

# **Economic and social value of the UK adult social care sector: Wales**

Independent research by Alma Economics

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## About the authors



Alma Economics combines unparalleled analytical expertise with the ability to communicate complex ideas clearly.

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Skills for Care and Development is an Alliance of seven organisations in the UK and Republic of Ireland, that focuses on regulation and workforce development in social care, social work, and early years. The Alliance consists of Skills for Care; Northern Ireland Social Care Council; Scottish Social Services Council; Social Care Wales; CORU; Early Years Alliance and Social Work England.

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# Abbreviations

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## List of acronyms

Acronym	Definition
A&E	Accidents and Emergencies
ASC	Adult Social Care
ASCOF	Adult Social Care Outcomes Framework
ASCS	Adult Social Care Survey
ASC-WDS	Adult Social Care Workforce Dataset
ASHE	Annual Survey of Hours and Earnings
BCR	Benefit-Cost Ratio
DALY	Disability-Adjusted Life Year
EBITDAR	Earnings Before Interest Taxes Depreciation Amortisation and Restructuring or Rents
FTE	Full-Time Equivalent
GOS	Gross Operating Surplus
GVA	Gross Value Added
INA	Immediate Needs Annuities
PAs	Personal Assistants
PSSRU	Personal Social Services Research Unit
QALY	Quality-Adjusted Life Year
SCRQoL	Social Care-Related Quality of Life

## List of definitions

Key term	Definition
Adult Social Care Survey	The Personal Social Services Adult Social Care Survey is an annual survey of all service users aged 18 and over who have received long-term support services in England. The aim of the survey is to understand how effective adult social care services are in supporting their users (NHS Digital, 2023).
Benefit-Cost Ratio (BCR)	The ratio of the estimated value of benefits compared to costs. If the BCR exceeds 1, this indicates that £1 of expenditure returns more than £1 of benefit.
Day care	Care provided for service users in a day care centre (non-residential) or the provision of activities outside the home.
Direct effects	The economic effects created by the operation of the adult social care sector itself. These include the earnings of employees in the sector, the gross operating surplus of independent care providers, and the number of jobs created.
Direct payment recipient	An individual who receives payment from the Government or local authority to pay for their own care, rather than having prescribed care provided to them.

Disability-Adjusted Life Year (DALY)	DALYs measure years lost and years lived adversely due to illness, disability, or injury. One DALY is equal to losing one year of healthy life due to premature death.
Domiciliary care	Care provided in a service user's own or family home.
Earnings Before Interest, Taxes, Depreciation, Amortisation, and Restructuring or Rents (EBITDAR)	EBITDAR is a standard measure of operating profitability for the private sector. EBITDAR focuses on a company's main operations, excluding expenses such as taxes, rent, and non-cash expenses. This facilitates comparison across companies as it minimises differences arising from factors not related to the core operations of a company.
Formal carer	Someone employed to provide paid help to adults with disabilities and or physical or mental illnesses.
Full Time Equivalent (FTE)	An FTE is equal to the hours a person employed full-time would work in a week. While this varies across countries, in Wales it is equal to 37 hours. As a result, a person working 0.5 FTEs, works half as many hours as a person employed full-time would (i.e. 18.5 hours per week).
Gross Operating Surplus (GOS)	The GOS is defined as income minus operating costs. It captures the income generated through profits and rents by independent providers of adult social care after subtracting, for instance, staff costs, costs associated with day-to-day services, and transportation costs.
Gross Value Added (GVA)	The amount of goods and services that have been produced, minus the cost of all inputs and raw materials that are directly attributable to that production.
Independent care	Private and voluntary sector providers of adult social care.
Indirect effects	Indirect are the effects created by the demand for intermediate goods and services by adult social care to provide its services.
Induced effects	Induced are the effects created by changes in the purchasing behaviour of individuals directly and indirectly employed in the adult social care sector.
Loss ratio	The loss ratio is a term used in the insurance sector, defined as the losses an insurer incurs from paying claims as a percentage of premiums earned. It represents the proportion of the income an insurer gains that is then claimed by insurance customers.
Unpaid carer	Someone who provides unpaid help to a friend or family member needing support, perhaps due to illness, older age, disability, a mental health condition or an addiction (Department of Health & Social Care 2018).
Macroeconomic impact	The macroeconomic impact includes the contribution of the adult social care sector to the economy, including wages of carers and operational profits of providers (direct impact), as well as the demand and income generated in other sectors because of adult social care (indirect and induced impacts).
Non-regulated care	Employers in the adult social care sector which are not subject to inspections or regulation.
Nursing care	Support provided to individuals with a higher level of needs. This support is delivered by specially trained carer and overseen by nurses.

Personal assistants (PAs)	Personal assistants are people hired directly by someone who requires support. They can also be employed by a family member or representative when the person they are supporting does not have the physical or mental capacity to be the employer. A PA works directly with the individual they are supporting in a person-centred way to enable them to live their life according to their wishes and interests.
Private care	Employers in the adult social care sector owned by for-profit private enterprises.
Public care	Employers in the adult social care sector owned and operated by local authorities and the NHS.
Quality-Adjusted Life Year (QALY)	A measure of the state of health of a person or group in which the benefits, in terms of length of life, are adjusted to reflect the quality of life. One quality-adjusted life year (QALY) is equal to 1 year of life in perfect health.
Regulated care sector	Employers in the adult social care sector that are inspected and regulated by the national social care inspectors.
Residential care	Care provided in a residential setting rather than in a service user's own or family home.
Social Care-Related Quality of Life (SCRQoL)	SCRQoL is part of the Adult Social Care Outcomes Framework (ASCOF) and Adult Social Care Survey (ASCS) captured in metric "1A: Quality of life of people who use services". This measures the care users' reported experience in eight outcome domains covering control, dignity, personal care, food and nutrition, safety, social participation and accommodation.
Socioeconomic impact	The socioeconomic impact includes wider benefits to the society, not captured in the macroeconomic models, such as wellbeing of adults receiving care.
Voluntary care sector	Service providers in the adult social care sector run by not-for-profit organisations.

## Executive summary

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In 2022, there were 84,134 people employed in the adult social care workforce in Wales, representing an increase of 7% from 2021. The sector encompasses a diverse array of services tailored to support adults with care and support needs, spanning across public, private, and voluntary sectors. Adult social care is expected to become even more important in the future, due to increased demand. For example, the number of people aged over 85 is projected to grow by 62% by 2037 (Office for National Statistics 2024a).

Recognising the importance of the adult social care sector, Skills for Care and Development (herein referred to as “the Alliance”) commissioned Alma Economics to analyse the economic and social value of the adult social care sector in the UK and each of the four nations. By estimating the value of the sector, Alliance members aim to inform public policy and improve public understanding, reframing social care as an essential social and economic investment. This report focuses on the adult social care sector in Wales; the research team has produced separate reports discussing the findings for each of the four nations and the UK overall.

For this research, our team developed two types of models: one focusing on macroeconomic impacts and the other on socioeconomic impacts. Both models consider a wide range of care settings (e.g. residential) and types of service provision (e.g., local authority), including unpaid care, across regulated and non-regulated sectors.

The macroeconomic models estimate the extent to which the adult social care sector contributes to the economy. In particular, we estimated the macroeconomic impact of the sector accounting for wages and earnings of employees in the sector, as well as the operating profits of independent care providers (direct impact). **Our estimates suggest that in 2023, over £2.1 billion in Gross Value Added (GVA) and 74,900 full-time equivalents (FTEs) were created from the direct operations of the adult social care sector, resulting in a labour productivity of approximately £27,800 per FTE. When unpaid care is included, the direct GVA is estimated at nearly £8.1 billion, and the number of FTEs increases to almost 331,200, yielding a labour productivity of £24,500 per FTE.**

The research also considered the indirect and induced effects of adult social care. The indirect effect arises from increased demand in other sectors that are part of the adult social care sector’s supply chain, such as personal protective equipment or home adaptations. Both direct and indirect effects lead to a rise in household income across the economy, driven by increased employment. A portion of this additional income is spent on other goods, which constitutes the induced effect. **The indirect effect, i.e., the value and employment created in other sectors due to the adult social care sector, is estimated to comprise 27,000 FTEs and £1 billion of GVA. Similarly, the**

**induced impact, resulting from the additional spending of individuals directly or indirectly employed in the sector, is estimated to comprise 14,900 FTEs and £1.5 billion of GVA.**

**Overall, the adult social care sector in Wales is estimated to support 116,700 full-time equivalent (FTE) jobs and generate £4.6 billion in value when considering direct, indirect, and induced impacts, not including unpaid care.** The estimated GVA of the adult social care sector represents approximately 6.98% of the total GVA in Wales in 2023, up from 1.9% in 2016 (ICF 2018e; Office for National Statistics 2024b). However, we recommend such direct comparisons be treated with caution, given methodological changes and data quality concerns.

The adult social care sector also creates a wide range of benefits that are not captured in GVA or employment measures, such as the wellbeing of adults receiving care and peace of mind for the general population. To estimate the magnitude of these socioeconomic impacts, we compared the costs and benefits of adult social care to a hypothetical scenario in which the adult social care sector (both formal and unpaid) ceases to exist. The results of this analysis suggest that the socioeconomic benefits of the adult social care sector are £22.6 billion while costing £8.1 billion. This means that for every £1 spent, there are £2.78 in socioeconomic benefits.



# 1. Introduction

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To ensure the sustainability of the sector, Skills for Care and Development have commissioned Alma Economics to analyse the economic and social value of the Adult Social Care sector in the UK and each of the four nations. The project estimated the value of the sector, and the findings will help inform investment cases and policymaking, and enhance public understanding of the sector's importance.

The chapters in this document are: 1. Introduction, 2. Methodological approach, 3. Findings, 4. Technical appendix, and 5. References.

## 1.1. Background

Skills for Care and Development is an Alliance of seven key organisations in the UK and Republic of Ireland, that focuses on regulation and workforce development in social care, social work, and early years. The Alliance consists of Skills for Care; Northern Ireland Social Care Council; Scottish Social Services Council; Social Care Wales; CORU; Early Years Alliance and Social Work England.

To support the long-term sustainability of the sector, Skills for Care and Development is seeking to build upon the economic information the Alliance have and inform the economic case for investment in the adult social care sector. To that end, Skills for Care and Development commissioned Alma Economics to analyse the adult social care sector's economic and social value in the UK as a whole and in each of the four nations.

The overall aim of the project is to:

- inform the economic case for investment in the social care sector and its workforce in the UK as a whole (as well as having national breakdowns), influencing policymaking and national spending review decisions on investment.
- improve public understanding of the value of the sector, emphasising the importance of investing in social care.

## 1.2. Structure of the document

This document presents our methodological approach and key findings across the macroeconomic and socioeconomic analysis of the adult social care sector in Wales.

The document includes the following sections:

- [Chapter 2](#) briefly outlines our methodological approach, including the (i) definition of the sector used; (ii) the groups of interest analysed; (iii) the direct, indirect, and induced effects considered; and (iv) the types of impacts included in the socioeconomic costs and benefits.

- [Chapter 3](#) presents key findings across the macroeconomic and socioeconomic analysis.
- [Chapter 4](#) is the Technical Appendix, detailing our methodology, sources, and assumptions used to arrive at the direct, indirect, and induced value of the sector, as well as the benefit-cost ratio from its operation.
- [Chapter 5](#) presents the sources referenced throughout the report.

## 2. Methodological approach

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**Following a thorough desk-based review, we identified key areas of impact of the adult social care sector, used to create two types of models, one including the macroeconomic impacts and another focusing on the socio-economic ones.**

In the context of this analysis, social care is defined as “[...] the support provided to adults (both older people and people of working age) with physical disabilities, learning disabilities, or physical or mental illnesses, and their carers. This may include personal care (such as support for eating, washing or getting dressed) or help with domestic routines (such as cleaning or going to the shops).” (Foster, 2024)

**This analysis considers a wide range of care settings (e.g. residential) and types of service provision (e.g. local authority), including unpaid care, across the regulated and non-regulated sectors.**

**The macroeconomic impact of the sector consists of direct, indirect, and induced effects. The direct impact has been estimated using the Gross Value Added (GVA), as the total value of wages and earnings of employees of the adult social care sector and the gross operating surplus of independent care providers. We also estimated the socioeconomic costs and benefits of the adult social care sector, encompassing both direct and induced costs, as well as tangible and intangible benefits.**

### 2.1. Overview of the suggested approach

Our proposed approach consisted of three phases. In the first phase, we carried out scoping and impact mapping to identify the main areas of impact and develop a detailed analysis plan. In the second phase, we developed an economic model to update the analysis of direct, indirect, and induced impacts, as well as calculate wider and wellbeing benefits. In the last phase, we drafted the report of findings for each nation and the UK as a whole.

In particular, Phase 2 consisted of:

- Calculating the **macroeconomic impact** of adult social care in Wales using quantifiable impacts. These include direct, indirect, and induced impacts. In summary, the macroeconomic analysis considers the income generated in a sector and those affected by it to estimate the total GVA and employment created.
- Estimating the **socioeconomic costs and benefits** of the adult social care sector in Wales.
- Creating indicative case studies of interventions and programmes that have proven successful in adult social care (presented in the UK-wide report).

## 2.2. Sector Definition

Social care does not have an established definition and the range of people's care needs is wider than any definition. For the purposes of this work, we used the following definition "*Adult social care is the support provided to adults (both older people and people of working age) with physical disabilities, learning disabilities, or physical or mental illnesses, and their carers. This may include personal care (such as support for eating, washing or getting dressed) or help with domestic routines (such as cleaning or going to the shops) .*" (Foster 2024)

The definition may vary depending on the country and context. In Wales, the Social Services and Wellbeing (Wales) Act 2014 defines the duties of local authorities to meet adults' needs for care and support, if the adult is within the local authority's area or an ordinary resident in the authority's area, but outside its area (Welsh Government, 2014). Similarly, the act specifies the duties of local authorities to meet the needs for support of a carer, where appropriate.

### 2.2.1. Groups of interest

For the purpose of this study, we built on a previous report by ICF (2018e), commissioned by the Alliance to examine the economic value of the adult social care sector in each nation and the UK as a whole. Following the ICF (2018e), we defined as part of adult social care the following groups: (i) regulated providers across the private, public, and voluntary sectors; (ii) non-regulated providers; and (iii) people employing personal assistants. However, we recognise that unpaid care is a significant part of adult social care. To that end, we went beyond the ICF methodology and analysed the economic contribution of unpaid carers and the financial support provided to them.

We also accounted for different care settings in both the regulated and non-regulated sectors. In particular, we collated data on the following care settings:

- Residential
- Nursing
- Domiciliary (or homecare)
- Day care
- Other care settings

We understand that individuals have different needs depending on their age. As a result, we will divide our analysis into two age groups, where possible: (i) adults aged 18-64, which consists primarily of individuals with physical or learning disabilities and mental health needs; and (ii) adults aged over 65.

## 2.3. Impacts and approach to quantification

Following a detailed literature and evidence review, we have identified direct, indirect, induced, and wider impacts of adult social care. The direct, indirect, and induced impacts were used to calculate the macroeconomic impact of the adult social care sector in Wales, while the wider socioeconomic impacts were used in our

socioeconomic impact analysis. The subsections below present the impacts we quantified, the indicators used, and the underlying rationale. All figures are reported in 2023 values. Estimates before 2023 were adjusted to 2023 values using GDP deflators.

### 2.3.1. Gross Value Added (GVA)

#### Indicators:

- **Wages and earnings** of employees of the adult social care sector.
- **Gross Operating Surplus** to capture income generated by the sector, other than wages.

GVA is the standard metric to estimate the macroeconomic impact of a sector. GVA measures “*The value generated by any unit engaged in production and the contributions of individual sectors or industries to GDP. It is measured at basic prices, excluding taxes less subsidies on products*” (Office for National Statistics, n.d.).<sup>1</sup> There are alternative approaches to calculating GVA, namely income, expenditure and output approaches. However, based on all ICF reports, the three approaches to calculating GVA would have yielded similar results (ICF, 2018a; 2018b; 2018c; 2018d; 2018e).<sup>1</sup> As a result, we followed the approach of the Network Analytics and Skills for Care (2021) report and Office for National Statistics (2017), and calculated GVA using the income approach (i.e. quantified the total income generated by the sector).

We chose the income approach because the required indicators are readily available, consistently defined, and robustly calculated. This facilitated aggregation to the UK level and comparisons across countries.

### 2.3.2. Labour productivity

#### Indicators:

- **GVA**
- **Full Time Equivalent (FTE)**

Productivity is a key metric of macroeconomic value, as emphasised by the HM Treasury in 2022. In this context, we focused on labour productivity. This is defined as GVA produced for a given measure of labour. The Office for National Statistics 2023a calculates productivity as GVA per hour worked, per worker, or job. However, to ensure comparability with previous reports on adult social care (i.e. ICF 2018d and KD Network Analytics and Skills for Care in 2021), we calculated labour productivity as GVA per FTE.

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<sup>1</sup> The KD Network Analytics and Skills for Care (2021) report notes that “in theory, and with perfect data, all three methods give the same answer”.

### 2.3.3. Avoided financial costs to the NHS

#### Indicators:

- **Hospital admissions**
- **Accident and Emergency (A&E) admissions**
- **Discharges from acute care**

Health and social care sectors work complementarily. Care workers can help prevent hospitalisation and accidents, reducing the frequency of emergency attendances. Furthermore, social care arrangements are a prerequisite for discharge from acute care. As a result, without adequate adult social care capacity, the NHS will incur additional costs due to having to accommodate medically fit individuals who could have been discharged.

### 2.3.4. Peace of mind benefits

#### Indicator:

- **Loss ratio** of providers of private long-term care

We estimated the peace of mind benefits resulting from the certainty that there is long-term care available if needed. To that end, we used evidence from Forder (2011) showing that individuals who buy insurance pay more in premiums than they receive through claims. This suggests that they are receiving other benefits apart from monetary ones. We propose that people are willing to accept the monetary cost because they value the peace of mind that insurance provides. As a result, we can calculate the size of the peace-of-mind benefit using the monetary loss that individuals are willing to accept through insurance. We expect that adult social care also provides peace of mind to the general population by ensuring that support will be available when needed.

### 2.3.5. Quality of life and wellbeing

#### Indicators:

- **Social Care-Related Quality of Life (SCRQoL)** as captured in the Adult Social Care Survey: The HM Treasury (2022) emphasises the importance of wellbeing in policy appraisal and evaluations and suggests various metrics. Following the KD Network Analytics and Skills for Care (2021) report, we quantified and monetised the impact of adult social care on the Social Care-Related Quality of Life. We used the adjusted SCRQoL, following Forder et al. (2016), to account for (i) external factors that might influence the quality of services and (ii) different preferences across the SCRQoL metrics.
- **Quality of Life Adjusted Years (QALYs)**: Access to social care significantly reduces the likelihood of individuals experiencing injuries and falls, thereby preventing the deterioration of their health. Thus, social care may improve health outcomes for those receiving care, in addition to the wellbeing impact associated resulting from receiving care (measured by SCRQoL as explained above). Health outcomes are typically measured in terms of quality-adjusted life years (QALYs),

which can be quantified and monetised. QALYs represent the additional healthy years gained by individuals due to receiving support. As per HM Treasury (2022) Green Book guidance, QALYs can be monetised by applying a £70,000 value (in 2020 prices) for each QALY gained. For instance, if an intervention has been found to create 0.4 QALYs (i.e. 40% of a year in perfect health and wellbeing), that means that the monetary benefit of the intervention is £28,000 in 2020 prices.

## **2.4. Indirect and induced effects**

The adult social care sector generates additional value through indirect and induced effects on top of its direct economic impact. Indirect effects are those created by the demand for intermediate goods and services by adult social care to provide its services. For instance, adult social care services need medical supplies, education and training for employees, cleaning products and services, furniture and household goods, among others. As a result, adult social care supports additional employment and GVA on top of its direct contribution. Induced effects are those created by the purchases of goods and services by individuals employed in the adult social care sector (directly or indirectly).

## **2.5. Estimating the socioeconomic impact of the sector**

This section outlines the approach used to estimate the economic and social costs and benefits of adult social care in Wales. In subsection 2.5.1, we present our methodological approach, including the analytical scenario and types of impacts. In 2.5.2 subsection, we outline our approach to calculating the costs and benefits included in our analysis.

Our approach accounted for both direct and indirect costs, as well as both tangible and intangible benefits that can arise from the sector. The direct costs concerned the financial investment need for the day-to-day operations of the sector, such as, such as the labour costs of care workers. Indirect costs include non-cash side-effects of adult social care that arise indirectly from the operation of the sector and are not part of the operating expenses. In particular, we included the salaries of formal carers that would need to be paid to provide the same level of care currently offered by unpaid carers. Tangible benefits, such as the reduction of A&E admissions, were quantified and monetised based on avoided costs. Intangible benefits, such as peace of mind benefits, were monetised using evidence from the international literature on people's preferences and willingness to pay for such benefits.

### **2.5.1. Analytical scenario**

To quantify and monetise the costs and benefits associated with adult social care, we needed a basis of comparison. As a result, we compared the costs and benefits of the adult social care sector (baseline) with a scenario where both formal and unpaid adult social care do not exist. Under the analytical scenario, we would expect some people to receive no support, while others would access NHS to receive the support that would otherwise be provided by adult social care. Those receiving no support would

experience adverse health and wellbeing impacts due to not receiving care and are more likely to experience increased injuries or illnesses, as adult social care helped prevent injuries and illnesses in the baseline scenario. Those accessing NHS would create an additional strain on the NHS, as they would stay in NHS due to the absence of adult social care.

### 2.5.2. Socioeconomic costs and benefits

We considered the following costs and benefits for the baseline scenario where adult social care exists:

#### Costs:

- Salaries of formal carers: Earnings of people providing formal care.
- Replacement cost of unpaid carers: The equivalent costs required to provide the level of care offered by unpaid carers.
- Resources spent on the delivery of adult social care: Expenditure on other non-labour costs, such as buildings and land.

#### Benefits:

- Improved wellbeing due to receiving social care: The improved wellbeing benefit relates to satisfaction with social care services. It captures care users' reported experience in eight outcome domains of control, dignity, personal care, food and nutrition, safety, social participation and accommodation. It does not include the impact of avoiding injuries on wellbeing or quality of life
- Improved health/quality of life due to not getting injured and being hospitalised (prevention): This benefit reflects the impact on quality and quantity of life due to injuries avoided through social care. This does not include the 8 domains mentioned above.
- Increased peace of mind benefits for the general public: The peace of mind benefits concern a different population compared to the previous two. While the aforementioned benefits apply to adults receiving social care, the peace of mind benefits apply to the general public, reflecting the benefit of knowing adult social care exists if needed (similar to insurance).
- Reduced NHS costs due to prevented hospitalisation and emergencies: As mentioned in the second benefit, adult social care helps prevent injuries. Apart from the impact on health and quality of life of adults in care, this also creates savings for the NHS through avoided hospitalisations.
- Increased efficiency in care provision from adult social care compared to the NHS: There is evidence that adult social care enables medically fit people to leave the hospital. The lack of available adult social care placements is one of the main reasons for delayed hospital discharges. As a result, the existence of the adult social care sector helps free up NHS capacity and could prevent additional discharge delays if sufficient placements were available.



### 3. Findings

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**The adult social care sector, covering formal care, in Wales, creates approximately 116,700 FTEs and £4.6 billion in economic value across direct, indirect and induced impacts (excluding unpaid care).**

**The direct impact constitutes the largest portion of this macroeconomic value, reaching more than £2.1 billion in GVA and 74,900 FTEs. As a result, each FTE in the adult social care sector creates approximately £27,800 in value. Including unpaid care in the calculations, the direct GVA increases to almost £8.1 billion, with the number of FTEs rising to almost 331,200. Consequently, labour productivity is approximately £24,500 per FTE.**

**The adult social care sector also creates employment and economic value in other sectors due to the demand for intermediate goods and services (e.g. medical supplies) to provide care (indirect effects). Our analysis suggests that the indirect effects of formal care create 27,000 FTEs in other sectors, generating approximately £1 billion in GVA. Furthermore, the spending of individuals directly or indirectly employed in the formal adult social care sector creates additional employment and economic value in other sectors (induced effects). In particular, the induced effects create 14,900 FTEs and generate £1.5 billion in GVA.**

**The adult social care sector also generates wider impacts on society, beyond employment and GVA. Our analysis suggests that the socioeconomic benefits of the adult social care sector in Wales are £22.6 billion, while the costs are £8.1 billion. This would mean that for every £1 spent in adult social care in Wales, £2.78 in benefits are generated.**

This chapter presents our findings across the macroeconomic and socioeconomic analyses. A detailed presentation of the underlying methodology and sources is included in the Technical Appendix.

It is worth noting that data relating to certain types of social care provision<sup>2</sup> in Wales is taken from data collected by Social Care Wales (SCW) as part of their unpublished 2023 Workforce Data Collection. SCW suggested that this data required the use of estimation methods to account for missing data. Triangulation with other available data shows that these figures may exhibit some inaccuracies, so our findings may be somewhat affected as a result.

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<sup>2</sup> This concerns day care and other care provision.

## 3.1. Macroeconomic impact findings

### 3.1.1. Formal care

To estimate the total macroeconomic impact due to the operation of the adult social care sector in Wales we considered direct, indirect, and induced effects. The following section presents our findings regarding the direct impacts.

#### Direct impact

The direct impact consists of GVA and employment. GVA was estimated using the (i) wages and earnings of all carers across provision types and care settings; and (ii) the Gross Operating Surplus of private and voluntary residential and domiciliary care providers. The subsection below presents the results for the first competent, namely the wages and earnings of carers in Wales.

#### Wages and earnings

The results suggest that the total value of wages and earnings in the adult social care sector in Wales, excluding unpaid care, is approximately £1.9 billion<sup>3</sup>. Workers in other types of care provision are the most significant contributors to this value, with earnings of approximately £560.7 million.

**Table 1. Income of formal carers in Wales, million pounds, 2023** <sup>4 5 6 7 8 9</sup>

Type of care	Local Authority	Private	Voluntary	Total
Residential care	£65.2	£313.8	£3.0	£382.1
Nursing care	£4.2	£347.6	£0.0	£351.8

<sup>3</sup> All figures presented have been rounded, so adding individual lines may not always add up to the quoted total.

<sup>4</sup> Includes both Local Authority, Further/Higher Education, Government, Health, Justice, and Regulation provision.

<sup>5</sup> The workforce data for Wales collates information in Local Authority and Commissioned provision categories. The split of commissioned services between private and voluntary has been assumed to be the same as (ICF 2018e).

<sup>6</sup> The earnings of carers in the voluntary sector have been assumed to be equal to the earnings of those in the private sector, following (ICF 2018e).

<sup>7</sup> The earnings of employees in regulated day care services have been proxied by the average earnings of employees in other care settings. This is due to the fact that day care is not regulated in England, so there are no relevant earnings from England to be used. Additional details are included in the Technical Appendix.

<sup>8</sup> Includes adult placement services, advocacy services, supported living, social work teams, central staff, and residential care staff.

<sup>9</sup> Personal assistants employed through commissioning organisations are included in the relevant provision types. The remaining personal assistants are hired by direct payment recipients. As a result, we quote only the total figure and do not break this down into private, public, or voluntary provision.

Type of care	Local Authority	Private	Voluntary	Total
Domiciliary care	£89.0	£381.9	£0.0	£470.9
Day care	£53.1	£5.5	£1.6	£60.1
Other	£409.3	£110.1	£41.4	£560.7
<b>Total excluding personal assistants and unpaid care</b>	<b>£620.8</b>	<b>£1,158.8</b>	<b>£46.0</b>	<b>£1,825.6</b>
<b>Personal assistants</b>	Not applicable	Not applicable	Not applicable	£41.5
<b>Total including personal assistants but excluding unpaid care</b>	<b>£620.8</b>	<b>£1,158.8</b>	<b>£46.0</b>	<b>£1,867.1</b>

### Gross Operating Surplus

The table below presents the results of our analysis of the Gross Operating Surplus (GOS) of private and voluntary providers by type of care. The results suggest that the total GOS in the adult social care sector is approximately £215 million. Residential and nursing care providers constitute the vast majority of the total GOS, with £123 million and £74 million respectively.

**Table 2. Gross Operating Surplus of private and voluntary providers by types of care, million pounds, 2023**

Type of care	GOS
Residential	£122.8
Nursing	£74.1
Domiciliary	£18.5
<b>Total</b>	<b>£215.4</b>

### Total direct impact

The total direct impact consisting of GVA and employment is presented in the table below. We also calculated the labour productivity as the ratio of GVA per FTE.

The findings suggest that there are approximately 74,900 direct FTEs in the sector, producing £2.1 billion in direct GVA. This results in labour productivity in the adult social care sector is almost £27,800 per FTE.

**Table 3. Total direct impact and productivity, 2023**

Type of impact	Excluding unpaid care
<b>GVA (million pounds)</b>	£2,082.5
<b>Number of FTEs</b>	74,900
<b>Productivity (£ per FTE)</b>	£27,800

## Indirect and induced impacts

The adult social care sector also creates employment and value in other sectors due to the demand for intermediate goods and services (e.g. medical supplies) to provide care (indirect effects). Furthermore, the spending of individuals directly or indirectly employed in the adult social care sector creates additional employment and value in other sectors (induced effects).

As shown in table 4, there are significant indirect and induced benefits resulting from the operation of the adult social care sector. In particular, the presence of the adult social care sector results in the generation of 27,000 FTEs and £1 billion of GVA across other sectors. Similarly, there are 14,900 FTEs created due to the spending of individuals directly or indirectly employed by the adult social care sector, which leads to an additional value of £1.5 billion.

**Table 4. Indirect and induced GVA and employment (excluding unpaid care), 2023**

Type of impact	Indirect	Induced
<b>GVA (million pounds)</b>	£1,018.4	£1,456.1
<b>Number of FTEs</b>	27,000	14,900

## Total macroeconomic impact

The following table summarises the direct, indirect, and induced impacts of adult social care in Wales. These figures represent the total macroeconomic value of the sector in terms of GVA and employment. The table excludes the contribution of unpaid carers, who are typically family members or friends providing care without pay.

As shown below, the existence of the adult social care sector in Wales creates approximately 116,700 FTEs and £4.6 billion of value across direct, indirect and induced impacts.

**Table 5. Direct, indirect, and induced impacts, 2023**

Type of impact	Direct	Indirect	Induced	Total
<b>GVA (million pounds)</b>	£2,082.5	£1,018.4	£1,456.1	£4,557.0
<b>Number of FTEs</b>	74,900	27,000	14,900	116,700

## Sensitivity analysis

This subsection presents a sensitivity analysis of the estimates of the gross operating surplus, direct GVA, and total GVA. As described in the methodology section and detailed in the technical appendix, our calculations involve several assumptions. To explore the importance of these assumptions to our final results, we varied one key assumption in our macroeconomic impact calculations.

Similar to the ICF (2018e) report, we explored how sensitive the overall results are to the change in the Earnings Before Interest Taxes Depreciation Amortisation and Restructuring or Rents (EBITDAR) used in the GOS calculation. In particular, we first

compared the baseline estimates (i.e. the results presented in the previous sections) to the results under the EBITDAR used by the ICF (2018e) report. This scenario was explored to facilitate comparison with the previous macroeconomic value estimate. As a result, any comparisons with the ICF 2016 estimate and this report should be made using the “ICF EBITDAR” scenario.

The second sensitivity test was varying the EBITDAR by 20% above and below the baseline estimate. Varying the baseline estimate by a fixed percentage is a common sensitivity analysis technique (e.g. Hamby, 1995), while the magnitude of the percentage was an arbitrary choice.

In summary, to assess the sensitivity of our results to changes in EBITDAR, we calculated the GOS, as well as the direct and total GVA, for 3 alternative EBITDARs: (i) baseline -20%, (ii) baseline +20%; (iii) ICF EBITDAR. The results suggest that the total GVA varies by approximately £94 million in both the lower and the upper bound of our estimates.

**Table 6. Total macroeconomic impacts with varied assumptions, million pounds, 2023**

Scenarios	GOS	Direct GVA	Total GVA
<b>Baseline</b>	£215.4	£2,082.5	£4,557.0
<b>Baseline - 20%</b>	£172.3	£2,039.4	£4,462.7
<b>Baseline + 20%</b>	£258.5	£2,125.6	£4,651.2
<b>ICF EBITDAR</b>	£180.8	£2,047.9	£4,481.1

## Unpaid care

Unpaid carers, similar to formal carers, create significant value in the sector. This subsection presents the estimates for direct, indirect, induced, and total macroeconomic impacts including the contribution of unpaid carers. In particular, if unpaid carers were replaced with formal carers, it would cost approximately £6 billion to maintain the same level of care, as shown in the table below.

**Table 7. Replacement cost of unpaid carers in Wales, million pounds, 2023**

	Unpaid care <sup>10</sup>	Total excluding unpaid care	Total including unpaid care
<b>Wages and earnings</b>	£6,032.3	£1,867.1	£7,899.4

The table below shows the total direct impacts including unpaid care. In particular, there are more than 331,200 FTEs in the sector, which would contribute more than £8.1 billion, with a labour productivity of £24,500 per FTE.

<sup>10</sup> The replacement cost of unpaid carers has been assumed to be equal to the average earnings of all adult social care employees, weighted by the number employed in each care setting and type of provision. This was then converted to an FTE basis using the ratio of FTEs per unpaid carer.

The inclusion of unpaid carers reduces labour productivity, as the replacement cost of one unpaid carer is assumed to be equal to the earnings of a formal carer. However, one unpaid carer's FTEs in Wales are higher than those of a formal carer's. As a result, the nominator of the productivity ratio, i.e. the total GVA including both formal and unpaid care, will not increase proportionately to the denominator, which is the FTEs of both formal and unpaid carers.

**Table 8. Total direct impacts (including unpaid care), 2023**

Type of impact	Excluding unpaid care	Including unpaid care
<b>GVA (million pounds)</b>	£2,082.5	£8,114.8
<b>Number of FTEs</b>	74,900	331,200
<b>Productivity (£ per FTE)</b>	£27,800	£24,500

The table below presents GVA and FTEs with the addition of unpaid carers. The indirect GVA, including unpaid carers, is approximately £1.1 billion and the associated indirect FTEs are 48,100. The induced GVA amounts to approximately £1.6 billion, while the induced FTEs are almost 26,500.

**Table 9. Indirect and induced GVA and employment (including unpaid care), 2023**

Type of impact	Indirect	Induced
<b>GVA (million pounds)</b>	£1,132.7	£1,619.6
<b>Number of FTEs</b>	48,100	26,500

Finally, the table below collates and aggregates the aforementioned direct, indirect, and induced impacts of the sector, including unpaid care. In total, the adult social care sector creates approximately £10.9 billion of GVA and 405,800 FTE jobs.

**Table 10. Direct, indirect, and induced impacts (including unpaid care), 2023**

Type of impact	Direct	Indirect	Induced	Total
<b>GVA (million pounds)</b>	£8,114.8	£1,132.7	£1,619.6	£10,867.1
<b>Number of WTEs</b>	331,200	48,100	26,500	405,800

### 3.1.2. Comparisons with past evidence

Previous attempts have been made to estimate the macroeconomic value of the adult social care sector in Wales. Most notably, ICF published a report in 2018, using 2016 data.

The box below presents high-level comparisons of findings between this report and ICF. It is important to note that the findings are not necessarily comparable due to differences in (i) data; (ii) methodology; and (iii) other external factors. As a result, we cannot comment on the causes of any changes in figures since 2016, since these are not necessarily attributable to the sector itself.

**Our findings suggest that the adult social care sector, covering formal care, in Wales, creates approximately 116,700 FTEs and £4.6 billion in economic value across direct, indirect and induced impacts (excluding unpaid care). The estimated GVA represents approximately 5.90% of the total GVA in Wales in 2023.**

**The ICF report estimated that the adult social care sector in Wales creates approximately 93,600 FTEs and £2.3 billion. Below we break down the differences between the two estimates by direct, indirect, and induced impacts.**

**We have estimated the direct impact at £2.1 billion in GVA and 74,900 FTEs, compared to £1.1 billion GVA and 61,600 FTEs in ICF. As a result, each FTE in the adult social care sector creates approximately £27,800 in value in 2023, compared to £18,700 in 2016. The increase in GVA between 2016 and 2023 is roughly 81%.**

**Our analysis also suggests that the indirect effects create 27,000 FTEs in other sectors, generating approximately £1 billion in GVA. The ICF estimates are 23,000 and £553.7 million respectively, resulting in an increase of approximately 80% in GVA.**

**Finally, the induced effects in this report have been estimated to create 14,900 FTEs and generate £1.5 billion in GVA. In contrast, ICF estimated the induced impacts generate to 9,000 FTEs and £542.5 million in GVA. This suggests an increase of approximately 176% in GVA from 2016.**

**If we look at the percentage differences between our estimates and ICF's, the induced impacts appear to have increased the most, while direct and indirect impacts have had almost half of the increase in induced impacts.**

## **3.2. Socioeconomic impact**

The second part of our analysis consisted of exploring the costs and of the adult social care sector, compared to a hypothetical scenario where both the formal and unpaid care sectors cease to exist. Below, we present high-level findings from this analysis. Additional details on our sources and methodology can be found in the Technical Appendix.

### **3.2.1. Costs**

The following table presents the main costs associated with the adult social care sector in Wales. As indicated below, the total cost of the adult social care sector in Wales is estimated to be approximately £8.1 billion in 2023. The most significant cost within the adult social care sector is related to the value generated from unpaid care, which equals

the cost of replacing unpaid carers with formal care staff while maintaining the same level of care provision (£6 billion in 2023).

**Table 11. Costs due to the operation of adult social care, million pounds, 2023**

<b>Salaries of formal carers<sup>11</sup></b>	£1,903.4
<b>Replacement cost of unpaid carers</b>	£6,032.3
<b>Resources spent on the delivery of adult social care</b>	£187.4
<b>Total costs</b>	<b>£8,123.1</b>

## Benefits

Similarly, the following table presents the benefits of adult social care. As shown below, the total socioeconomic benefits of the adult social care sector in Wales, including unpaid care, are estimated to be around £22.6 billion in 2023. The most significant benefit is the improvement in wellbeing due to receiving social care, estimated at approximately £20.9 billion in 2023. This benefit represents the monetary value that care users would be willing to pay to achieve improvements in outcomes such as safety, personal care, and accommodation (as captured by the SCRQoL). The size of this benefit can be explained from: (i) the magnitude of the impact that care services have on wellbeing; (ii) the monetary value of wellbeing impacts; and (iii) the size of the populations affected (i.e. the entire population receiving unpaid care and those receiving formal care, excluding nursing care).

**Table 12. Benefits due to the operation of adult social care, million pounds, 2023**

<b>Improved wellbeing due to receiving social care</b>	£20,915.5
<b>Improved health/quality of life due to not getting injured and being hospitalised</b>	£52.7
<b>Increased peace of mind benefits for the general public</b>	£416.1
<b>Reduced NHS costs due to prevented hospitalisation and emergencies</b>	£1,139.2

<sup>11</sup> Please note that there is a small discrepancy between the total salaries of formal carers in the socioeconomic and macroeconomic models. This discrepancy arises because the macroeconomic impact model uses earnings per FTE, whereas the socioeconomic model uses earnings per person. The total earnings differ because the macroeconomic model calculates earnings per FTE based on care setting and provision type, while the socioeconomic model uses weighted average earnings to determine earnings per person. We chose different earnings measures for each model due to their distinct purposes. The macroeconomic model employs earnings per FTE for a more accurate bottom-up approach. In contrast, the socioeconomic model serves as a legacy tool for projecting future costs and benefits. To this end, using earnings per carer would be more suitable for projections as it allows the application of growth rates of cared-for individuals and carers.



<b>Increased efficiency in care provision from adult social care compared to NHS</b>	£99.1
<b>Total benefits</b>	<b>£22,622.7</b>

### Net benefits and Benefit-Cost Ratio

Overall, the analysis suggests that the benefits of the adult social care sector significantly outweigh the costs. In summary, the operation of the adult social care sector in Wales creates more than £14.5 billion in net benefits (i.e. total benefits minus total costs). Furthermore, the adult social care sector achieves a Benefit-Cost ratio of £2.78, suggesting that for every £1 spent in adult social care in Wales, £2.78 of benefits are generated.

## 4. Technical appendix

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This appendix presents in detail the calculations and data sources used to estimate the macro and socioeconomic impact of the adult social care sector in Wales. Section 4.1 of this chapter outlines our approach to calculating the macroeconomic impacts. In particular, subsection 4.1.1 explores the direct benefits resulting from the operation of the adult social care sector, namely the Gross Value Added (GVA). Subsection 4.1.2 briefly outlines our approach to calculating the productivity benefits, while subsection 4.1.3 describes our methodology for calculating the indirect<sup>12</sup> and induced<sup>13</sup> impacts of adult social care, consisting of GVA and employment. **The direct, indirect, and induced effects together will constitute the total macroeconomic impact of the adult social care sector.** Section 4.2 in this chapter outlines our approach to calculating the wider socioeconomic costs (subsection 4.2.1) and benefits (subsection 4.2.2) of the adult social care sector, as described in the previous chapter.

### 4.1. Macroeconomic impact

#### 4.1.1. Direct effects

##### Gross Value Added

To calculate GVA, we summed the total earnings and profits generated by the adult social care sector. This includes:

- **Wages and earnings** of the employees in the regulated and non-regulated sectors, as well as personal assistants and unpaid carers. We first collated data on the number of jobs and FTEs in the adult social care sector. These were then multiplied by the average earnings per FTE for each type and setting of care.
- **Gross operating surplus** in the independent sector across care settings. Our aim was to capture the additional value generated by the sector due to the profits of private and voluntary providers, apart from wages and earnings. To that end, we applied average profitability ratios (EBITDAR)<sup>14</sup> to the care home and domiciliary care placements provided by the private and voluntary sector. Day care and any other types of care were not included in this calculation as there is no information available for their profitability.

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<sup>12</sup> Indirect are the effects created by the demand for intermediate goods and services by adult social care to provide its services (ICF, 2018a).

<sup>13</sup> Induced are the effects created by changes in the purchasing behaviour of individuals directly and indirectly employed in the adult social care (ICF, 2018a).

<sup>14</sup> Earnings Before Interest Taxes Depreciation Amortisation and Restructuring or Rents (EBITDAR) is a standard measure of operating profitability for the private sector (CMA, 2017).

## Detailed technical discussion

### 1. Number of jobs and FTEs

To estimate the number of employees and FTEs in the regulated sector in Wales, we combined various sources. The number of employees for residential, nursing, and domiciliary care was taken from internally held data of the Care Inspectorate Wales (CIW). The number of employees for day care and other types of care provision was data from the Social Care Wales (SCW) workforce report for 2023 (unpublished). The workforce report was also used to estimate the FTEs for day care and other types of care. In particular, we calculated the ratio of FTEs per person using data on the number of hours worked per week. However, both the CIW and SCW do not differentiate between private and voluntary provision. As a result, we applied the ratio of private to total commissioned placements from the ICF (2018e) report to the figures used in the shared datasets. The results of this calculation suggest there are approximately 800 non-regulated service sites in Wales in 2023.

The total number of jobs in non-regulated services in Wales was calculated by multiplying the number of non-regulated service sites by the number of posts/FTEs per site in England due to the lack of Wales-specific data (Skills for Care, 2023). The number of non-regulated service sites was estimated by: (i) identifying relevant Standard Industrial Classification (SIC) code classes<sup>15</sup> in the Inter-Departmental Business Register, (ii) multiplying the above by the share of sites offering adult social care using the Adult Social Care Workforce Dataset (ASC-WDS) (Office for National Statistics, 2021; Skills for Care, 2021), and (iii) subtracting from the above the number of regulated sites (CIW, 2023).<sup>16</sup> The respective FTEs were then calculated assuming that the ratio of FTEs per site is the same between England and Wales.

We calculated separately the number of unpaid carers claiming Carer's Allowance using Department of Work and Pensions (DWP) data, although the allowance was not included in the direct economic contribution (Department for Work and Pensions 2024). While Carer's Allowance is not explicitly exclusive to unpaid carers, the criterion of maximum net income of £139 per week makes it unlikely that a significant number of claimants are formal carers, given their gross weekly income is £393 (Office for National Statistics 2022a). As a result, we assumed that all claimants of Carer's Allowance are unpaid carers receiving support from local authorities.

To calculate the number of people employing personal assistants in adult social care, we leveraged analysis done by Skills for Care (2023a), showing the share of individuals employing personal assistants (PAs) directly (as opposed to employing through

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<sup>15</sup> Following (ICF, 2018e), we included SIC 87: Residential care activities and SIC 88: Social work activities without accommodation.

<sup>16</sup> The number of regulated care sites was calculated as the sum of care homes without nursing, care homes with nursing, domiciliary care, adult placement service, and advocacy service.

registered providers). This estimate was then multiplied by the number of individuals receiving direct payments to get to the number of people directly employing PAs (approximately 1,900) (Social Care Wales, 2023). Lastly, we multiplied the result by the average number of workers per employer, as per the aforementioned Skills for Care report.

## *2. Wages and earnings*

Earnings for both the regulated and non-regulated sector in Wales were estimated following ICF (2018e). In particular:

- We calculated the average earnings in the adult social care sector in Wales and England using the Annual Survey of Hours and Earnings (Office for National Statistics, 2022a). The results suggest that care workers and home carers across seniority levels in England earn £418 gross, per week, compared to £419 in Wales.
- We then calculated the ratio of the above-average earnings.
- The ratio was then multiplied by the earnings for England quoted in the ASC-WDS (Skills for Care, 2021).

The earnings estimate for the formal sector employees was also used to calculate the value of unpaid care. In particular, we used the average earnings of employees in the formal sector, weighted by the number of employees in each setting, as a proxy for the compensation that paid carers would receive to offer the same volume of care. This was then converted to an FTE basis using the ratio of FTEs per unpaid carer. Finally, we applied this average to the hours of unpaid care provided by unpaid carers (Office for National Statistics, 2023b). Any benefits or allowances received by unpaid carers were not included in the direct economic contribution, as we were interested in the value of the output produced by unpaid carers.

## *3. EBITDAR*

Following the KD Network Analytics and Skills for Care (2021) report, we combined various sources to estimate the EBITDAR in residential and domiciliary care settings. In particular, we first created a time series for EBITDARs using the following sources:

- EBITDARs from 2012 to 2016 are taken from the Competition & Markets Authority, 2017.
- EBITDARs for 2017 and 2019 are taken from The adult social care market in England National Audit Office 2021.
- EBITDAR for 2018 has been imputed from KDNA in The value of adult social care in England (KD Network Analytics and Skills for Care, 2021).

We then calculated the average annual growth rate of EBITDARs from the time series described above, and applied this growth rate to the latest available data to project the EBITDARs to 2023.

#### *4. Output of the independent sector*

To calculate the Gross Operating Surplus, we multiplied the EBITDAR for the domiciliary, nursing, and homecare settings, calculated in the previous step, by the output of the private and voluntary sector in the respective care settings. The output was calculated by multiplying the number of occupants in private and voluntary residential and domiciliary care settings by the respective unit costs of care, including establishment costs, personal living expenses, and external services. Due to the lack of Wales-specific data, we used unit cost information for England, taken from the Personal Social Services Research Unit (2021) and the Homecare Association (2023). These costs were then adapted to the Welsh context using the Annual Survey of Hours and Earnings, as described in subsection 4.1.1 of this chapter. Lastly, we multiplied the respective unit costs by the number of adults in independent provision care homes and domiciliary care in Wales (Social Care Wales, 2023b).

#### **4.1.2. Productivity**

Following ICF (2018e), we calculated labour productivity as GVA per FTE. GVA, including the contribution of unpaid carers, was calculated as a standalone benefit, while FTE was an intermediate output in the calculation of GVA. These indicators were then divided to calculate labour productivity.

#### **4.1.3. Indirect and induced impacts**

The indirect and induced impacts on GVA and employment were estimated using impact multiplier tables. Type I multipliers were used to estimate the indirect impacts on employment and GVA, while Type II multipliers were used for induced impacts.

To calculate the indirect impact, we used Input-Output tables produced by the Office for National Statistics (2022b), which include Type I GVA and employment multipliers. These multipliers were then applied to the direct GVA impact, as calculated in the previous section, but excluding unpaid carers (explained in the last paragraph of this subsection).

To estimate the induced impacts, we leveraged a time series of direct and induced GVAs produced by KD Network Analytics and Skills for Care (2021), given the ONS does not produce Type II GVA or employment multipliers. We first calculated the Type II GVA multiplier by dividing the induced by the direct impact for each year from 2012 to 2020. The results of this calculation suggested that the Type II GVA multiplier is relatively stable across years, allowing us to use the 2020 multiplier from the KD Network Analytics and Skills for Care (2021) report. Similarly, we estimated the induced employment impact by calculating the Type II employment multiplier for 2016 from the ICF (2018a) report. Both Type II multipliers were then applied to the direct and the indirect GVA and employment, excluding the contribution of unpaid carers.

## 4.2. Socioeconomic impacts

### 4.2.1. Costs of Adult Social Care

Below, we present our approach to calculating the socioeconomic costs of the adult social care sector.

#### Salaries of formal carers

One of the main costs of the adult social care sector is the salaries of formal carers. We included the earnings of carers in both the regulated and non-regulated sectors and across the public, private, and personal assistant sectors. These were estimated as described in subsection 4.1.1 during the calculation of the macroeconomic impact of the sector. In summary, the earnings of employees in the regulated sector were sourced from the ASC-WDS and adapted to the Welsh context using the Annual Survey of Hours and Earnings (ASHE), as described in the wages and earnings section of the macroeconomic impact analysis (Skills for Care, 2021; Office for National Statistics, 2022a).

#### Replacement cost of unpaid carers

We understand that unpaid carers make up a significant share of the adult social care service provision. As a result, we included their contribution both in the costs and benefits of the sector. To calculate the costs due to the existence of unpaid care, we replicated the approach described in subsection 4.1.1 of the macroeconomic analysis. In particular, we used the average earnings of employees in the formal sector, weighted by the number of employees in each setting. This figure was assumed to be equal to the value created by each unpaid carer and was then converted to an FTE basis using the ratio of FTEs per unpaid carer. The earnings were then multiplied by the number of FTEs that unpaid carers provide, which were calculated using the hours of unpaid care provided per week (Office for National Statistics, 2023b). This means that unpaid carers create value equal to the earnings that formal carers would make to provide the same level of care.

#### Resources spent on the delivery of Adult Social Care

Apart from costs associated with wages, we have accounted for additional non-labour cost elements involved in the provision of adult social care. In particular, we used unit cost estimates from the Personal Social Services Research Unit (PSSRU) for items such as buildings and oncosts, and land costs (Bakx et al., 2020). These costs were again adapted to the Welsh context using the ASHE as described in the wages and earnings section of the macroeconomic impact analysis (Office for National Statistics, 2022a).

We recognise that using unit costs for large-scale interventions does not represent best practice in estimating their total costs, as costs are not always linear. For instance, the cost per adult for residential care may decrease as more adults are included due to shared resources and more efficient utilisation of facilities. However, certain costs, such as costs of highly specialised personnel or equipment, might not scale linearly. This is

because services, programmes, or interventions can exhibit economies of scale or diminishing returns. However, the PSSRU unit costs represented the best available evidence.

## 4.2.2. Benefits of Adult Social Care

This section includes our approach to quantifying and monetising socioeconomic benefits. In particular, we included: (i) quality of life and wellbeing impacts, (ii) peace of mind benefits, and (iii) avoided costs to the NHS.

### Avoided costs to the NHS

#### 1. Hospital admissions

Adult social care helps reduce the need for hospitalisation by offering care services. In the analytical scenario without adult social care, we expect an increase in hospitalisations. In the absence of robust UK-specific evidence, we have used international literature for some of the impacts in this section. For instance, to estimate the share of hospital admission costs that are avoided through social care, we followed KD Network Analytics and Skills for Care (2021) and used evidence from Bax (2020) showing that a care home admission in the Netherlands reduces the probability of hospital admission by 28%. We then applied this coefficient to the number of admissions from adults receiving adult social care in the baseline scenario. To calculate how many adults from adult social care are hospitalised, we leveraged research by Smith et al. (2015), showing that 8.2% of all hospital admissions come from care home residents. We then applied this coefficient to the total number of hospital admissions in Wales (Digital Health and Care Wales, 2023). Lastly, the number of avoided admissions from adult social care was monetised using unit costs for elective and non-elective inpatients from the NHS England National Cost Collection which were then adapted to Wales using the ASHE, as previously described (NHS England, 2021; Office for National Statistics, 2022a).

#### 2. A&E admissions

Adult social care also helps prevent accidents and emergency admissions, reducing the strain on the NHS. Under our analytical scenario, for example, people previously in care would be more likely to get injured and would receive care from the NHS. We explored different approaches to calculating avoidable A&E admissions. Ultimately, we used estimates from the Health Foundation, indicating that 41% of all A&E admissions of care home residents were potentially avoidable (Wolters et al., 2019). The same percentage for the same-aged general population was 27%. We assumed that the 14 percentage point difference in avoidable admissions was due to the support provided by care homes. We then multiplied this percentage point difference by the average number of A&E admissions per care home resident aged over 65<sup>17</sup>, per year (Wolters et al., 2019).

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<sup>17</sup> Due to data limitations, we used the incidence of hospital admissions among care home residents over 65 as a proxy for the total hospital admissions among all care home residents.

This calculation results in the number of A&E admissions that could be avoided per person, per year, which we then applied to all adults receiving unpaid care under our analytical scenario and all adults in non-nursing residential, domiciliary, and personal care, calculated during the macroeconomic impact analysis.

### *3. Discharges from acute care*

The existence of adult social care helps the NHS discharge people from the hospital, increasing the capacity of the NHS to accommodate new patients and reduce costs associated with bed days. As a result, avoiding delayed discharges is associated with reduced costs to the NHS due to fewer bed days.

We estimated two types of delayed discharges that could be avoided due to the existence of adult social care. First, we estimated the number of delayed discharges that could be avoided if adult social care had sufficient placements (thereafter “potentially avoidable delays”). To that end, we used estimates from StatsWales (2023) showing the number and reason for delayed discharges, which allowed us to calculate the share of all delayed discharges that are delayed due to unavailability of care placements.

The second type of delays we examined were delays that are not realised in the baseline scenario due to the existence of adult social care. These delays are avoided because adult social care offers placements for people medically fit to be discharged. However, in our analytical scenario, these placements are no longer available, leading to additional discharges getting delayed. To estimate the share of all discharges that are made possible due to the existence of adult social care placements, we used evidence from the Welsh Parliament Health and Social Care Committee (2022), showing the percentage of discharges to a different residence compared to all discharges. In the absence of more accurate data, we assume that all discharges to a different residence are discharges to adult social care.

The share of delayed discharges potentially avoidable due to adult social care, as well as the share of those not realising due to adult social care placements were then applied to (i) current NHS patients, (ii) additional NHS patients receiving care previously offered by adult social care, and (iii) additional people entering NHS through A&E that adult social care helped avoid under the baseline scenario. These impacts were then monetised using estimates for excess bed day costs (NHS Improvement, 2020), adapted to Wales using the ASHE, as previously described (NHS Improvement, 2020; Office for National Statistics, 2022a).

### *Peace of mind benefits*

There is a lack of evidence on peace of mind benefits due to adult social care in the UK. As a result, we explored alternative approaches to calculating this benefit. In all reviewed studies, peace of mind benefits were calculated as the difference of insurance payments subtracting the insurance claims paid out. The claims divided by the total insurance payments represent the loss ratio. For instance, if a loss ratio is 40%, this



means that someone paying for insurance can expect to get back only 40% of the money they pay in insurance premiums. As a result, the remaining 60% must represent another form of benefit to the insurance buyer, otherwise, they would be willing to pay only the 40% they would get back in claims. Research suggests that the remaining value (60% in this case) represents peace of mind benefits.

Forder (2011) explored the peace of mind benefits of Immediate Needs Annuities (INA), one of the few private insurance products in the UK. The author concluded that the average person would pay a lifetime cost of care of up to £69,000 through an INA, while they would pay £66,000 without one. The difference of £3,000 (or 4% of the premium) is the minimum peace of mind benefit holders of INAs accept (or equivalently, 96% is the maximum loss ratio). A report by Buckle et al. (2019) on 15 private UK health insurers calculated the medical insurance loss ratio ranging from 59% to 73%. Lastly, evidence from the US long-term insurance market suggests that the loss ratio is between 40% to 60% (Department of Health & Social Care, 2022).

Overall, the loss ratios range from 40% to 96% across studies and sectors. Due to the lack of a single, widely accepted loss ratio in the UK, we used the average of the UK's lower and higher bound estimates (i.e., the average of 59% and 96%).

The resulting ratio (78% loss ratio or 22% peace of mind benefit) was multiplied by the fair price of care, calculated as the total net expenditure on adult social care from HM Treasury's Public Expenditure Statistical Analyses (HM Treasury, 2023). In particular, we used the cost line of "personal social services" for old age and sickness and disability.

## Quality of life and wellbeing benefits

### *1. Social care-related quality of life*

SCRQoL is part of the Adult Social Care Outcomes Framework (ASCOF)<sup>18</sup> and Adult Social Care Survey (ASCS) captured in metric "1A: Quality of life of people who use services". This measures the care users' reported experience in eight outcome domains of control, dignity, personal care, food and nutrition, safety, social participation and accommodation. As a result, the impacts captured are distinct from the wellbeing of avoided injuries, captured in QALYs below, thus avoiding the risk of double-counting.

To ensure that the measured quality of life impact is not affected by non-service related factors, we used metric "1B: Quality of life of people who use services" from the ASCS, which is the metric 1A adjusted for preferences of service users and external factors that might influence perceived wellbeing. Using this metric follows the methodological approach outlined in Forder et al. (2016). However, the ASCS is produced only for England. To estimate the impact of adult social care expenditure on SCRQoL for Wales, we explored different approaches and ultimately decided to divide England's expenditure

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<sup>18</sup> The ASCOF measures how well care and support services achieve the outcomes that matter most to people.

on adult social care by the achieved SCRQoL. This allowed us to estimate the cost per SCRQoL, which was then applied to Wales' expenditure on formal adult social care. The expenditure per country was sourced from HM Treasury's Public Expenditure Statistical Analyses as described above (HM Treasury 2023).

We then used evidence by Stevens, et al. (2018) showing that the adjusted SCRQoL is the wellbeing equivalent of a QALY. As a result, we monetised the impact on SCRQoL by applying the monetary value of a QALY (HM treasury 2021). Lastly, the monetised impact was applied to adults receiving unpaid care under the baseline, as well as to those receiving formal care under the baseline but not receiving any support in our analytical scenario.

## *2. Quality of Life Adjusted Years*

Access to social care significantly reduces the likelihood of individuals experiencing injuries thereby preventing the deterioration of their health (Crawford, 2020; Gabrielle F Miller et al., 2022). Thus, social care may result in increased "quantity and quality of life", captured by Quality Adjusted Life of Years (QALYs), by preventing injuries and illnesses, on top of the wellbeing impact due to receiving care, captured in SCRQoL (Office for Health Improvement and Disparities, 2020). Under the analytical scenario, people would no longer receive adult social care and would potentially suffer preventable injuries. According to the Wolters et al. (2019), the most common avoidable admissions are for pneumonia, urinary tract infections, and fractures or sprains. To estimate the number of these admissions, we applied their incidence rates to the number of potentially avoided A&E admissions due to the existence of adult social care (as calculated in 1.2) for adults who previously received care but would not access any support under our analytical scenario. The impact of these potentially preventable injuries or illnesses on the quantity and quality of life was then monetised to estimate the savings that adult social care generates by preventing injuries.

To estimate the impact of injuries and illnesses on quality and quantity of life, we first applied disability weights<sup>19</sup> for the most commonly avoided injuries and illnesses in care homes to Disability Adjusted Life Years (DALYs) (Institute for Health Metrics and Evaluation, 2019).<sup>20</sup> To translate DALYs to QALYs, we explored different approaches and ultimately assumed that the gains in QALYs are broadly equal to losses in DALYs, following Bevan et al. (2007). These QALY impacts were then monetised using the

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<sup>19</sup> Disability weights are values representing the health impact associated with specific diseases and are generated through consultations with clinicians, experts, or community members. These are applied to Disability Adjusted Life Years (DALYs) to estimate mortality and morbidity of specific diseases (Hagell and Cheung, 2019).

<sup>20</sup> QALYs measure equivalent healthy years lived, whereas DALYs measure loss of health. A QALY value of 1 is equivalent to a year in perfect health, while a DALY value of 1 is equivalent to death (National Collaborative Centre for Infectious Diseases, 2015).

latest monetary value for a QALY, which is £70,000 in 20/21 prices according to the Green Book (HM Treasury, 2022).

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