

Appendix 17

# Local Government Reform: Impact on people services

Summary Version

# Local Government Reform: Impact on people services

## INTRODUCTION

### Purpose of this work

The County Councils Network (CCN) have commissioned this research in partnership with Newton to provide data-driven evidence and analysis on the **potential impact of LGR on people services** to multiple authorities in England. Given ECC's ongoing partnership with Newton, Essex was asked to pilot this work and be first to receive the outputs.

The research looks to show the impact of disaggregation and aggregation from the current two unitary authorities and County Council in Greater Essex to various scenarios of new unitary authorities. The work **focuses on the demand and cost of key areas of service provision** in new scenarios, and what pressures and variations might exist in new configurations now and forecast 15 years into the future.

The research shows the **significant level of complexity** involved in understanding the true impact on organisations, finances, and residents of potential LGR configurations. This first phase of work has been completed at pace and does not provide opinion on preferred LGR scenarios. It aims to lay out evidence to support the ongoing LGR discussions.

### What this analysis covers

The work has considered the impact on **Adults' social care, Children's social care and SEND** services of reaggregating these services across new geographical footprints within Essex.

It is based on 2, 3, 4, and 5 unitary authority configurations. The particular configurations have been selected from the Grant Thornton options to provide the broadest range of analysis. This analysis could be replicated for other configurations based on existing district boundaries.

For each proposed formation we have calculated the **expected demand or caseload for key services** within the county and forecast the **expected cost of delivering these services** (including long term placements and direct staffing).

### Limitations of this analysis

Data for this analysis is from: ECC district level data on demand, unit cost and capacity for Adults, Childrens and SEND provision; and ASCFR national return data for Southend and Thurrock. Local data from Southend and Thurrock was not available for this analysis.

This analysis has been performed **without the use of personal identifiable data** of individual service users. By necessity this means that there are points where the output of this work provides aggregate values rather than detailed breakdowns to protect the identity of individuals within Essex.

This work is **not a financial budget** and exact prediction of outlays in the years to come; this forecast is built off a singular snapshot of data each year, and the financial adjustments that are implemented in financial reporting practices are not applied here.

The scope **includes service users in receipt of long-term provision** and does not model all activities in each service. Staff costs in the model are limited to direct staff supporting residents within the services, not corporate services and supporting functions.

# Considered unitary scenarios

This analysis has considered the impact of LGR on people services by considering 4 possible unitary formations. These models were taken from the Grant Thornton analysis and were selected to illustrate a range of possible formations.

Scenario 1 splits Greater Essex into two areas with around 1m population each. Scenario 4 has 5 areas with around 300-500k population each.

## Scenario 1 – Two Unitaries



- North:** Uttlesford, Braintree, Colchester, Tendring, Harlow, Epping Forest, Chelmsford, Maldon
- Total population: 1.11 million
  - % population 65+: 21%
  - % population 85+: 3%
  - % population U18: 21%
  - % population U5: 5%
  - % population in most 10% deprived nationally: 3%
  - % population non-white: 10%

- South:** Brentwood, Basildon, Thurrock, Castle Point, Southend, Rochford

- Total population: 828 k
- % population 65+: 20%
- % population 85+: 3%
- % population U18: 22%
- % population U5: 6%
- % population in most 10% deprived nationally: 6%
- % population non-white: 13%

## Scenario 3 – Four Unitaries



- North:** Uttlesford, Braintree, Colchester, Tendring
- Total population: 619 k
  - % population 65+: 22%
  - % population 85+: 3%
  - % population U18: 20%
  - % population U5: 5%
  - % population in most 10% deprived nationally: 5%
  - % population non-white: 8%

- Central:** Harlow, Epping Forest, Chelmsford, Maldon

- Total population: 490 k
- % population 65+: 20%
- % population 85+: 3%
- % population U18: 21%
- % population U5: 6%
- % population in most 10% deprived nationally: 0%
- % population non-white: 13%

## Scenario 4 – Five Unitaries



- North East:** Braintree, Colchester, Tendring
- Total population: 522 k
  - % population 65+: 23%
  - % population 85+: 3%
  - % population U18: 20%
  - % population U5: 5%
  - % population in most 10% deprived nationally: 6%
  - % population non-white: 8%

- North West:** Uttlesford, Harlow, Epping Forest

- Total population: 330 k
- % population 65+: 19%
- % population 85+: 3%
- % population U18: 22%
- % population U5: 6%
- % population in most 10% deprived nationally: 0%
- % population non-white: 13%

- South West:** Brentwood, Basildon, Thurrock

- Total population: 378 k
- % population 65+: 16%
- % population 85+: 2%
- % population U18: 24%
- % population U5: 6%
- % population in most 10% deprived nationally: 8%
- % population non-white: 18%

- South East:** Castle Point, Southend, Rochford

- Total population: 372 k
- % population 65+: 23%
- % population 85+: 3%
- % population U18: 20%
- % population U5: 5%
- % population in most 10% deprived nationally: 5%
- % population non-white: 9%

- Central:** Maldon, Brentwood, Chelmsford

- Total population: 334 k
- % population 65+: 21%
- % population 85+: 3%
- % population U18: 20%

Data: ONS population forecasts and estimates, Census 2021 data, Index of Multiple Deprivation data 2019  
 Assumptions: Population growth matched to ONS growth rates, ONS projections, or aligned to linear regression model of population growth as appropriate.

# LGR impact on people services – summary insights

## Geographical concentration



There are significant geographical concentrations of demand across greater Essex.

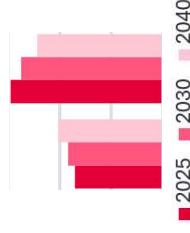
In most scenarios of disaggregation, there is huge variation of demand and forecast spend between proposed unitary authorities. This variation is beyond what would be expected from total population numbers in each scenario.

The North east of the County has a higher prevalence of all demand types in this analysis, particularly driven by Working Age Adults demand.

In the scenarios with 4 and 5 unitary authorities, forecast spend on ASC provision in the North East is more than double the other unitary authorities.

In the 5 UA scenario, forecast spend for children's social care provision in North East and South West is more than double that of Central and North West.

## Future demand shifts



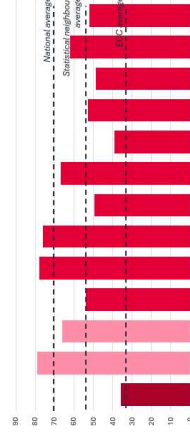
The model forecasts significant shifts in demand over the next 15 years. Spend on the provision in scope of this analysis is forecast to rise by:

- 90% in Adults by 2040
- 75% in Childrens by 2040
- 150% in SEND by 2040

The 65+ population is forecast to grow by 28% by 2040, with 3 districts having a third of people over 65 and a further 5 districts with a quarter of people over 65.

There is a distorted demography due to residential placements being in different parts of the county from a person's original address. Post-LGR this leaves a distorted concentration of placements in North East, particularly for working-age adults. Over time, this demand reduces in NE as the distortion unwinds, whereas demand in other areas increases between now and 2040. Although reducing the NE demand remains the highest.

## Performance levers



The analysis shows how the geographic configuration of future authorities will have the biggest impact on the scale of demand and cost for each authority, and on the variation between them.

The model shows a small increase in total cost of provision for scenarios with more unitary authorities, driven by increased unit costs and increased staffing needs. (the increase is small as this work does not include the costs of multiple new operating models and support services such as systems, estates, IT, analytics, legal, transformation etc.)

A much more significant lever on future demand and spend will be service performance, and therefore prevalence of need. This is particularly acute for Children in Care in Essex, where ECC have 50% of the national average of children in care per 10,000. This varies significantly between districts and is much higher in Southend and Thurrock. Maintaining and improving this practice and performance will be a significant lever to demand and cost once the new geography is set.

# Demand Summary

## DEMAND FOR SOCIAL CARE AND SEND SERVICES IS EXPECTED TO GROW

This analysis has modelled the demand for Adults' Social Care, Children's Social Care and SEND services across Essex, including Southend and Thurrock. A detailed breakdown by setting is included later in this report.

As well as the most absolute demand, the **North / Northeast** has the **most demand as a % of population**

The **biggest growth rates in demand are in the Western districts** (Uttlesford – 3.1%, Brentwood – 2.8%) where this is driven by increases in the number of EHCPs. This is more than a percentage point faster than the districts that see the slowest rates of growth (Tendring – 1.1%, Braintree – 1.3%).

The region of the county with the **most demand on people services is in the North East** (Braintree, Colchester & Tendring). This gives a large proportional variation between UAs in Scenarios 3 and 4.

Scenario	Proposed Authority	% Total Population interacting with people services	% Change in number of residents interacting with people services (2025-2040)	% change ASC (2025 – 2040)	% change CSC (2025 – 2040)	% change SEND (2025 – 2040)	Number of residents interacting with people services, by directorate
Baseline	Essex	2.2%	37.8%	23%	4%	63%	16.2k
	Southend-on-Sea	2.3%	37.7%	29%	-3%	65%	1.3k 1.7k
	Thurrock	2.5%	29.8%	31%	0%	40%	1.3k 2.4k
Scenario 1	North	2.2%	36.2%	19%	3%	65%	11.8k
	South	2.3%	37.9%	31%	0%	54%	7.5k 2.7k 10.0k
Scenario 2	North East	2.5%	31.7%	16%	4%	58%	7.2k 1.6k 5.8k
	West	1.9%	43.5%	24%	2%	74%	5.3k 1.2k 4.9k
	South	2.3%	37.1%	32%	1%	52%	6.8k 2.4k 8.0k
Scenario 3	North	2.4%	33.5%	16%	4%	63%	7.3k 1.6k 6.0k
	Central	2.0%	40.5%	25%	2%	68%	4.5k 1.1k 4.1k
	South West	2.3%	35.8%	29%	1%	51%	3.7k 1.5k 5.2k
	South East	2.2%	40.5%	34%	0%	60%	3.8k 1.0k 3.4k
Scenario 4	North West	1.9%	45.7%	15%	1%	82%	2.9k 0.7k 2.6k
	North East	2.5%	30.6%	24%	4%	57%	6.5k 1.5k 5.2k
	Central	1.9%	41.1%	25%	4%	66%	3.0k 0.6k 2.8k
	South West	2.4%	34.0%	31%	1%	46%	3.0k 1.5k 4.6k
	South East	2.2%	40.5%	34%	0%	60%	3.8k 1.0k 3.4k

Data: ONS population forecasts and estimates, Essex data  
 Assumptions: Population growth matched to ONS growth rates, ONS projections, or aligned to linear regression model of population growth as appropriate.

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# ASC  
 # CSC  
 # SEND

# Spend Summary

## SPEND ON PEOPLES SERVICES BY PROPOSED UNITARY FORMATION

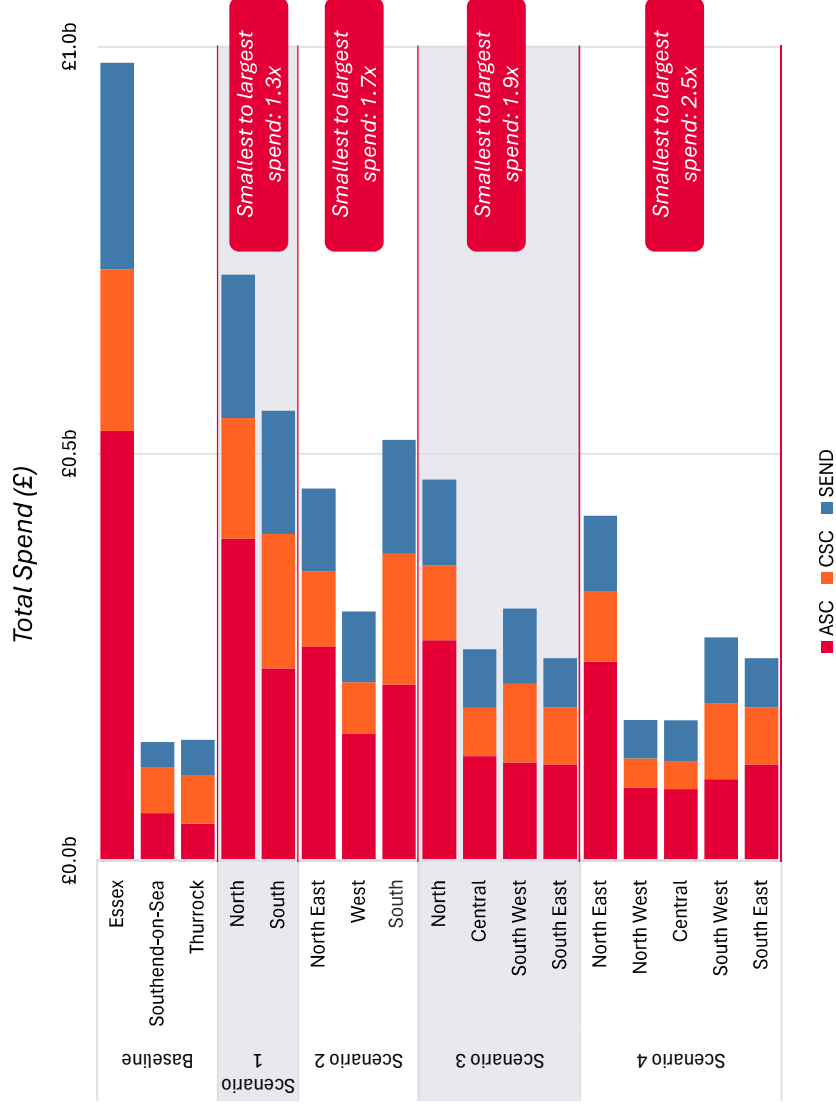
This analysis has considered the impact of LGR on the cost of delivering adults' & children's social care services alongside the cost of SEND support.

Cost values presented herein include both placement costs (e.g. residential beds or EHCP provision) alongside staffing costs for staff working directly on supporting service users. Staffing costs for business support functions are excluded. **ASC costs are net of client contributions.**

Across the county, **the majority of spend is driven by ASC spend (55%),** and this remains consistent across all unitary formations.

We can see that spend aligns with spread of demand across the county. This is because there is more variation in demand than unit cost.

**Most demand is located in the North East of the county,** so this region has the most spend in every proposed scenario. Some of the most deprived areas in Essex are located in the North East, alongside a significant proportion of capacity for WAA placements. There are some historic reasons for this (e.g. former Long Stay Hospital in Colchester) that will influence the demand breakdown across regions. This has resulted in residents from across Essex being placed in this region whilst delivering services on existing footprints. This analysis shows that as these placements end, the concentration of demand in the North East will reduce as patterns return to existing underlying demographic trends.



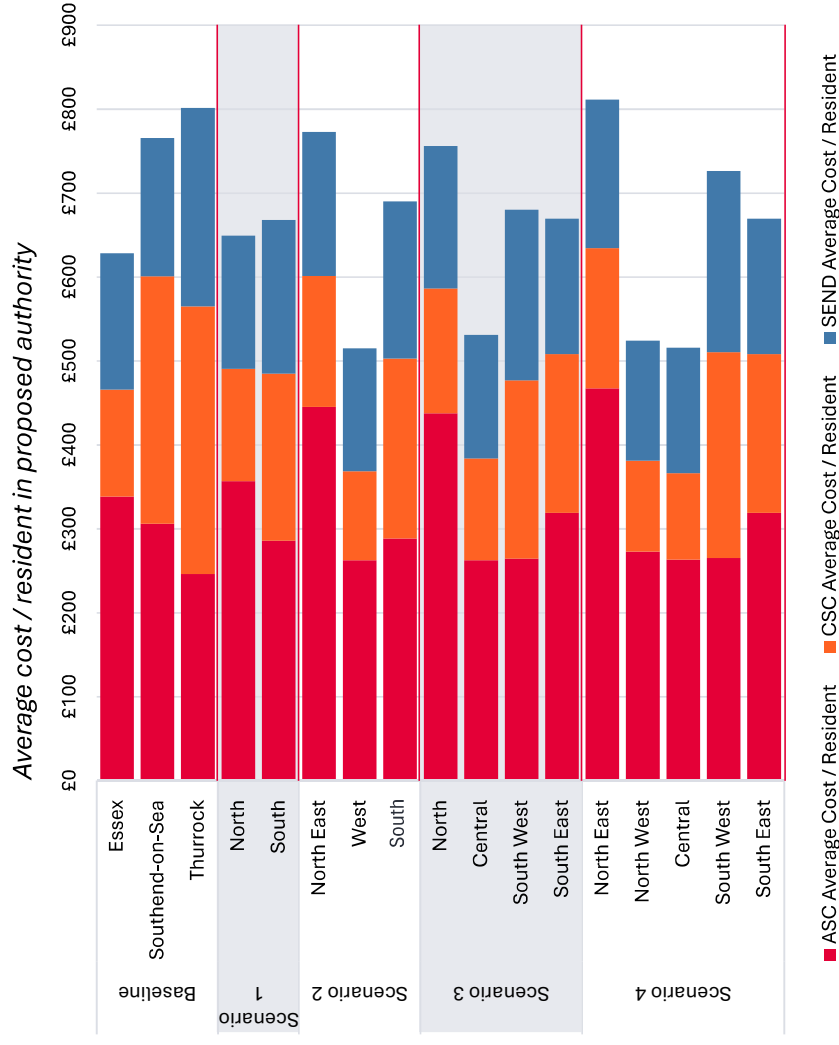
Data: ONS population forecasts and estimates, Essex data  
 Assumptions: Population growth matched to ONS growth rates, ONS projections, or aligned to linear regression model of population growth as appropriate. Distorted demography adjustments. Staffing and unit costs rise with inflation. UAs average cost/CIC assumed to match nearest Essex quadrant.



# Spend Summary

## SPEND ON PEOPLES SERVICES BY PROPOSED UNITARY FORMATION – COST PER RESIDENT

With some of the highest unit costs, and the greatest volume of demand, the **North East** faces the **highest cost of delivering care per resident** across the proposed scenarios; this is driven by the both high concentration of residents interacting with social care in Colchester and Tendring and a relatively high unit cost across all settings.



Data: ONS population forecasts and estimates, Essex data  
 Assumptions: Population growth matched to ONS growth rates, ONS projections, or aligned to linear regression model of population growth as appropriate. Distorted demography adjustments. Staffing and unit costs rise with inflation. UAs average cost CIC assumed to match nearest Essex quadrant.

## Adult's Social Care

The scope of this section is to provide insight into the likely impacts of each proposed scenario on Adults' Social Care, covering demand, cost and quality over the next 15 years.

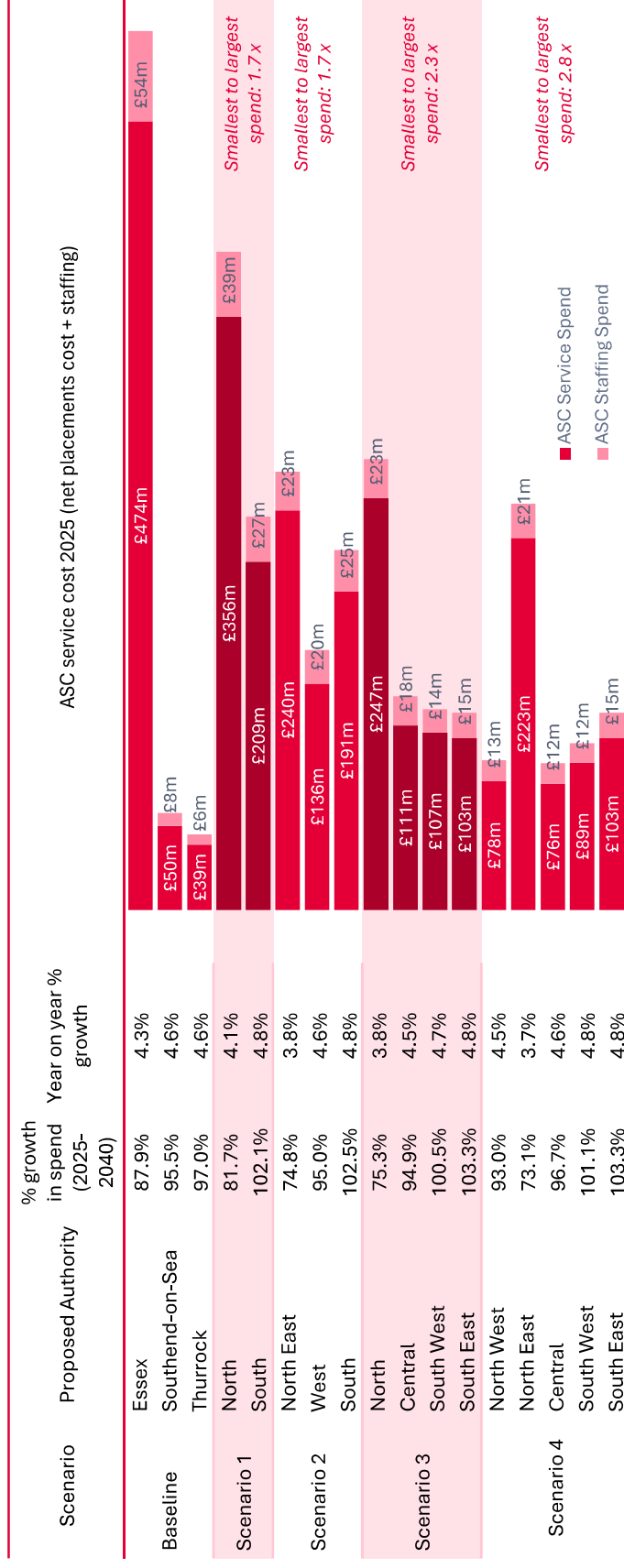


# Adult Social Care

## SERVICE COST VARIATION AND FORECASTS

This analysis has considered the variation in the cost of delivering care between each of the proposed unitary formations. This cost includes both the cost of long term placements types (community, domiciliary, residential and nursing care), in addition to the authority staffing cost. Staffing costs include direct ECC employees as part of the ASC directorate, staffing spend as part of business support functions have been excluded. All costs presented are net of client contributions. Cost growth includes both the expected impact of increased demand, increased unit cost and wage increases.

Spend on Adults' Social Care is forecasted to almost double between 2025 and 2040. This is driven by increases in both unit cost and demand. The distribution of demand and unit cost pressures across the proposed scenarios results in greatest growth in cost in the South of the county. The largest spend outlays across all unitary formations are focussed in the North of the county due to higher service demand in Tendring and Colchester. Scenario 3 and 4 have a **spend in North/Northeast of 2.3x and 2.8x the lowest spend authority**, respectively.



Data: ONS population forecasts and estimates, ECC provided cost data  
 Assumptions: Population growth matched to ONS growth rates, ONS projections, or aligned to linear regression model of population growth as appropriate.

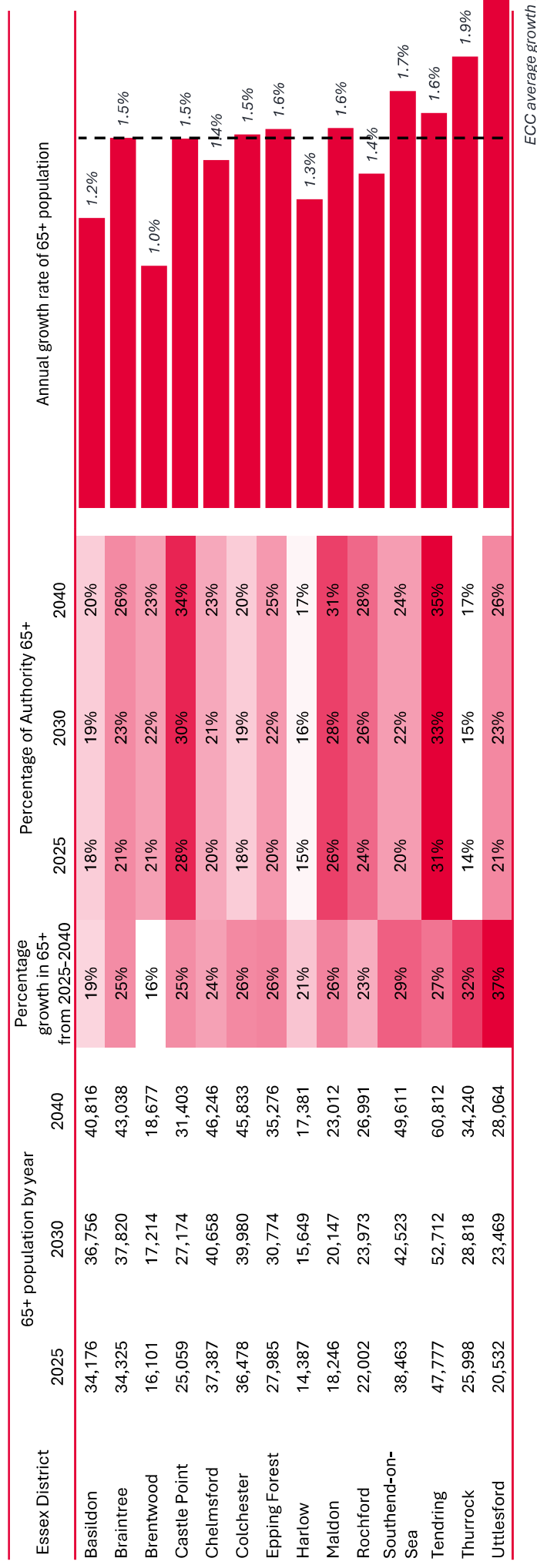
# Adult Social Care: Older Adults

## POPULATION VARIATION AND FORECASTING

Our existing Older Adults (over 65) population is concentrated in Tendring alongside the urban centres in Southend-on-Sea, Colchester and Chelmsford. This population is growing in all districts at an average rate of 1.5%, with the highest rate of growth in Uttlesford at 2.1% per year, compared the slowest rate of 1.0% in Brentwood. The districts with the highest proportion of their population in this cohort are Tendring, Castle Point and Maldon each with approximately 1 in 3 residents in this category.

Whilst this work has modelled changes in the size of each of the below population segments, it has not attempted to capture the impact of changes in the deprivation or demographics within these segments (i.e. the impact on demand & unit cost of our 65+ cohort in tendering becoming older or more deprived).

**The total 65+ population is forecast to grow by 28% by 2040, with 3 districts having a third of people over 65 and a further 5 districts with a quarter of people over 65.**



# Adult Social Care

## SERVICE COST SUMMARY

The service cost presented herein includes both the cost of placements, and local authority staffing costs. It does not include the cost of delivering business support functions that currently sit outside of the Adults social care directorate (eg IT support) or other commissioned services, system costs, estates etc. This cost for each scenario is included in the table below alongside the expected service cost in 2025 and 2040. In general, we see a small increase in service cost for scenarios with more authorities when only looking at placement costs and direct staff spend. This is driven by an increased placement unit cost and higher staffing management overheads for smaller authorities.

Scenario	Proposed Authority	Cost per supported person (2025)	Cost of service for scenario (2025)	ASC service cost 2025 (net placements cost + staffing)	Cost of service for scenario (2040)	ASC service cost 2040 (net placements cost + staffing)
Baseline	Essex	£628		£528m		£992m
	Southend-on-Sea	£614	£632m	£58m	£1,196m	£114m
	Thurrock	£690		£46m		£90m
Scenario 1	North	£644	£632m	£395m	£1,196m	£719m
	South	£608		£236m		£478m
Scenario 2	North East	£705		£263m		£461m
	West	£569	£636m	£156m	£1,203m	£305m
	South	£610		£216m		£438m
	North	£711		£271m		£475m
Scenario 3	Central	£552		£128m		£250m
	South West	£631	£639m	£121m	£1,208m	£242m
	South East	£600		£119m		£241m
	North West	£592		£90m		£174m
Scenario 4	North East	£719		£244m		£423m
	Central	£563	£641m	£88m	£1,212m	£173m
	South West	£641		£100m		£202m
	South East	£600		£119m		£241m

Data: ONS population forecasts and estimates, ECC provided cost data  
 Assumptions: Population growth matched to ONS growth rates, ONS projections, or aligned to linear regression model of population growth as appropriate.

## Section 2b: Children's Social Care

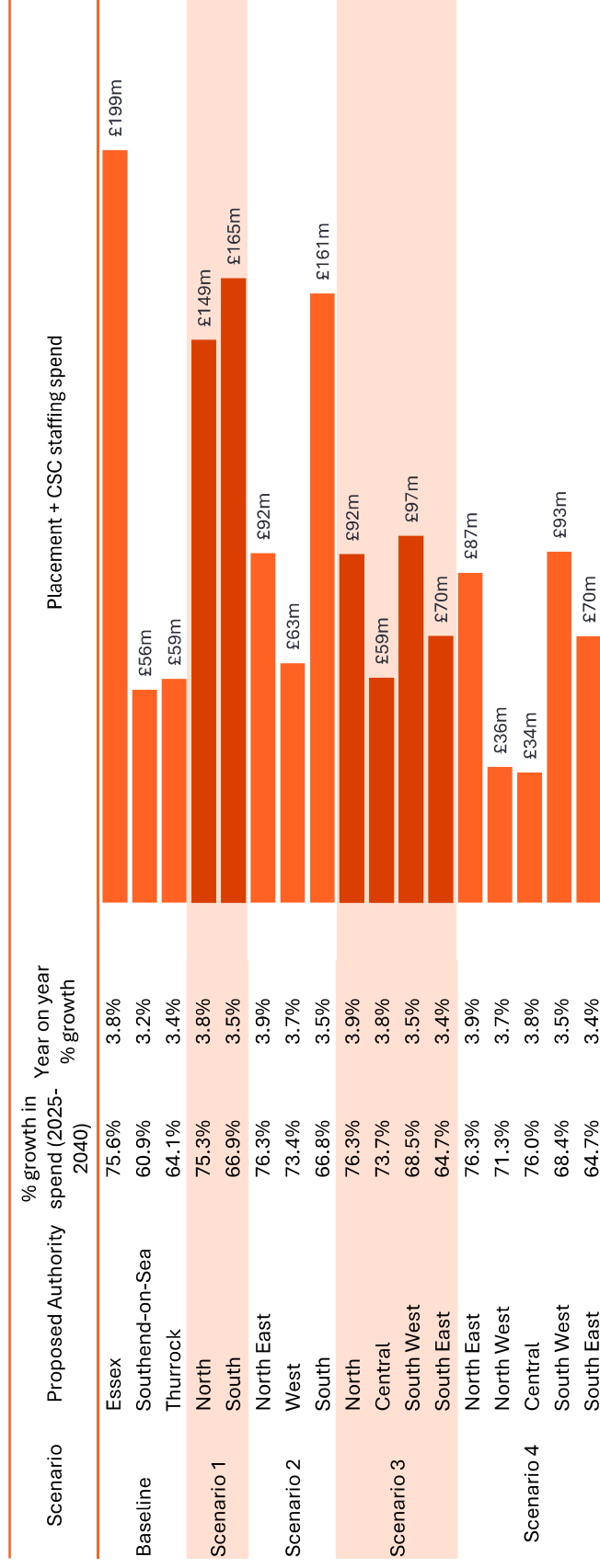
The scope of this section is to provide insight into the likely impacts of each proposed scenario on Children's Social Care, covering demand, cost and quality over the next 15 years.

# Childrens Social Care

## CIC PLACEMENT AND STAFFING COST: VARIATION AND FORECASTING

The service cost presented herein includes both the cost of placements, and local authority staffing costs. **It does not include the cost of delivering business support functions that currently sit outside of the Childrens social care directorate (eg IT support) or other commissioned services.** As this work has been performed without any personal identifiable data and caseload sizes for children in care settings are small, analysis in this section has assumed a constant blend of settings across proposed unitaries. We have not modelled any changes in the blend of settings with time. We might expect to see significant variation in unit cost over time should this blend change i.e. due to a decline in internal fostering capacity or increase in residential placements. Inflation has been assumed at a compounding 3.2% in line with a 65/35 split between 10 year average earning and prices indexes.

Spend on Children's Social Care is forecasted to increase by up to 75% between 2025 and 2040. The distribution of demand and unit cost pressures across the proposed scenarios results in relatively consistent growth across the proposed authorities. **Scenarios 2, 3 and 4 all show significant variation** in total demand and therefore spend, with South and North East showing significantly more demand than other areas.



Data: ONS population forecasts and estimates, Essex data  
 Assumptions: Population growth matched to ONS growth rates, ONS projections, or aligned to linear regression model of population growth as appropriate.

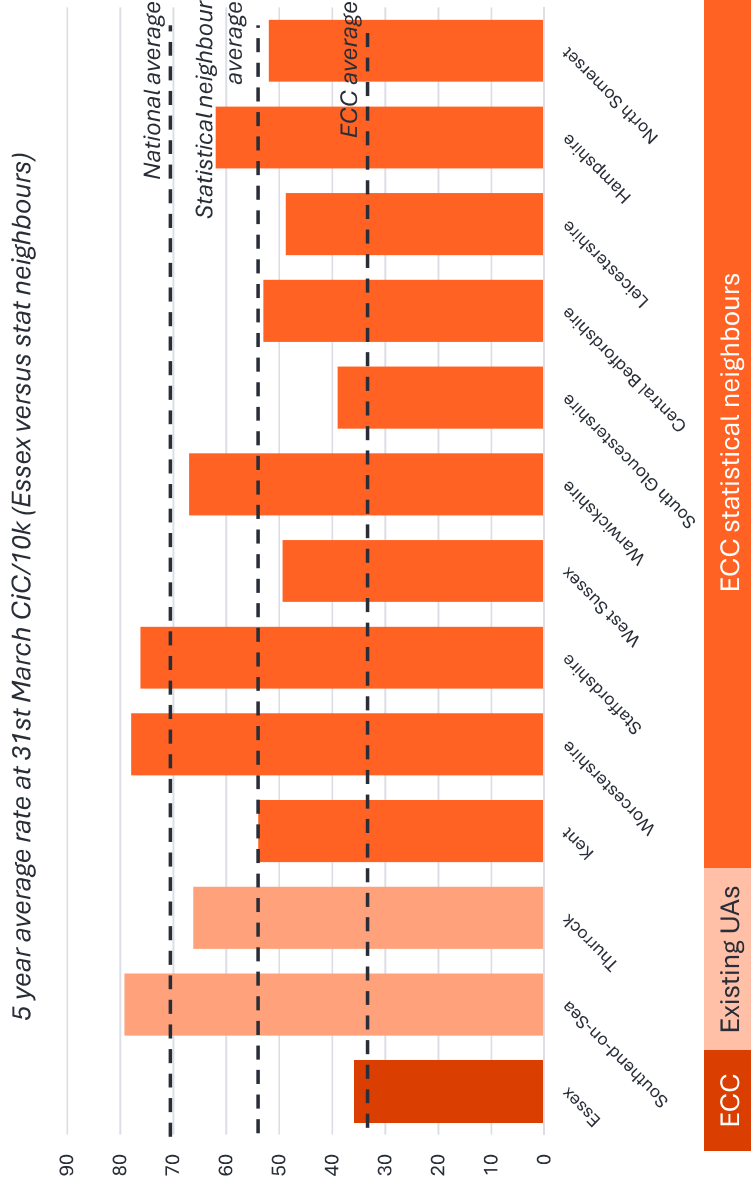
# Children's Social Care: Children in Care

## POSSIBLE IMPLICATIONS OF DISAGGREGATION OF CHILDREN'S SERVICES

Essex has a particularly low level of Children in Care per 10k, much lower than both Southend and Thurrock unitary authorities. ECC also considerably outperforms the average of its statistical neighbours and the national average rate of children in care per 10k.

This level of performance varies significantly within ECC between districts and with Southend and Thurrock. **Maintaining and improving the practice and performance will be an important lever on future demand** and future spend. There is risk that through disaggregation of service on the existing footprints that new authorities are not able to continue to deliver in line with ECCs current performance and therefore lead to higher cost bases.

We have therefore modelled an additional three scenarios (see next page) that consider the impact of increasing prevalence of CiC in the proposed new authorities. These scenarios include a more detailed forecast of CiC demand from recent discovery work, a case at stat neighbour CiC/10k and a further case at national average CiC/10k.



# Children's Social Care: Children in Care

## POSSIBLE IMPLICATIONS OF DISAGGREGATION OF CHILDREN'S SERVICES

It is clear that an erosion of ECCs current practice model and relative low rates of CiC present the risk of considerable cost pressures on the proposed unitary formations. This could result in a growth of spend of up to £236m compared to the baseline case, in the worst case of all areas regressing to the national average. The costs presented below include only the cost of CiC placements. This analysis shows a large range of scenarios for comparison and does not attempt to show where Essex may land in that range.

It is unlikely performance would reduce to national average given the current practice, however, it is expected that the prevalence of children in care will increase significantly even without LGR (ECC forecast column).

Scenario	Proposed Authority	2025 CiC cost		2040 CiC cost		2040 CiC cost		2040 CiC cost	
		Based on existing CiC/10k	Based on ECC forecast CiC/10k	Based on ECC forecast CiC/10k	Assuming Stat Neighbours CiC/10k	Assuming National CiC/10k	Assuming Stat Neighbours CiC/10k	Assuming National CiC/10k	
Baseline	Essex		£135m		£242m				
	Southend-on-Sea	£209m	£38m	£361m	£61m				
	Thurrock		£36m		£58m				
Scenario 1	North	£210m	£102m	£362m	£182m	£475m	£249m	£588m	£327m
	South		£108m		£181m		£226m		£261m
Scenario 2	North East		£64m		£115m		£134m		£177m
	West	£212m	£42m	£365m	£74m	£479m	£135m	£593m	£177m
	South		£106m		£176m		£209m		£239m
Scenario 3	North		£63m		£114m		£137m		£180m
	Central	£213m	£40m	£366m	£71m	£481m	£115m	£595m	£151m
	South West		£62m		£104m		£129m		£152m
	South East		£48m		£78m		£100m		£112m
	North West		£23m		£39m		£66m		£87m
Scenario 4	North East		£61m		£109m		£119m		£156m
	Central	£213m	£23m	£368m	£41m	£482m	£86m	£597m	£114m
	South West		£59m		£100m		£112m		£129m
	South East		£48m		£78m		£100m		£112m
	North West		£23m		£39m		£66m		£87m



## Section 2c: SEND

The scope of this section is to provide insight into the likely impacts of each proposed scenario on SEND, covering demand, cost and quality over the next 15 years.

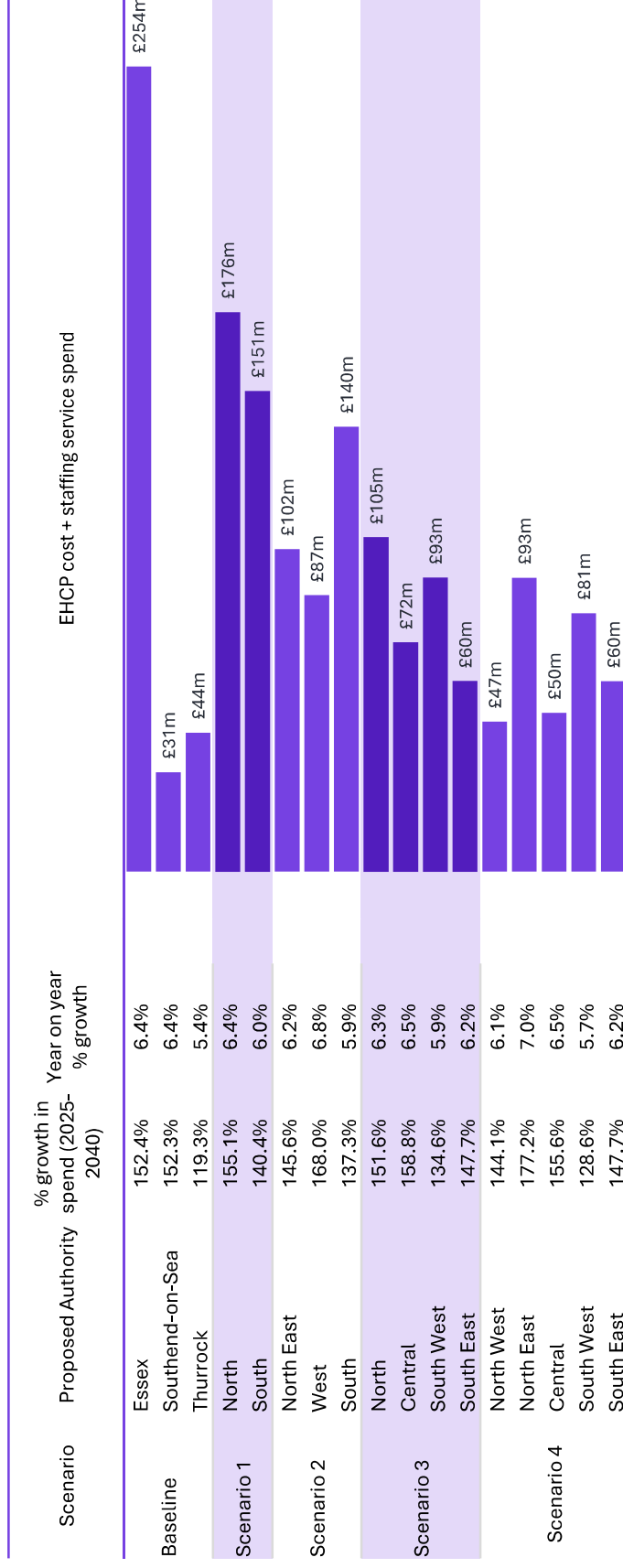
# Education: EHCPS

## EHCPS COST AND STAFFING: VARIATION AND FORECAST

Total spend on EHCPS is forecasted to continue its rapid increase by around 150% between 2025 and 2040. The distribution of demand and cost pressures are primarily in the North East. The largest spend outlay across all scenarios by region is focussed in the North of the county.

The values presented below include both expected EHCPS and staffing costs. **It does not include the cost of delivering business support functions that currently sit outside of the Childrens social care directorate (eg IT support), SEN provision (outside of EHCPS) or other commissioned services.**

**Scenarios 2, 3 and 4 all show variation** in total demand and therefore spend, with South West and North East showing higher demand than other areas.



Data: ONS population forecasts and estimates, Essex data  
 Assumptions: Population growth matched to ONS growth rates, ONS projections, or aligned to linear regression model of population growth as appropriate.

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# Education: EHCPs

## EHCP DEMAND VARIATION AND FORECASTING

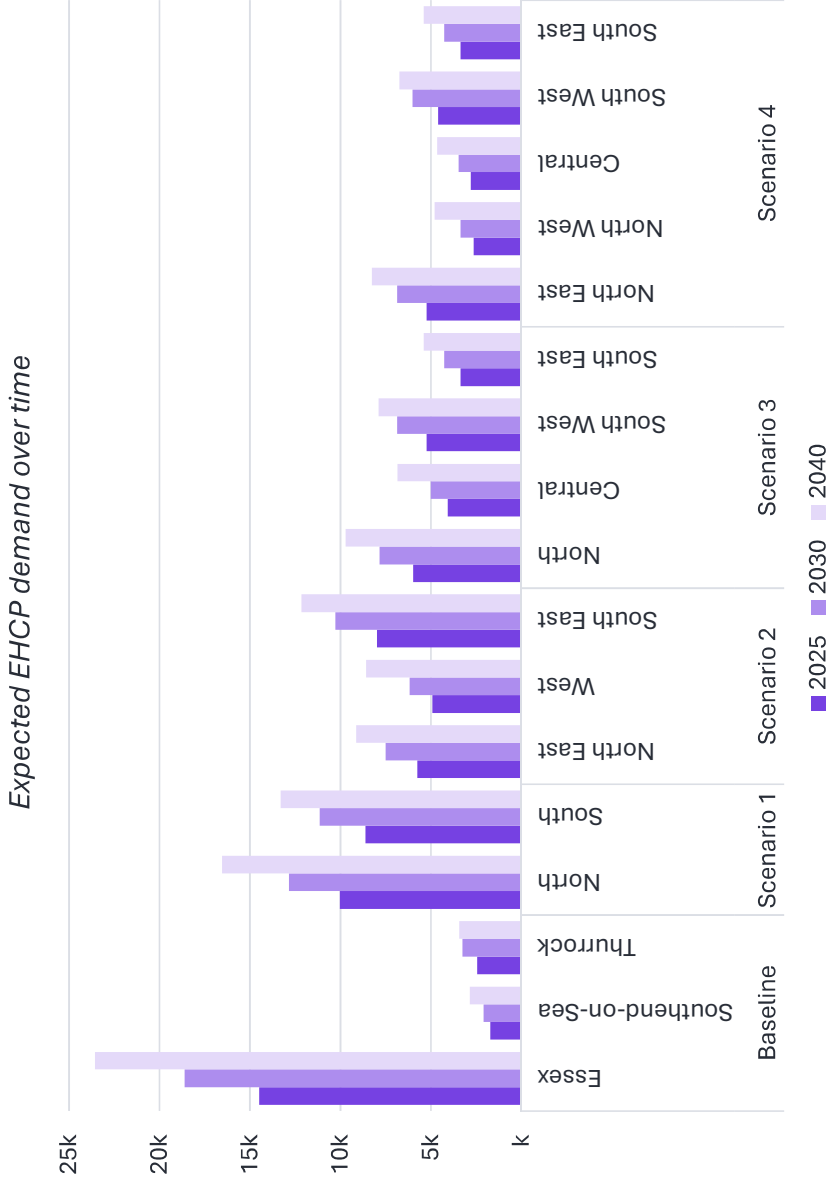
We have modelled the distribution and change in the size of the EHCP caseload across the proposed unitary formations.

EHCP demand growth is uncorrelated to the school age children population demographic changes. A relatively constant school age population (in some cases shrinking) is matched to rapid growth in EHCP numbers across the county and across the country.

Demand is greatest in the North of the county.

**Across all scenarios, growth in demand is consistently higher than any other provision setting.**

A 5 unitary approach (Scenario 4) faces the greatest initial spread of demand (excluding baseline case).



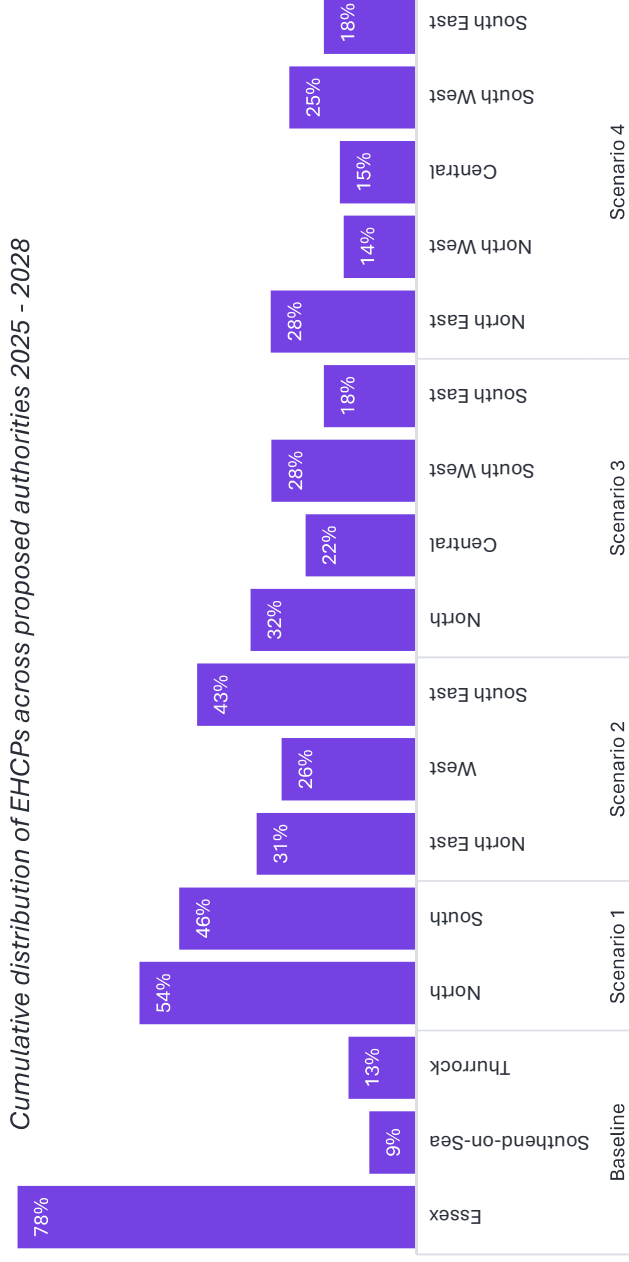
Data: ONS population forecasts and estimates, Essex data  
 Assumptions: Population growth matched to ONS growth rates, ONS projections, or aligned to linear regression model of population growth as appropriate. Capped prevalence at 550/10k under 25s

# Education: SEND deficit

## SEND DEFICIT DISTRIBUTION

The ECC **SEND deficit position is projected to increase to £219.5m** by vesting day in 2028 where this position may fall to the proposed new unitary authorities.

Our analysis has calculated the cumulative contribution to this deficit position by each of the proposed unitaries in each scenario. **If this deficit is projected to the unitary authorities in proportion to their cumulative demand between 2025 through 2028 we see the following distribution.**



# Demand forecasting

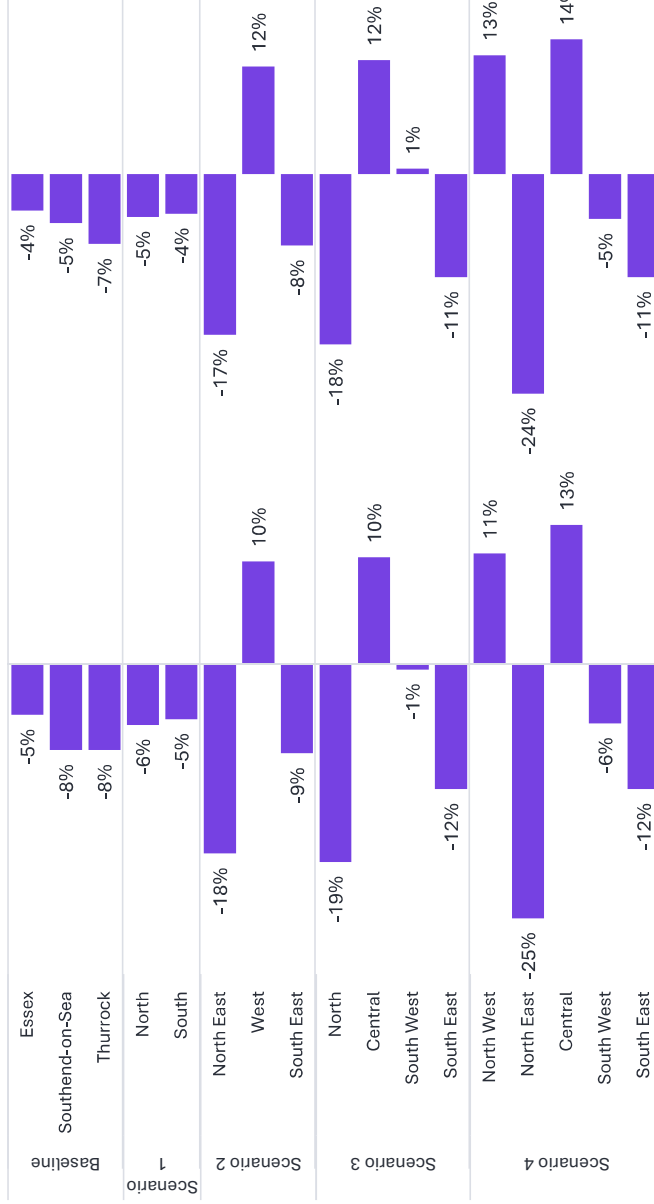
## PLACEMENT DEMAND AND CAPACITY

The size of the school age population has been compared to the forecast number of mainstream school places available by district provided by ECC. The population has not been adjusted to account for the proportion of children receiving education in other settings (approx. 7% nationally). We can see that over the current authority footprints, demand and capacity are well aligned, but this is not the case over all of the proposed new unitary formations. The shortage of capacity is greatest in the North East, with surplus capacity in the urban Central and North West regions.

2025 school capacity deficit



2030 school capacity deficit

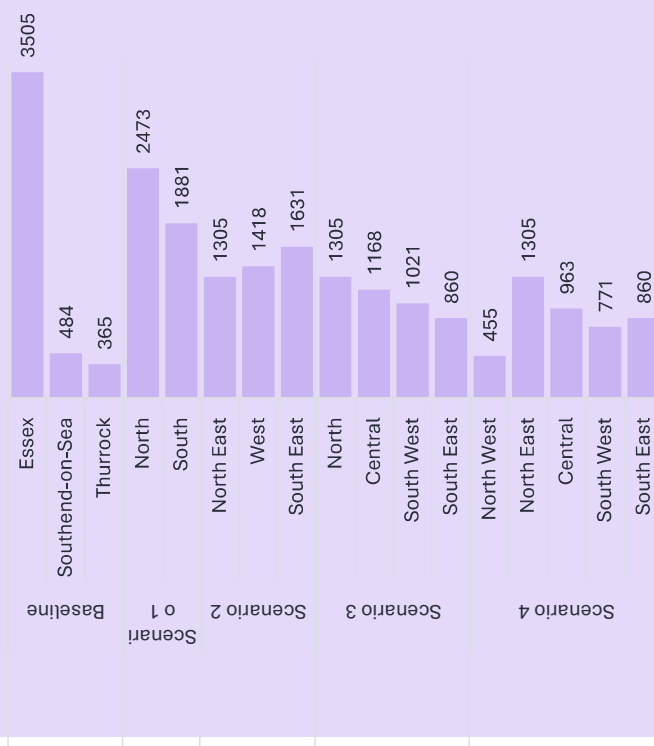


Negative results indicate demand greater than capacity

### MSS capacity

From the available data it was not possible to provide a direct MSS demand vs capacity comparison. In lieu of this we have presented the distribution of maintained special school places by each of the proposed scenarios.

MSS capacity



Data: ONS population forecasts and estimates, CQC transparency data, Essex transparency data, Essex data, gov.uk education dataif  
 Assumptions: Population growth matched to ONS growth rates, ONS projections, or aligned to linear regression  
 model of population growth as appropriate. 2025 school's capacity held constant.

# Appendix I: Methodology

# Methodology: Demand



# Demand Modelling

HIGH LEVEL APPROACH



To model how we expect demand to vary by geography and change over time we have segmented the population. This will both enable us to provide forecasts for new geographical footprints, and control for the impact of deprivation and population density in our forecasting.

When we look to the features that have the biggest impact on social care demand for a population, we see that these are age and deprivation. In the model, we have segmented our population by age, and used the smallest practical geography to control for deprivation.

*Smaller geography = more accurate.*

For each segment ( i.e. U18 in MSOA x ) of the population we can say:

$$\text{Segment Demand} = \text{Segment Population} \times \text{Segment Prevalence}$$

We know all three of these terms today, and through making a series of sensible assumptions on how we expect the prevalence and population to change within a segment we can forecast our expected demand in that segment.

# Demand Modelling

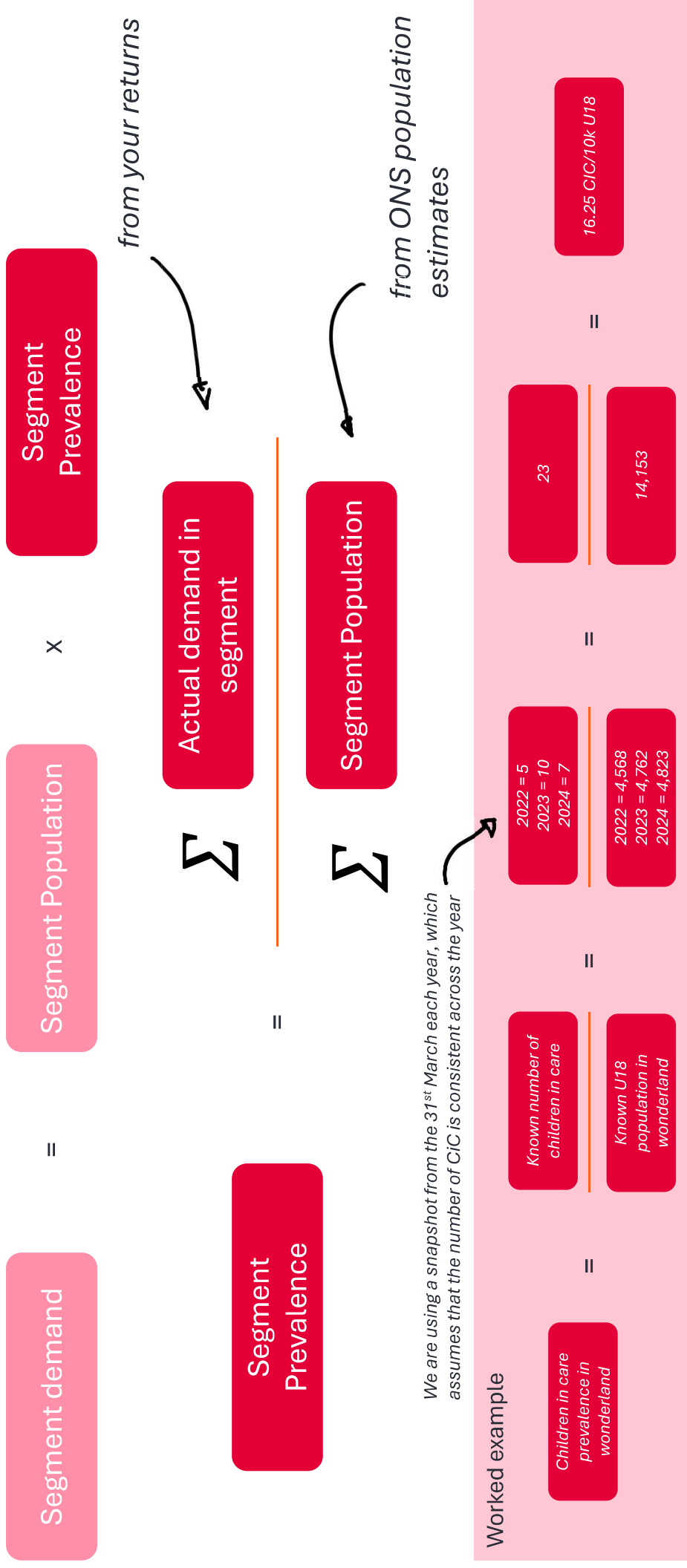
## POPULATION CHANGES

$$\text{Segment demand} = \text{Segment Population} \times \text{Segment Prevalence}$$

- To model population growth we are using the following datasets:
  1. **Forecasts:** ONS population projections (at a District level), last updated in 2019.
  2. **Historical trends:** ONS population estimates (at an LSOA level), updated annually.
- Where they exist, we will use ONS population projections as the basis for population forecasts (i.e. district level and above).
  - We appreciate that these will not always account for the impact of local housing provision and are intending to enable you to tweak these forecasts in an interactive model when we share this (post 14<sup>th</sup> March).
- Where forecasts do not exist to a granular enough detail, we will use a simple model ensuring that aggregations match the most granular ONS figure available.
- For each cohort we are using the following age segments,
  - Childrens: U18
  - SEND: U25
  - Working age adults: 18-65
  - Older Adults: 65+

# Demand Modelling

WHAT DO WE MEAN BY PREVALENCE



# Demand Modelling

## ORDINARY RESIDENCE



We know that we have more placements in some parts of the county than others relative to local demand. As a result we place service users in areas of the county that are not the same as their originating address. **This means that our data currently shows an artificially distorted view of need across the county.** As our population tends to its “natural” demographics we would expect this distortion to unravel and social care need to equalise across geographies. This phenomenon will only impact “placement” based services (e.g. residential care), and not community services (e.g. dom care).

For each service, we are planning on producing cost and demand analysis for 2 key scenarios:

Service	Day 1 demand	Long term population driven demand
<b>Childrens:</b> Children in Care	Using known demand and cost data for each placement, provide a forecast for each district based on service users currently placed in that locality. <i>We have assumed that this placements will be distributed with respect to their <b>originating address</b>, not the placement address.</i>	We will perform the analysis based on the children’s <b>originating / parental address</b> , which will not change as a result of the location of the child’s placement.
<b>Adults:</b> residential and nursing placements	Using known demand and cost data for each placement, provide a forecast for each district based on service users <b>currently placed in that locality.</b> These forecasts will have demographic distortions baked in as we do not expect services users to be moved due to changes in boundaries.	Our long-term population driven demand forecast will be based on originating address where known. We do nothome-based record of a service users originating address so cannot use these to forecast demand. As the population across the county tends to its natural demographics, we expect the prevalence of nursing and residential placements to tend to the same distribution between districts as home based care (as this service does not result in service users changing address). For the longer term forecasts we will use a prevalence rate that is distributed in this way.

# Demand Modelling

HOW ARE WE MODELLING CHANGES IN PREVALENCE OVER TIME

$$\text{Segment demand} = \text{Segment Population} \times \text{Segment Prevalence}$$

In theory we can use historic demand data to understand how prevalence changes over time. However, in practice, this data is noisy, heavily influenced by COVID-19 and rarely available over the long term. For these reasons we have applied the principle of keeping prevalence fixed, unless we have a specific compelling reason to believe this assumption to be false. We can calculate a known prevalence from actuals, for the period FY21/22 through FY23/24.

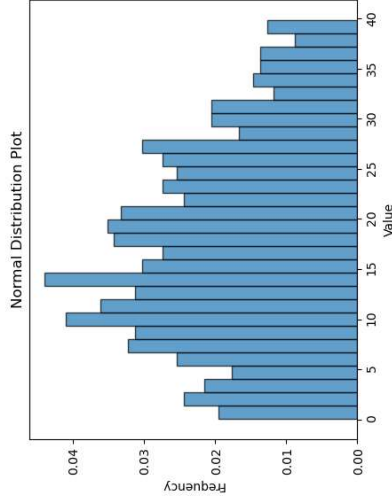
Cohort	Assumptions for Day 1 (2025)	Assumptions for 2030 & 2040
Older Adults	<ul style="list-style-type: none"> <li>Prevalence remains the same as past 3 year average per district, based on placement address</li> <li>For OP, use population 65+ for prevalence and population forecasts</li> <li>Practice is consistent across current LA footprints</li> </ul>	<ul style="list-style-type: none"> <li>Assume "natural" demographic demand is proportionally spread as per originating address where available or as per dom care between MSOAs.</li> <li>For OP: Assume average placement duration of 2 years.</li> </ul>
Working age adults	<ul style="list-style-type: none"> <li>Prevalence remains the same as past 3 year average per district, based on placement address</li> <li>For WAA, use population 18-65+ for prevalence and population forecasts</li> <li>Practice is consistent across current LA footprints</li> </ul>	<ul style="list-style-type: none"> <li>Assume "natural" demographic demand is proportionally spread as per originating address where available or as per dom care between MSOAs.</li> <li>For WAA: Assume average placement duration of 15 years.</li> </ul>
Children's	<ul style="list-style-type: none"> <li>Prevalence remains the same as past 3 year average per district</li> <li>Use U18 population</li> <li>Assumed that spend will be divided by originating address rather than placement address, therefore analysis completed based on parents address (not placement address)</li> <li>Practice is consistent across current LA footprints</li> </ul>	<ul style="list-style-type: none"> <li>Prevalence remains the same as past 3 year average per district</li> <li>Assumed that spend will be divided by originating address rather than placement address, therefore analysis completed based on parents address (not placement address)</li> </ul>
SEND	<ul style="list-style-type: none"> <li>Use U25 population &amp; increase as per ONS forecasts</li> <li>Assumed linear increase in ECHP prevalence until cap at 5.5% of population</li> <li>Breakdown by setting in same proportions as now</li> </ul>	<ul style="list-style-type: none"> <li>Assumed linear increase in ECHP prevalence until cap at 5.5% of population</li> <li>Breakdown by type in same proportions as now</li> </ul>

# Assumptions LENGTH OF STAY

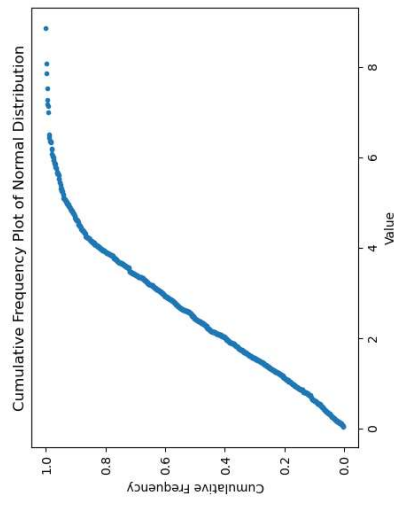
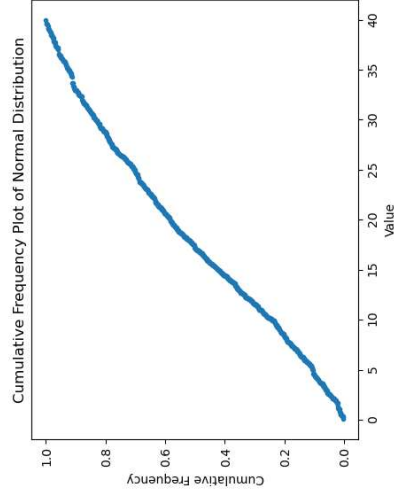
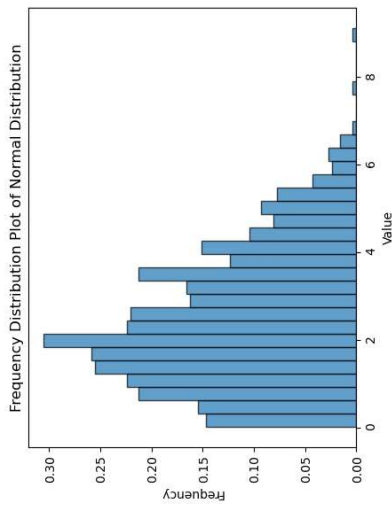
## Proposed assumption

	Service	Mean = s.d.	5 years	15 years
WAA	Dom	15	10%	40%
	Resi	15	10%	40%
	Nursing	15	10%	40%
OP	Dom	2	90%	100%
	Resi	2	90%	100%
	Nursing	2	90%	100%

### WAA



### OP



## Demand Modelling

SUPPRESSION HANDLING

$$\text{Segment demand} = \text{Segment Population} \times \text{Segment Prevalence}$$

Where values in data returns have been redacted, we have taken the following approach to “filling in the blank”.

1. Where a total over a larger geographical area is known, we have spread the missing values proportionally by population over the blanks.
2. Where a total at a larger geographical area is not known, we have calculated the demand based on the average prevalence from the known values and multiplied it by the population for the suppressed segment. If this gives a value greater than 5, we have assumed 5.
3. Where we have no more detailed information, we have assumed 2.5.



# Methodology: Cost

# Cost Modelling

## SERVICE COST

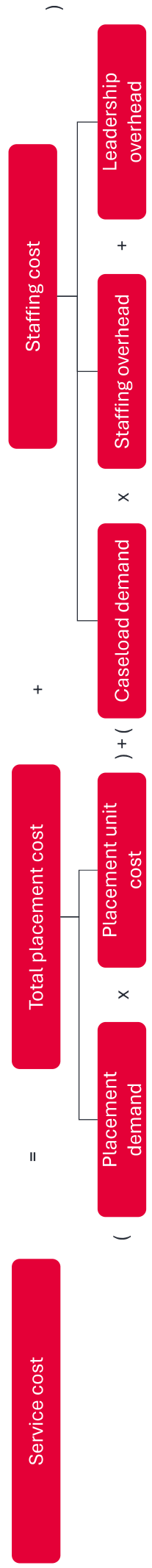
Our cost analysis has been limited to assessing the impact of LGR on two key drivers of spend:

1. The cost of placements & homecare
2. The staffing cost associated with identifying need and supporting residents.

Where we have sufficiently granular data this extends too:

Service	Description	Services in scope		
		Adults	Childrens	Education
Placements	Analysis on unit cost of placements and homecare. This will extend to estimating the impact of scale, population density, complexity, self funding, OOA placements, Inflation and equalisation of rates.	<ul style="list-style-type: none"> <li>• Nursing</li> <li>• Residential</li> <li>• Domiciliary</li> <li>• Supported living</li> <li>• "other"</li> </ul>	<ul style="list-style-type: none"> <li>• Children in care residential placements</li> </ul>	<ul style="list-style-type: none"> <li>• MSS</li> <li>• IMSS</li> </ul>
Staffing	Analysis of the distribution of staffing spend across the proposed unitaries, and any anticipated changes in organisation structure.	<ul style="list-style-type: none"> <li>• All council Adults Social Care directorate staffing</li> </ul>	<ul style="list-style-type: none"> <li>• All council Childrens social care directorate staffing</li> </ul>	<ul style="list-style-type: none"> <li>• All council Education directorate staffing</li> </ul>

The overarching governing equation is:



# Cost Modelling

## UNIT COSTS



In a similar manner to our demand modelling, we have used the same population segmentation approach to help us model costs across the county.

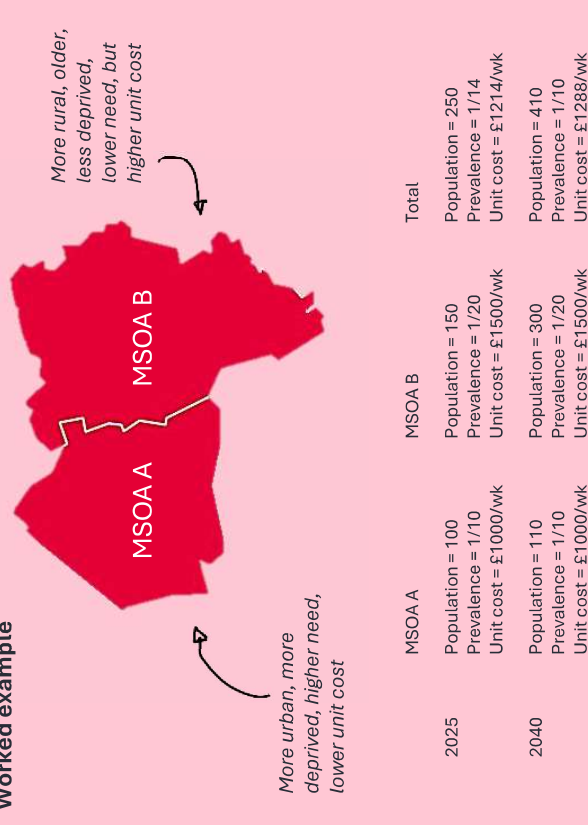
As part of the data return you have provided us with unit costs at MSOA granularity. This means that we can model cost at this small geographic level to help control for complexity (driven by deprivation et.) and local cost variation (e.g. higher rents in urban areas).

We have modelled unit cost by individual setting (i.e. OP Nursing) to ensure that we are comparing cases of comparable complexity so far as is possible within non-PID data.

Placement demand is taken as per the approach discussed last week.

To provide average rates over larger geographic areas we have used a demand weighted average. This means that if we forecast increasing need in an expensive area of the county, and a reduction in need in a less expensive area, the average unit cost would adjust to account for this.

### Worked example



# Cost Modelling

## UNIT COSTS

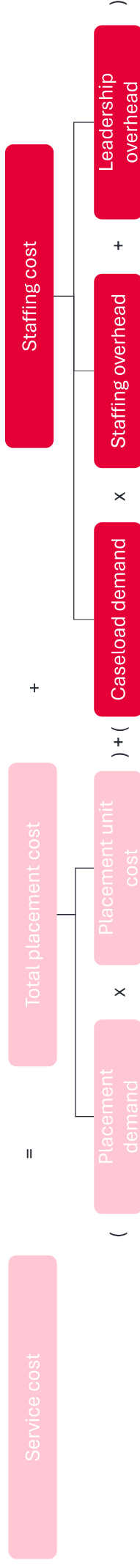


The unit cost is the cost of a setting placement for one service user. As we forecast unit cost forward, there are several factors that we have considered to assess the impact of LGR.

Factor	Hypothesis	How are we modelling the impact of this?
Scale	That smaller authorities have less buying power and so will pay more for placements as they are outcompeted by larger LAs and the private market.	Using both national and individual data returns we will identify any correlation between unit cost and scale. If any strong trend is identified, we will apply an expected increase in unit cost rate as a result.
Population density	It is more expensive to deliver care in areas with lower population density due to increased travel time.	
Complexity	More complex cases have a higher associated cost of care and our caseload is increasing.	By modelling costs at a small geographic scale we control for these factors. As our underlying population changes (gets older, poorer or less dense) the aggregated cost will change to reflect this as we will have more service users with a higher average unit cost.
Self funding	Different areas of the county will have differing levels of self funders, which means that different unitary authorities will need to contribute differing percentages of the total cost of care.	
Out of area placements	We pay more to place service users outside an authority.	Out of area placements were not significantly more expensive than those provided in county.
Inflation	Placement costs will increase in cost regardless of complexity or authority boundaries.	We have assumed compounding 3.25-3.21% inflation in line with 10 year CPI & average earnings index.
Equalisation of care rates within a LA	Where an existing unitary authority is absorbing neighbouring MSOAs/districts and is paying a materially higher unit cost, and additional demand added to these contracts will be at this higher rate.	We are not expecting this to impact many scenarios, but will assume the unit cost of the existing unitary where this is higher.

# Cost Modelling

## STAFFING COST



Through our analysis on staffing cost, we are looking to understand the following:

1. How will staffing requirements vary across the proposed unitary authorities.
2. Where do we expect to see the cost of staffing change between different proposed models?
3. Where might existing organisational structures become unviable due to disaggregation of services?

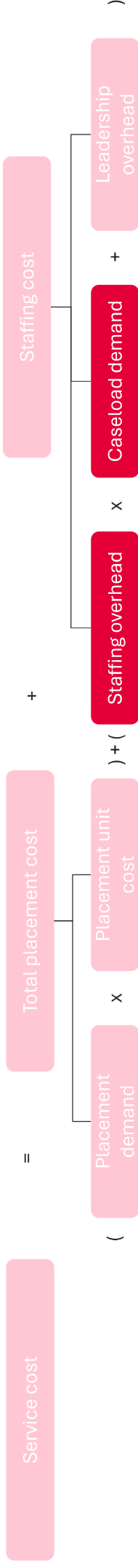
Our analysis has focused only on staff working directly on people services (e.g. transformation or data teams are excluded).

We have divided the workforce into 2 key groups:

- **Delivery team:** Staff that scale with demand, this includes all staff up to “team manager” level ( up to c. £70k/annum/FTE).
- **Senior leadership:** Staff at Director level or their direct reports. These roles are required for every organisation regardless of caseload size.

# Cost Modelling

## STAFFING COSTS (DELIVERY TEAM)

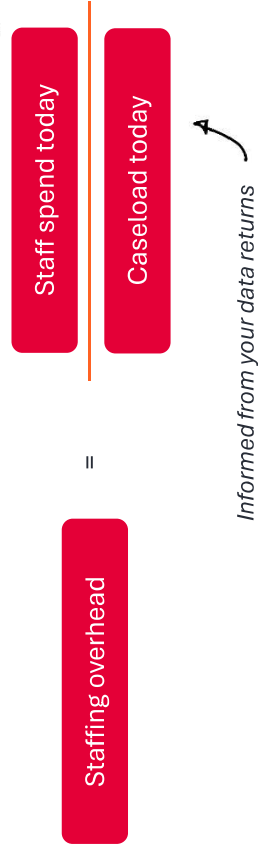


Staffing costs that scale with demand

Most staffing cost scales with the number of service users that we serve. We can therefore use a staffing overhead per service user to attribute this spend to unitary authorities based on expected demand both on day 1, and using our 2030 / 2040 forecasts.

*Includes only staff that scale with service delivery, i.e. up to team manager grade*

*Assumed to rise with average earnings, 3.51%*



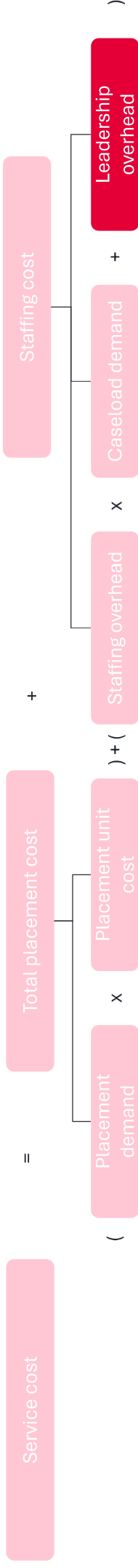
Caseload demand is used as a proxy to understand how our total staffing costs will change with time and be distributed between proposed LAs. Because we are most interested in changes to caseload and we are using a consistent definition of this demand for both the future state and demand today, it does not matter if this demand fails to capture all work performed by a team.

In general, this demand includes an element related to the number of new referrals that will require assessment, and an element related to the total size of the caseload, that will require a periodic review.

We have modelled caseload demand to include:

Service	New assessments	Periodic review
Adults	Number of requests for support received for new clients	Total number of service users supported
Children's	Referrals (or assessments)	Safeguarding services caseload (i.e. CIN + CP + CIC)
SEND	New EHCPs	EHCPs open on 31 <sup>st</sup> March

# Cost Modelling STAFFING COSTS (SENIOR LEADERSHIP)



## Senior leadership

Whilst these staff might make up a relatively small proportion of the number of employees in an organisation, due to higher salaries they make up a disproportionate percentage of current staffing spend. For scenarios whereby total demand on an organisation is smaller, this leadership overhead can make up a significant proportion of spend.

We have assumed that director level leadership team for each directorate is fixed in its scale, and that by increasing the number of authorities in a geography we would need to duplicate this team across each service.

Their director reports i.e. “Head of”/ “Assistant Director” will be assumed to scale with demand by 50% (e.g. a 50% reduction in demand would result in a 25% reduction in this cohort).

We have assumed senior leadership to include staff with salaries >£70k/ annum/FTE, i.e. “Head of” and “Director” roles.

## Organisational structures and team viability

In addition to the cost modelling detailed we will also indicate where we think that a proposal will result in an organisation structure that may be unviable.

Where you have been able to provide us staffing data at sufficient granularity (i.e. to a team and role level) we will indicate where we believe that a team will have insufficient local demand to support disaggregated delivery.

Our methodology to identify these teams is as follows:

1. Using team specific demand (i.e. # CIC for the CIC team) calculate the average staffing overhead (£/service user).
2. Maintaining the current average caseload per worker attribute existing staffing spend to each of the proposed unitary authorities.
3. Identify where proposed spend for a given team in a unitary authority is less than 1 worker, 1 senior worker and 0.5 team manager at current rates of pay. These teams will then be flagged as unviable.



## Cost model IMPACT OF SCALE

- We have already performed work alongside the CCN to understand the relative importance of various factors affecting the cost of delivering care, the most significant include population size, density and relative deprivation.
- Through modelling unit cost over a segmented population we have already capture variation in population density, deprivation and demography. However, these factors were used as control variables in our scale analysis to isolate the impact of this change to geographic boundaries.
- To model the impact of scale on unit cost we have developed at statistical model based on multivariable linear regression. The dependent variable was defined as the unit cost for each setting and two independent variables were defined as:
  - Cohort population size (i.e. 65+ population for OA)
  - Index of Multiple Deprivation score
  - Median income
- These factors are available from national data and were used to calculate regression variables enabling us to predict the average unit cost for a given LA for each setting based on its scale, unit cost and relative deprivation.
- For each proposed scenario's a unit cost factor was calculated as the ratio of the predicted unit cost for the proposed formation over then baseline case. The deprivation and median income were set to the average for the county. This unit factor is then applied to the forecast unit costs in the analysis. In most this cases this was approximately a 2-3% increase in cost for a 50% reduction in cohort population.

# Cost modelling

## SUPPRESSION HANDLING



Where placement cost values in data returns have been redacted, we have taken the following approach to “filling in the blank”.

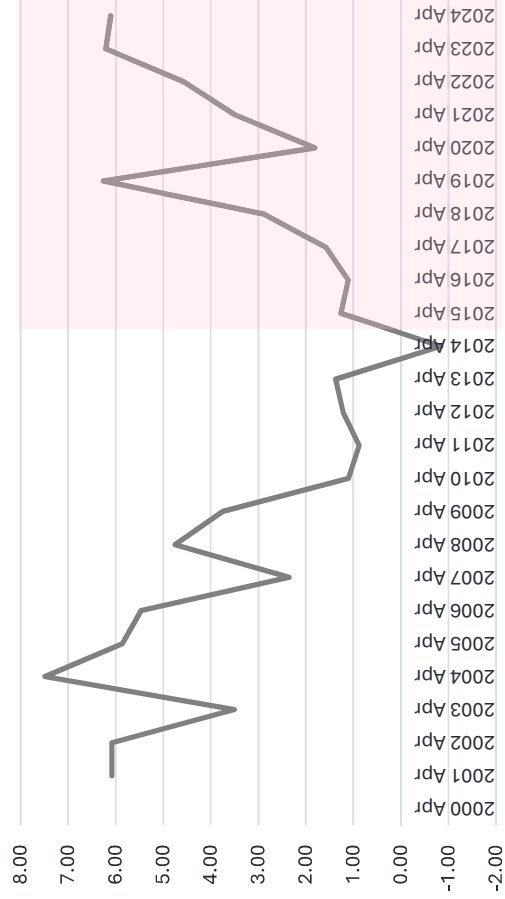
1. Where an average over a larger geographical area is known, we have set the missing value for all unknowns to give that weighted average when aggregated.
2. Where a total at a larger geographical area is not known, we have assumed the average of the known data.

# Inflation & National Insurance APPROACH

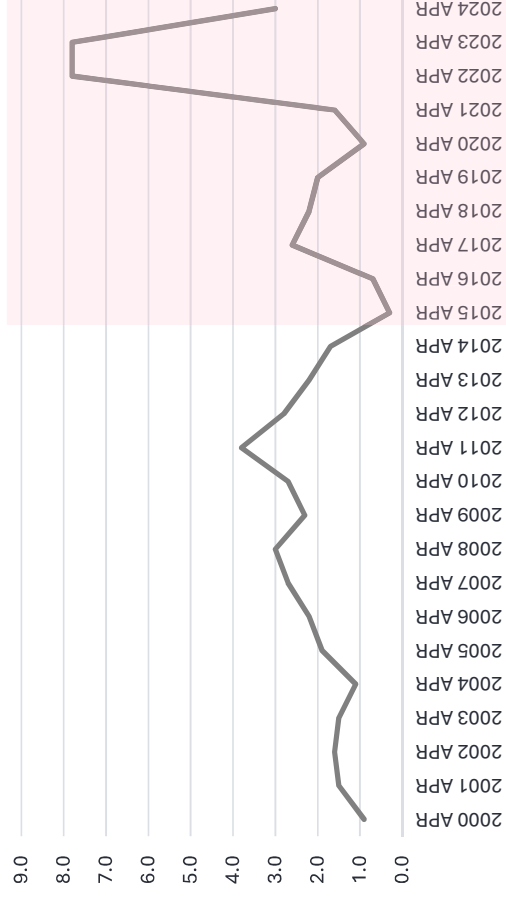
Through this report the following inflationary increases have been used in the model.

Index	10 year compound average	Residential weightings of inflation measures	Dom & Nursing weightings of inflation measures
CPI	2.85%	40%	30%
Average earnings	3.51%	60%	70%
Total		3.25%	3.31%

ERN03 - NSA ind monthly growth xbia



CPHI



# Existing Unitaries

## DATA SOURCES FOR THURROCK AND SOUTHEND

This analysis has been based on directly provided data for ECC districts. However, there was not equivalent data from Southend and Thurrock unitary councils. Where possible national data returns have been used to indicate demand and cost for these neighbouring councils. Detailed breakdown of this is provide below.

Category	Values	How are we estimating these values from national returns?
Demographics	Population, Ethnicity, Deprivation	ONS data (banded forecasts and population estimates), Census 21 (Population by ethnicity and location), Index of Multiple Deprivation (File 10 2019 data)
Demand	Residential, Nursing and Domiciliary Care (OA and WAA)	Average prevalence of ECC districts assumed for Residential, Nursing and Domiciliary Care.
	Children's safeguarding	Government returns: Children in Need (CiN – B7 return; CPP – D5 return), Children Looked After in England Including Adoptions (CiC - CLA on 31 March by characteristics – LA)
Capacity	SEND	Government returns (Sen2 Caseload – Ages groups), split by average proportions of provision type of 3 closest county district statistical neighbours (population density, % in top 10% deprivation, # EHCPs)
	Adults	CQC transparency data (Care directory with filters, CQC care directory)
	CiC residential	County data often includes capacity in neighbouring unitaries, where not available we will estimate using capacity / resident of population from county figures
	CiC internal fostering	Estimated using rate per / resident from County figures
	MSS	Publicly available data ( <a href="https://www.livewellsouthend.com/specialschools">https://www.livewellsouthend.com/specialschools</a> ) with gov.uk education data
Unit Cost	Residential and Nursing (OA and WAA)	Provided in ASCFR returns (Table 52)
	Domiciliary Care (OA and WAA)	Provided in ASCFR returns (Table 52)
	CiC	County-wide average unit cost
Staffing	SEND	Average unit cost of 3 closest county district statistical neighbours (population density, % in top 10% deprivation, # EHCPs)
	Staffing overhead	Assumed comparable spend per service user as county