (65 and over).

We start by inflating the 2020/21 figure for the number of people supported by social care to 2021/22 using the population growth estimates for the same year. We continue this process for each year up to 2044/45.

Chart 1 and *Chart 2* show the projected number of people supported by social care from 2020/21.

We estimate that if current population growth estimates hold and the level of services required remains similar, then the number of people supported by adult social care will grow from 221,000 in 2020/21 to over 266,000 by 2044/45.

Most of these additional individuals utilising social care services are over the age of 65, with growth of 70% between 2019 and 2045 for this age group, whilst the number of users of working age population is due to grow by 6%.
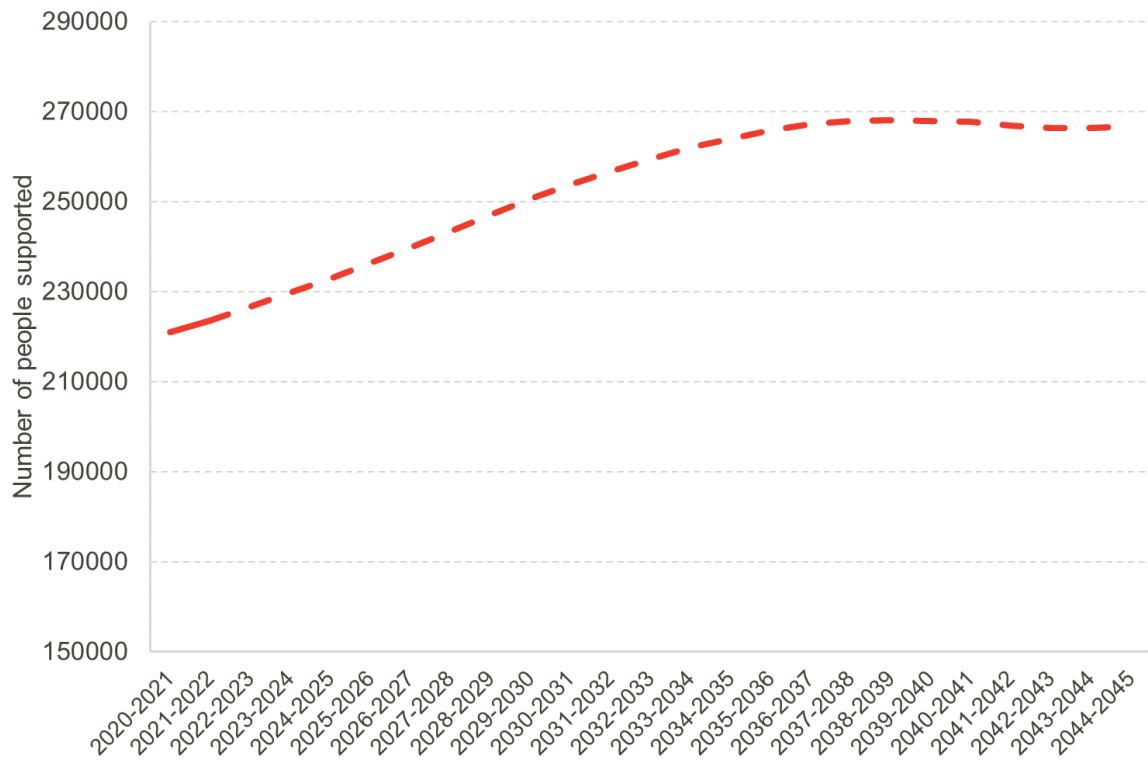
Within the older population, the number of people supported aged 85 and over are estimated to more than double between 2017/18 and 2044/45.
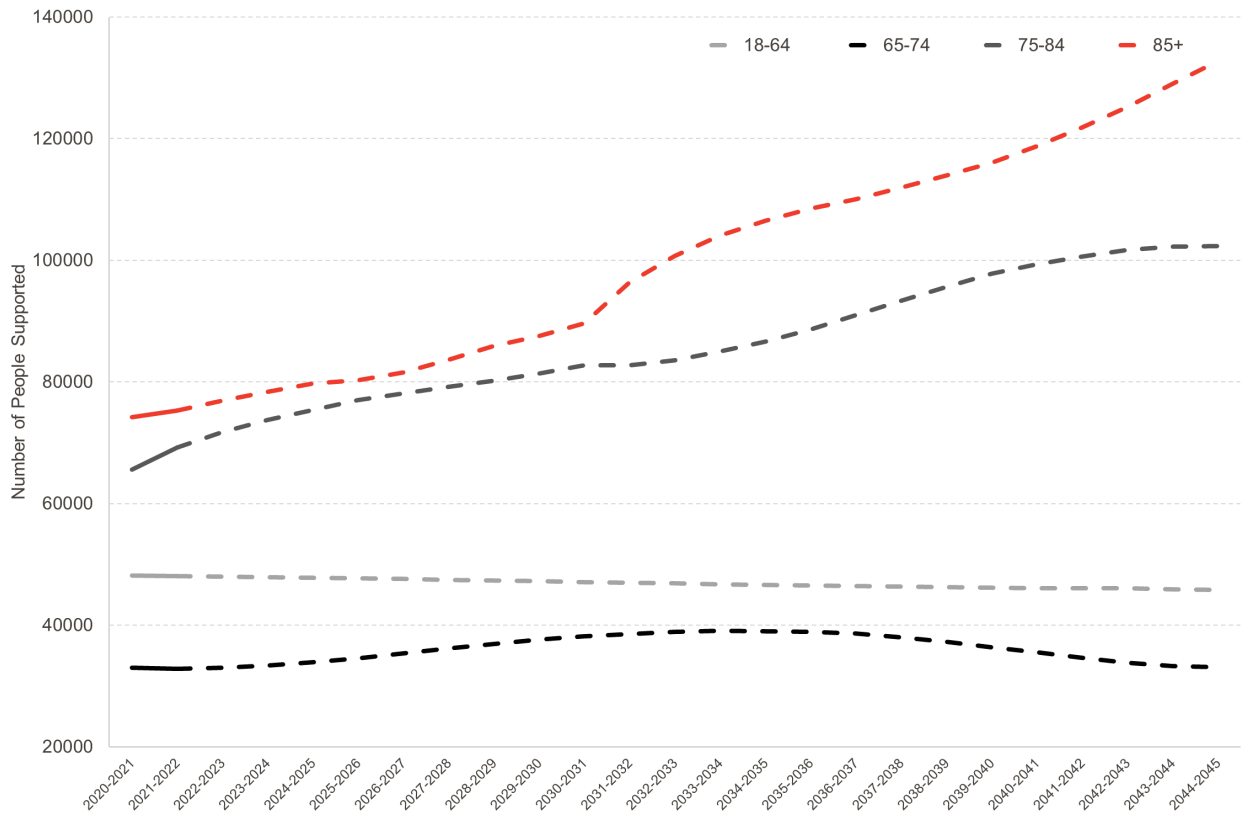
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[4] See Public Health Scotland
[5] See NRS

Chart 1: Expected number of people supported by social care, 2017/18 – 2044/45

Chart 2: Expected number of people supported by social care, by age group, 2017/18 – 2044/45

We can also project the share of social care users that use care homes and home care, ***Chart 3***.
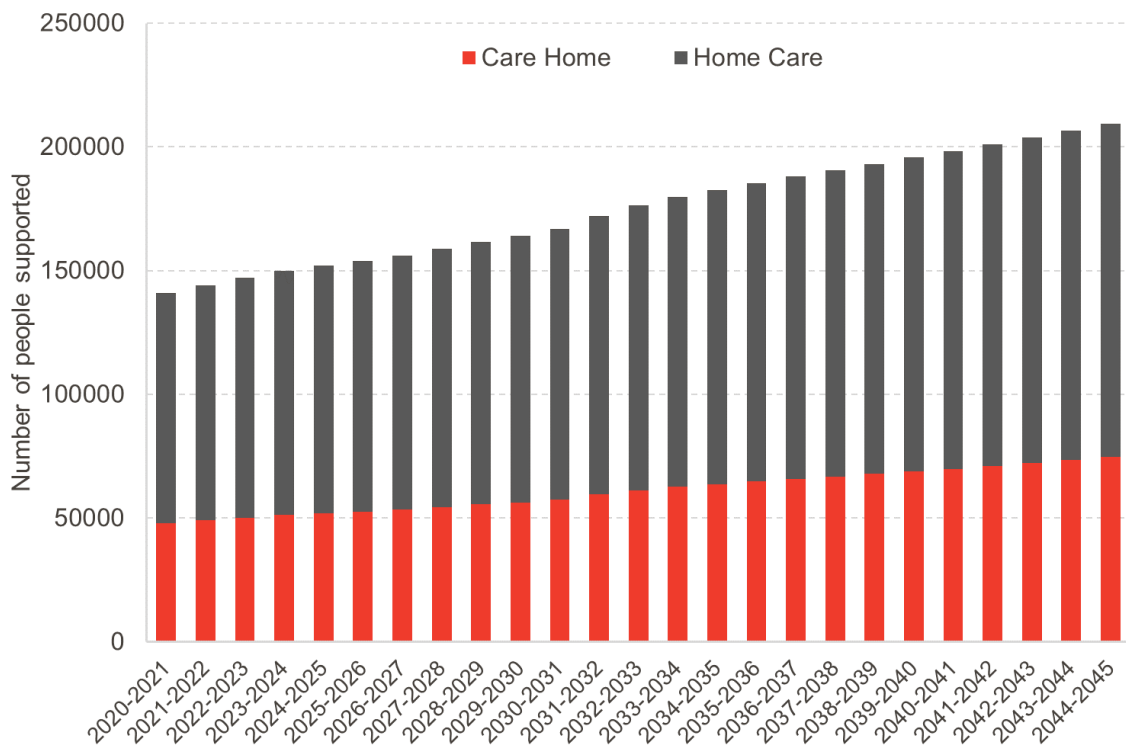
Data from Public Health Scotland provides the number of people supported utilising care homes, home care, and other forms of social care such as telecare and direct support payments.

In order to project the number of people utilising each type of care, we first calculate the share of service users i.e., the number of people supported by social care, that utilise each type of care.

We then apply these shares to our forecasted figures for the total number of individuals supported by social care for each age group.

We have only been able to do this for Care Home and Home Care at the moment. The data available for users of other care requires further investigation before we are confident enough to use it in projections. For example, day care provision remains far below pre-pandemic levels, and therefore projecting forward from current levels is unlikely to provide a valid estimate.

Chart 3: Expected number of people supported by home care and care homes, 2020/21 – 2044/45

Source: Public Health Scotland, FAI Calculations

Projecting future expenditure on adult social care

As the number of individuals utilising social care services rises, so does the associated cost of providing these services.

We attempt to project the estimated expenditure on adult social care by the associated components of social care, again only for home care and care homes at present.

Scotland's local government finance returns (LGFS) for 2020-21 provides figures on expenditure for care homes and home care. Using the available data on the number of people supported by home care and care homes, we calculate unit costs (cost per person) of care for both services.

Even with data on the numbers supported by other services, we also are unsure of the reliability of estimates for expenditure on other social care services such as day care, telecare and home meals[6]. This is a further issue which we will need to look into in the future.

Using the above method, expenditure on care homes will grow from £1.3bn in 2020-21 to over £2.1bn by 2044-45, an increase of 55%. Home care, whilst having relatively lower expenditure, rises at similar rates to care home expenditure. Expenditure on home care services is estimated to grow by 45%, from £1bn in 2020-21 to more than £1.5bn in 2044-45.

The estimates therefore suggest that the combined expenditure on care home and home care will rise to over £3.5bn by 2044-45, an increase of 51%.

**Chart 4:** Expected future expenditure on home care and care homes, 2020/21 – 2044/45
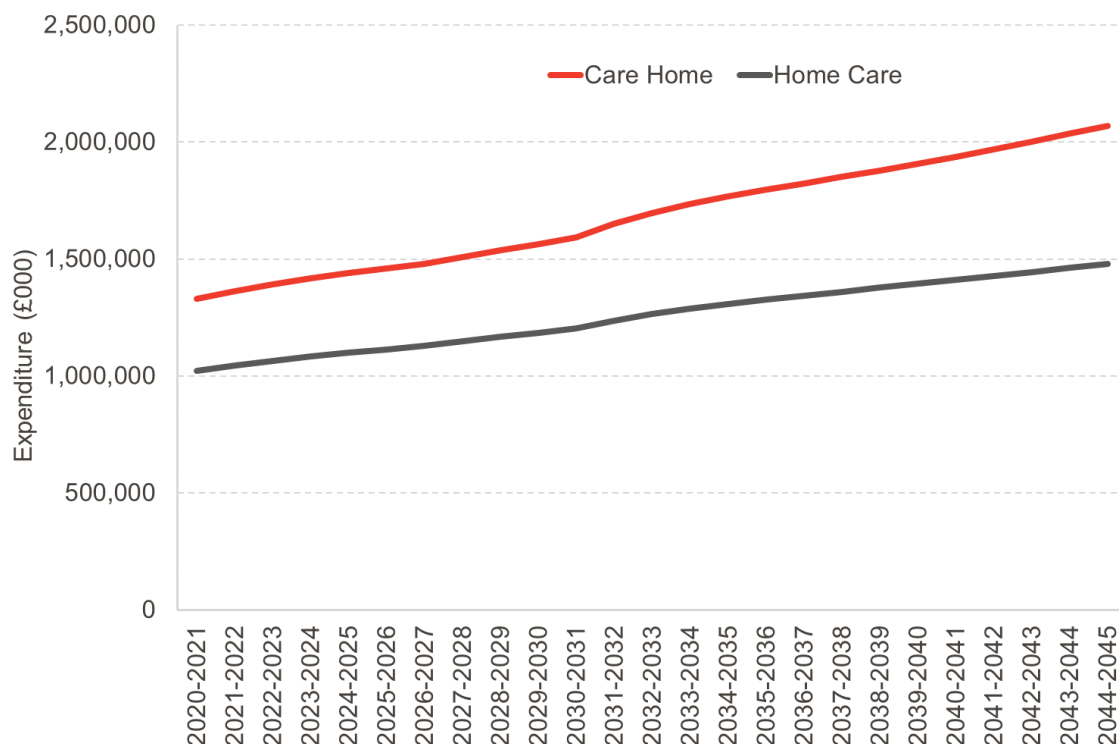
Source: LGFS, Public Health Scotland, FAI Calculations

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[6] The expenditure figures for these services is grouped in the LGFS, therefore it is not possible to isolate just the expenditure for other social care services.

In the absence of being able to estimate projections for other care services beyond care homes and home care, we have provided a more general, less granular method to provide a projection of overall expenditure on adult social care. This uses local government finance returns (LGFS) data for the financial year 2020-21 . We then assume that expenditure will likely grow at the same rate as the number of people supported and apply population growth rates to inform a projection. LGFS data provides a breakdown for over 65's and 18-64 groups which provides some nuance to the projection. However, it does not account for differential population projections with the over 65 age group and the types of care that are likely to be required by different cohorts of the older population. For these reasons, we believe that this estimate will understate future need.

Expenditure on adult social care for service users over 65 was £2.3bn in 2020-21 and £1.5bn for 18–64-year-olds, a total of £3.85bn for the year. The projection using the method above suggests that expenditure on social care will rise from £3.85bn in 2020/21 to around £4.4bn by 2044/45, a 14% increase over the 30-year period.

Chart 5: Expected future expenditure on adult social care (non-adjusted for inflation), 2020/21 – 2044/45
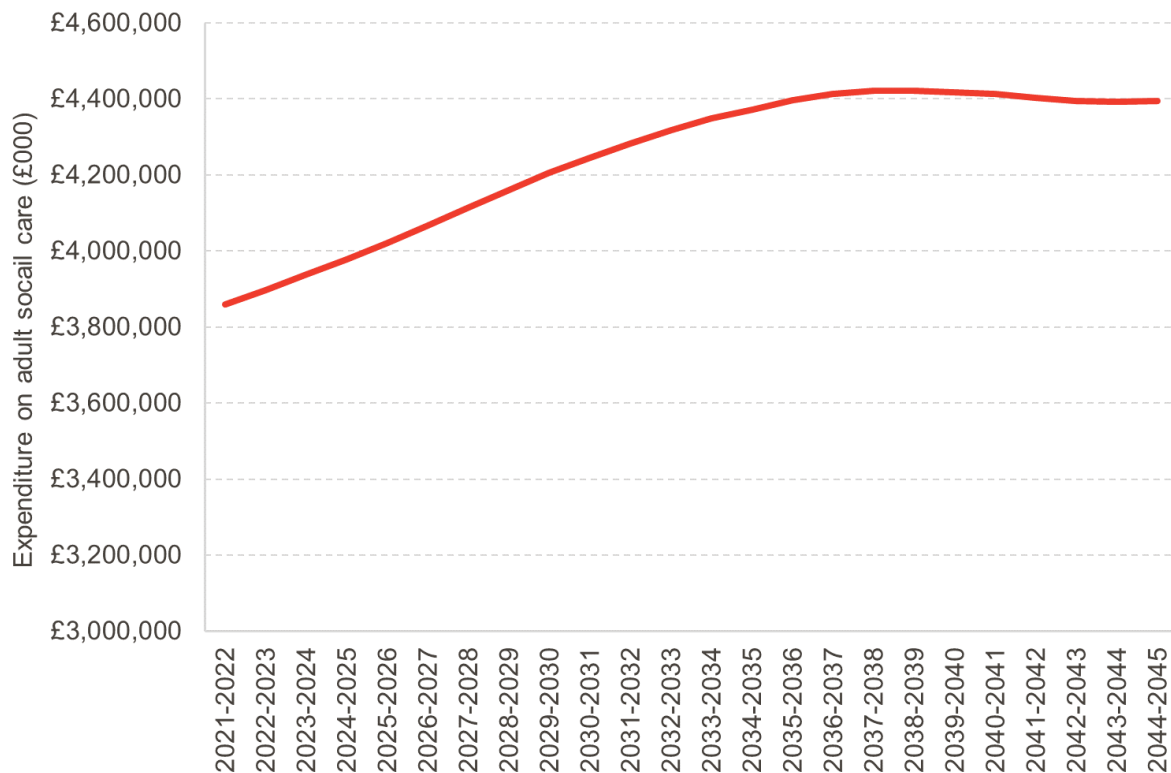
Source: LGFS, FAI Calculations

Over the coming years, however, inflationary pressures will have a large role to play in both service provision and cost of adult social care, particularly in the short term as inflation remains at record high levels.

Table 2 highlights the projected inflation outturn over the coming 4 years and highlights over 2022 and 2023, inflation will remain high before returning to the Bank of England's target rate of 2%.

2021	**2022**	**2023**	**2024**	**2025**	**2026**
2.6%	7.4%	4%	1.5%	1.9%	2%

Source: Statista

We use the inflation outturn data provided in Table 2 for the years 2021-2022 to 2025-2026 and assume that from 2026 onwards, inflation has returned and remains at the Bank of England's target rate.

Our results suggest that over the coming 5 years, expenditure on adult social will rise 18% from £3.9bn to over £4.6bn, and that by 2044/45 this will nearly 70% bigger, with expenditure over £6.6bn.

Chart 6: Expected future cost of adult social care (adjusted for inflation), 2021/22 – 2044/45
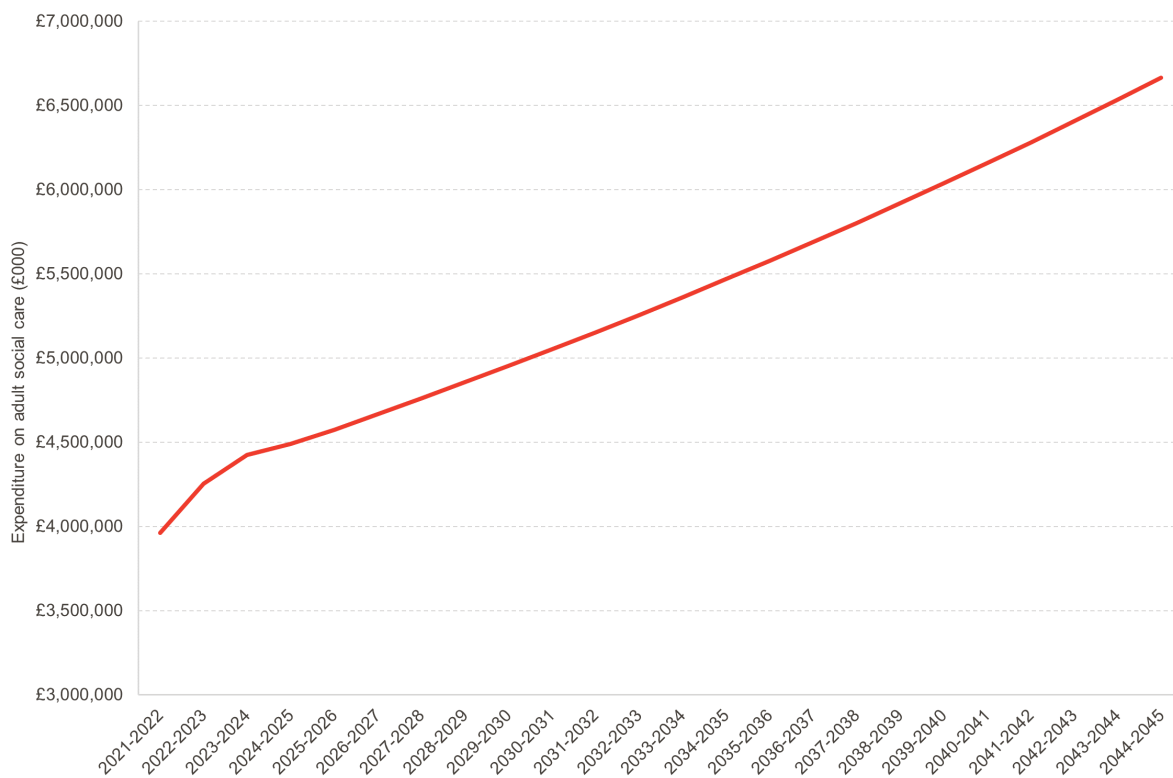
Source: LGFS, FAI Calculations

Conclusions

Trying to predict how the structure of a population might change over time is a complex task, and whilst we have attempted two basic simulations, there is clear scope to refine and improve our estimates.

There is clear value in building a clearer understanding of this issue. An ageing population, shrinking birth rates and falling working age population means that funding public services in the future is a key issue for government to contend with.

What is clear is that the introduction of a National Care Service comes at a time when the number of individuals requiring social care services is increasing rapidly, and so must remain a key factor in any resource decisions going forward.

It is also important to remember that the evidence cited in this paper, and our own work, accounts only for the 'met' need of social care i.e., those individuals who are both eligible and receive required services. There is another subgroup of the population that are may be eligible in the future for social care services, for example under National Care Service Reforms, but do not yet receive them: the unmet need.

Over the coming year, as part of our work analysing elements of the National Care Service, we will seek to consider both the implications of servicing met and unmet need of adult social care, to better understand what the overall demand and costs of services over the coming decades.

It is also clear that more work needs done on understanding the unit costs of different types of care in order to improve projections on future levels of expenditure.

Whilst the work presented in this briefing is more simplistic than other attempts outside of the UK, it provides some idea of a baseline estimate to build upon as we learn more about the associated costs of adult social care and the number of people both utilising and eligible for care.