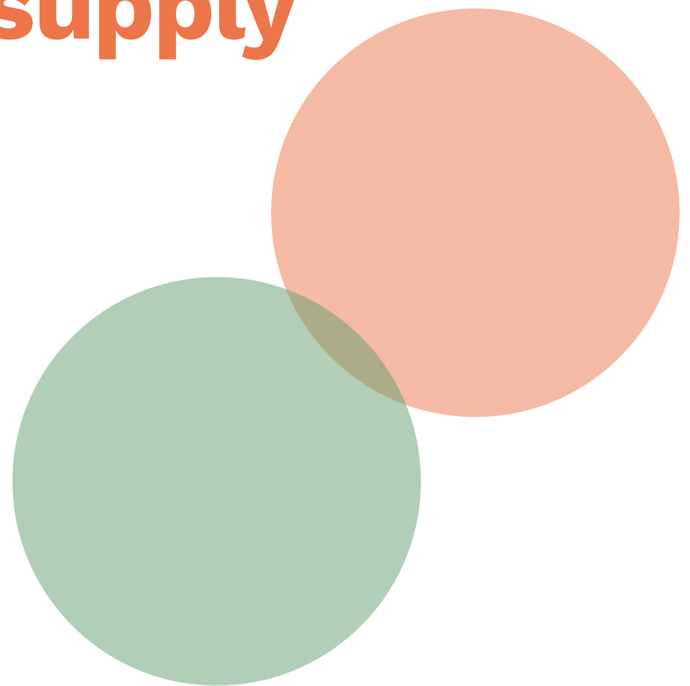
TOPIC 7:

Public sector market power in primary dental care and adult social care and implications for long-term supply



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Plain English summary

Context

Dentistry and adult social care in England operate somewhat like a marketplace, with services provided by many mostly independent providers. Large shares of the demand are, however, publicly funded and commissioned (paid for) by the NHS and local authorities (LAs), respectively. Due to funding pressures, the NHS and LAs use their market power to keep (real) prices paid to independent providers down and increase contributions for those using these services. This market imbalance has led to a shift from public commissioned services to more private service provision and concerns that quality of care is impacted by low care tariffs.

Knowledge gap

There is little known about the drivers behind independent health and care providers' decisions to provide less publicly commissioned services and more services paid privately. These decisions do have, though, important equity implications, and can increase pressure on other parts of the healthcare system (e.g., avoidable hospitalisations) as well on families (e.g., unpaid care).

Value

Research could provide evidence on:

- The factors affecting dentists' and social care providers' decisions to provide more (or solely) privately paid services vs. publicly commissioned.
- The impact of reduced provision of public funded primary care and social care services on avoidable hospital admissions, and development of other health conditions.
- The impact that public Adult Social Care provision for cared-for persons and carers have on unpaid carers' quality of life, health and labour market attachment.

Impact

By investigating these factors, the research aims to provide evidence that can inform policy decisions and potentially mitigate the negative consequences of the current market dynamics in dental and social care. This could lead to improvements in access to care, quality of care, and support for the workforce in these sectors, ultimately benefiting both service users and providers.

Introduction

Some health and care services in England, like primary dental care and adult social care (ASC), are provided mainly by independent providers. For example, primary dental care services are provided in about 11,000 private dental practices (**Kings Fund, 2023**), while adult social care is provided in 39,000 care establishments with the vast majority (over 85%) being independent and only a small fraction owned by either local authorities (LAs) or the National Health Service (NHS) (**Skills for Care, 2023**).

A large share of the demand in these markets is, however, publicly funded. The NHS (through Integrated Care Boards (ICBs)) contract from dental practices about 45% of primary dental care treatments (**LaingBuission, 2022**), while LAs and the NHS commission about 60% of ASC services (**ONS, 2023**a; **ONS, 2023**b). LAs and the NHS therefor have substantial market power in these markets, which they use to keep prices low, often below sustainable levels for independent providers. This can lead to market failure, with supply unable to meet demand levels.

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In this pathfinder we look at the implications of such market failure caused by public sector market power in primary dental care and ASC markets, with implications on service supply in the long-term, and knock-on effects on workforce, peoples' health and care outcomes, equity of service provision, and informal/unpaid care.

Other primary care services, like eye care, pharmacies, general practitioners, also have experienced similar market pressures and increases in private provision (**The Health Foundation, 2023**; **Kings Fund, 2024**). However, even though the private sector is growing in these markets, its share is relatively small, and related to an increasing demand for services. Prices paid by the NHS did not keep up with inflation in post pandemic years (**Kings Fund, 2024**), indicating further challenges to publicly-commissioned services and incentives to increase private provision. On the other hand, NHS provision, although insufficient, is relatively stable so far. Therefore, the private sector mostly helps alleviate the pressure on the NHS service demand in these markets, rather than pushing out public services. By comparison, the primary dental care market started the shift towards increased private provision much earlier, in the 1980s and early 1990s (**Dentistry, 2022**). This likely means there is more to learn from this market, even if it is useful to keep an eye on the development of provision of other primary care services. While a comparison of various primary care markets would be an interesting exercise, given our focus on public sector market power, we will mainly explore primary dental care and adult social care, where public sector pricing had a substantial impact on causing market failure.

The primary dental care market in England

Market structure

In September 2024 there were 36,492 dentists and 71,533 dental care professionals (e.g., nurses, hygienist, therapists, etc.) in England registered with the General Dental Council (**General Dental Council, 2024**a). The majority (85%) of the dental workforce worked in one of about 11,000 independent dental practices (**Kings Fund, 2023**).

Primary dental care supply in England is rather fragmented. A large share (69%) of dental practices are owned and managed by individual dentists, working as self–employed, partners or directors of small private businesses, and further 20% of dental practices are owned and managed by small incorporated groups (**College of General Dentistry**). Only a small share of practices are owned by large dental body corporates, like Mydentist and Bupa Dental (**Christie&Co, 2024**), with some market consolidation in recent years (e.g., merger between Portman and Dentex) (**LaingBuission, 2022**).

Funding and prices

The size of the primary dental market in England has been valued by LaingBuisson at £8.3 billion in 2020/21, of which the private sector accounted for £4.6 billion (55%) (**LaingBuission, 2022**). Funding for NHS dentistry in England comes partly from central funding and partly from patient charges, with a trend of a real term decrease in central funding and real term increase in patient charges. In 2021/22 the NHS contribution to dentistry was £2.47 billion (about 80% of the total) and patient charges were £630 million (20%) (**Williams et al., 2023**).

Despite the decrease in funding, the NHS budget for dental care has been consistently underspent, as the allocated funding to dental practices is “clawed back” by commissioners if the agreed level of activity is not delivered (see details on the Dental Contract below). The underspend for 2022/23 was estimated by the Nuffield Foundation to be about £400 million (or about 13% of the overall budget) (**Williams et al., 2023**).

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Allocations from NHS England to Integrated Care Boards (ICBs) are based on the amount of historic dental activity commissioned in each area before the current dental contract was introduced (i.e., before 2006). The allocations were aimed to be needs rather than demand based. However, a needs-based resource allocation formula has not been put in place yet (**House of Commons Library, 2024**).

The Dental Contract

In contrast to GP services, there is no requirement for people to register with a dental practice offering NHS dental care, and, in theory, they can go to any practice holding an NHS contract for treatment

(i.e., no geographical restrictions). Dental practices, on the other hand, have the choice to provide NHS dental services to new patients or not, depending on whether they have capacity under the terms of their contract with their Integrated Care Board (ICB) (**Baird and Chikwira, 2023**). It is the latter rather than the former which drives the access to services (see Equity and health impact, below).

The most common contracts used for NHS primary dental care services in England are General Dental Services (GDS) contracts, introduced in 2006. They cover mandatory routine and clinically urgent treatments, but also more specialist services such as complex extractions, home visits or sedation. Under GDS contracts, payments are made by ICBs for Units of Dental Activity (UDAs), with bands of treatment attracting different numbers of UDAs (and different patient charges), depending on the complexity of treatment (see Table 1). Each practice has to agree to provide a maximum number of UDAs for an agreed price during each fiscal year, with funding being "clawed back" by commissioners, if less than 96% of UDAs are delivered (**Baird and Chikwira, 2023**).

The NHS Dental Contract has long been criticised, as before July 2022 it did not differentiate (and pay more) for more complex and time-consuming treatments or treatments for more than one tooth under Band 2. Moreover, if a dental practice achieved the agreed number of UDAs early during a fiscal year, it was not reimbursed for additional NHS activity. This incentivised dentists to provide more Band 1 treatments as well as not to accept new patients, as they may need more complex treatments (i.e., Band 2 or 3).

Table 1: UDAs and patient charges in England by NHS dental treatment band

NHS dental treatment band	Treatment	Number of UDAs	Patient charges 2024/25
Band 1	Examination, diagnosis and advice. If needed also X-rays, scale and polish, and planning for further treatment.	1	£26.80
Band 2a	Covers everything in Band 1, plus additional treatment such as fillings, root canals and extractions other than Band 2b and Band 2c	3	£73.50
Band 2b	Covers everything in Band 1, plus a course of treatment involving either non-molar endodontics to permanent teeth or a combined total of three or more teeth requiring permanent fillings or extractions.	5	£73.50
Band 2c	Covers everything in Band 1, plus a course of treatment involving molar endodontics on permanent teeth	7	£73.50
Band 3	Covers everything in Band 2, plus more complex treatment such as crowns, dentures and bridges	12	£319.10
Emergency	Examination, assessment, advice and urgent treatment	1.2	£26.80

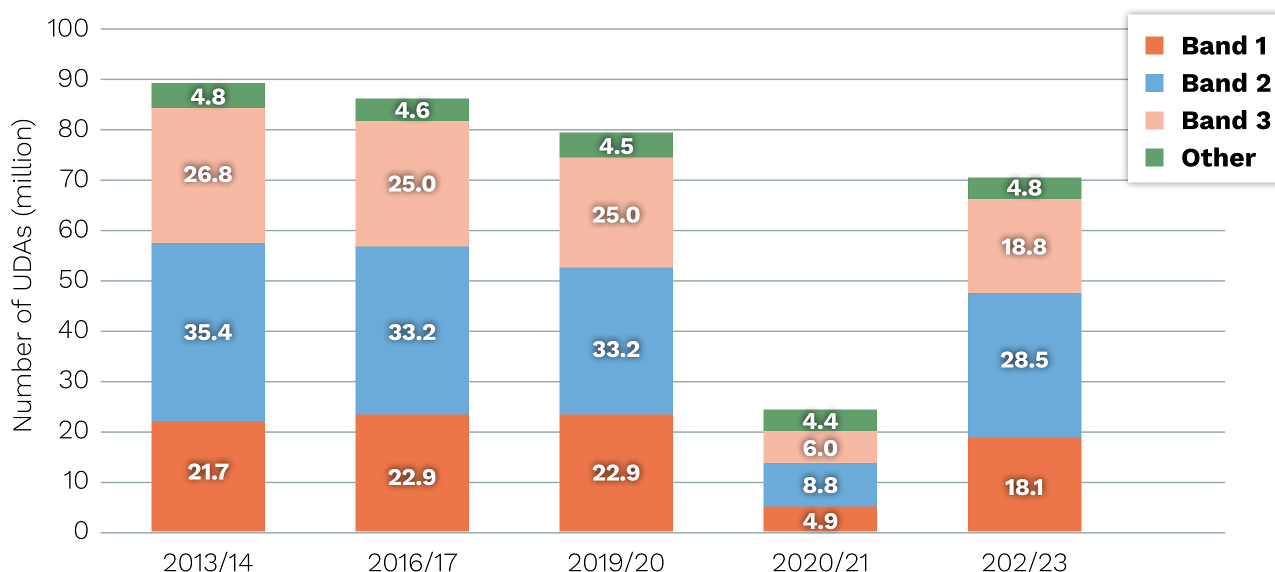
Source: NHS England. Note: Band 2 has been broken down in November 2022 into three categories, to reflect courses of treatment of different complexity

Reform to the dental contract completed in 2022 included: i) the introduction of a new national minimum value for each UDA across England, ii) enhanced UDA in two new Bands (2b and 2c) reflecting more complex treatments, and iii) the possibility for dental practices to be reimbursed for up to 110% of their contract value (**Baird and Chikwira, 2023**). The BDA, however, warned that the reform was not going far enough to address the perverse incentives to dentists to provide mainly less complex treatments, and likely not incentivise demoralised dentists to provide more NHS dental care (**BDA, 2023**).

Market failure in NHS primary dental care

The issues with the Dental Contract and inadequate pay for NHS dental activity has led to market failure in the NHS dental market, with a declining trend in NHS dental care activity. The number of NHS courses of treatment delivered by dental practices reduced from 39.7 million in 2013/14 to 38.4 in 2019/20 and 32.5 million in 2022/23. Similarly, the number of UDAs reduced from 88.7 million in 2013/14 to 78.8 million in 2019/20 and 70.0 million in 2022/23. Pre-pandemic (i.e., 2013/14 to 2019/20), the biggest reduction in activity was in Band 3 (18%) and Band 2 (17%) treatments, and reached 30% and 20%, respectively, in 2022/23 (see Figure 1). For Band 1 treatments there was a 6% increase in UDAs in the years before the pandemic. However, post-pandemic (i.e., 2022/23) there is an important drop in Band 1 activity as well: 21% reduction compared to 2019/20, and 17% reduction compared to 2013/14.

Figure 1: Number of UDAs delivered by NHS treatment band and year



Source: NHS England, NHS Dental Statistics

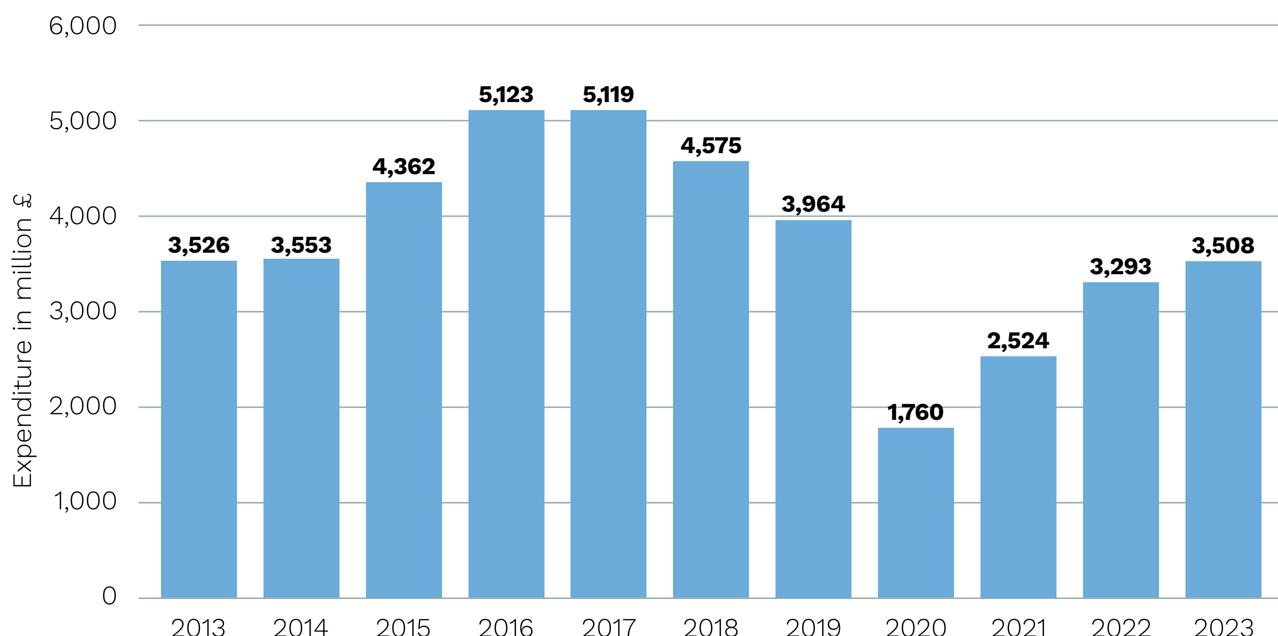
The pandemic had a big impact on dental care, with NHS activity dropping to less than a third in 2020/21 compared to the previous year, mainly due to lockdowns as well as people isolating and avoiding any non-urgent treatments. By 2022/23 dental activity generally recovered, but has not reached pre-pandemic levels (see Figure 1).

Increase in private sector dental care activity

The NHS Dental Contract allows practices to provide a mix of NHS and private services. A General Dental Council survey of dentists working patterns shows that the majority (74%) are holding contracts with the NHS. However, only a minority (14%) provide strictly NHS services while 60% are providing a mix of both NHS and private dental care (**General Dental Council, 2024**b).

As the Contract became increasingly unattractive and dentists could charge higher prices privately, dental practices moved towards more private dental care provision (**Williams et al., 2023**). ONS data on UK household consumption expenditure on dental services shows an increase before the pandemic, reaching a peak at £5.1 billion in 2016 and 2017, before decreasing to £4.0 billion in 2019 (see Figure 2). Similar to NHS dental activity, household expenditure on dental services sharply declined

Figure 2: Annual household expenditure on dental services in the UK (volume based)



Source: Office for National Statistics, 2024

Note: Household consumption expenditure on dental services includes mainly expenditure on private dental care, but may also include NHS patient charges.

during the pandemic, and although it has recovered subsequently, it had not (yet) reached pre-pandemic levels by 2023. This may also reflect other changes in the economy, i.e. the recent cost-of-living crisis, where relative falls in income compared to rising costs may have reduced demand for (private) dentistry, given it is a normal good (**Sintonen & Linnosmaa, 2000**).

The trend of decreasing NHS dental care and increasing private dental services is likely to continue. A survey of dentists from 2022 shows that nearly three-quarters (74%) intended to reduce (or further reduce) the amount of NHS activity they were undertaking, while 43% indicated they are likely to provide only private dental care (**British Dental Association, 2023**). This trend might lead to a reduction not only in NHS dental care capacity, but dental care capacity overall, as dentists providing more private services can likely afford to provide fewer treatments for higher prices, without decreasing their earnings.

Dentistry workforce

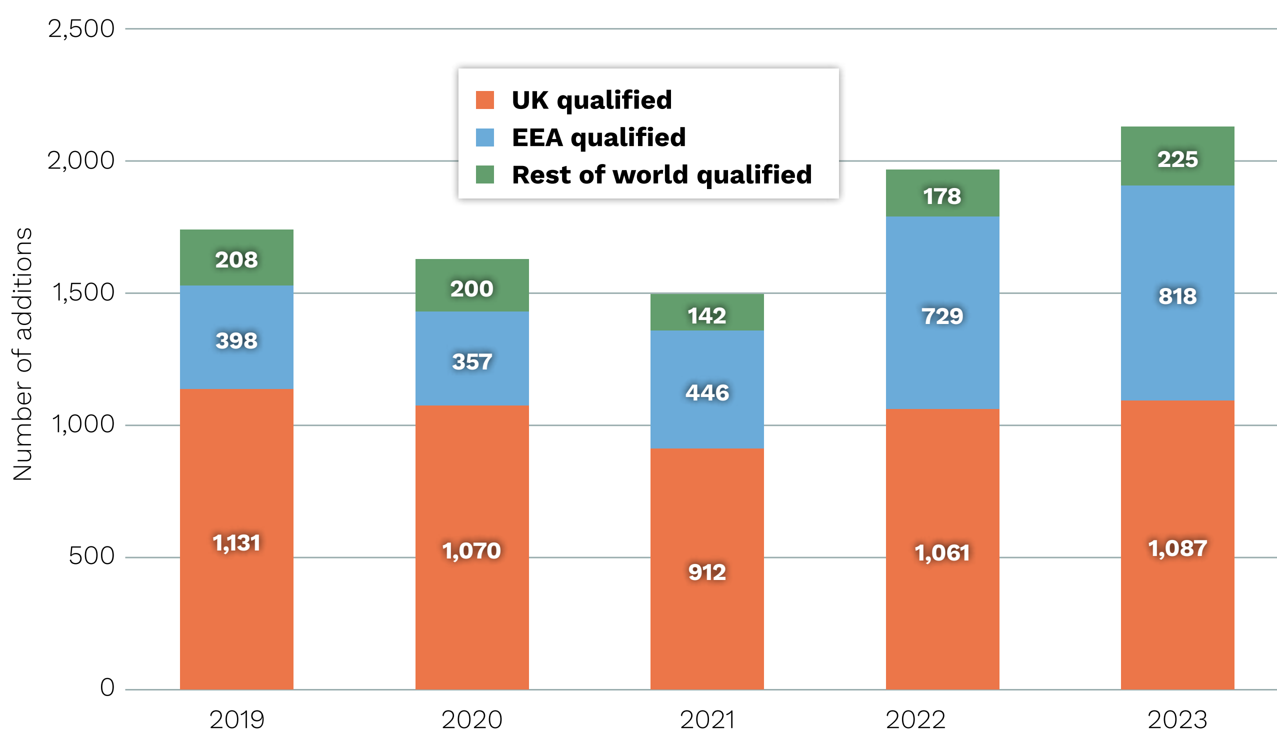
The UK has among the lowest rate of practising dentists in Europe. In 2022 the EU27 average was 0.8 per 1,000 population, with rates of 0.9 in Germany and Italy and 0.6 in France. In comparison, the UK had only a rate of 0.5 per 1,000 population (**OECD/European Union, 2022**). Moreover, there is also

substantial variation between UK countries, with higher rates in Northern Ireland and Scotland (0.6 per 1,000 population) and around 0.43 per 1,000 population in England (**Williams et al., 2023**).[1]

Dental practices experience challenges in recruitment and retention of dentists and dental care professionals, with some reporting labour shortages that led to not fulfilling NHS contracted activity (**LaingBuission, 2022**). A British Dental Association survey of primary dental practices revealed that 65% of the respondents (N=2,204) had unfilled vacancies for dentists. The main factors mentioned for job vacancies by those with unfilled posts were: i) working under the current NHS contract (82%); ii) issues relating to remuneration levels; and iii) difficulties attracting candidates to remote, rural or deprived communities (**Mills et al., 2023**; **British Dental Association, 2022**).

A large share of dentists (87%) reported having experienced symptoms of stress, burnout or other mental health problems, with low job satisfaction levels due to insufficient time to spend with patients (75%), and only 25% being able to offer the kind of care they want to provide (**British Dental Association, 2022**). These work related issues have been accompanied by a rather sharp decline in the training and registration of new dentists, from over 2,500 in 2015 (**McCarey et al., 2022**) to 1,500 in 2021, before starting to recover again (see Figure 3).

Figure 3: New additions to the dentist register by country of qualification and year



Source: GDC Registration Reports 2019 to 2023

Overseas recruitment

Immigration of dentists trained overseas has for many years improved the supply of dental care in the UK. In the last two decades (2000-2019) dentist registration has increased from 31,325 to 42,469, with

1 Figures for the UK do not include dentists providing only private services. Considering that these represent about 25% of the UK dentists, the overall rate of dentists per 1,000 persons for England would be around 0.57, which is still low compared to other European countries.

international dental graduates constituting 58% of the increase in registrants (**Davda et al., 2020**). In 2023, over 30% of all dentists registered with the GDC had an overseas qualification, the majority of them (60%) having an EEA qualification. Comparatively, the vast majority of dental care professionals (i.e., nurses, hygienist, therapists, etc.) were UK trained (95%), with only 1% having an EEA qualification and 4% being qualified in a non-EEA country.

A Nuffield Trust report on the effects of Brexit on the health and care workforce in the UK, mentions that before 2016 majority of overseas recruitment of dentists was from EEA countries, and represented around 25% of annual additions to the GDC register (**McCarey et al., 2022**). This dropped sharply around the time of the Brexit referendum and reached the lowest point during the pandemic (2020/2021), with no compensation in recruitment from the rest of the world (see Figure 3). Since then, though, recruitment from EEA countries has recovered, most likely aided by the legislation which enables the GDC to continue recognising EEA dentists' qualifications. These arrangements were reviewed in 2023 and extended for a period of five years (**GDC, 2023**). Dentists with an overseas qualification from the rest of the world need to pass the Overseas Registration Examination (ORE) to register with the GDC. This important hurdle explains the rather low recruitment numbers of dentists from these counties.

The NHS Long Term Workforce Plan 2023

The **NHS Long Term Workforce Plan 2023** recognised the staffing issues in primary dental care and proposed measures to increase training places for dentists, hygienists and therapists by 40% by 2031/32. The Plan anticipates though that a large amount of the growth in dentistry capacity will come from improving the participation rate of dentists in NHS services, by tying-in new graduates to spend for a number of years a minimum proportion of their time delivering NHS dental care. Moreover, the Plan aims to implement a better skill mix, by increasing the dental activity through dental therapists and hygienists from currently 5% to 15% in 2036/37.

While the Plan is ambitious, there are many limiting factors to its delivery. Just increasing training places to complete a degree is not sufficient to increase the number of qualified dentists. Graduates need to also complete foundation training, by working under supervision in NHS approved dental practices (**Baird and Chikwira, 2023**), numbers of which are falling due to increased provision of private dentistry. This requirement will restrict the number of dentists that can be trained. Moreover, an important limiting factor for improving the skill mix is the dental practice size. With almost half of dental practices having 1-4 persons (**Williams et al., 2023**) and 69% small private businesses owned and managed by individual dentists (i.e., self–employed, partners or directors) (**College of General Dentistry**), a large number of practices will face physical limitations to increase the skill mix.

Equity and health impact

Access to dental services

Access to NHS dental services has been often reported in the last years to be a serious issue, with many dental practices not taking any new patients, mainly due to the upper limits to contracted UDAs as well as risks associated with new patients potentially needing complex treatments (Band 2 or Band 3), perceived to be inadequately reimbursed (see subsection *The Dental Contract*).

A large **BBC News survey** during May to July 2022 of nearly 6,880 general dental practices in the UK with a NHS contract (i.e., almost all dental practices with a NHS contract) found that 90% were not accepting new adult NHS patients and 80% were not taking on children. There is substantial geographic variation in access. A third of the 217 UK upper-tier local authorities had no dentist taking on new adult patients. Across nations, Scotland had better access, with 18% of practices taking on new NHS patients, while the rates in Wales, England and Northern Ireland were only about half that. In England, access was worst in the South West, North West and Yorkshire and the Humber, where 98% of practices were not accepting new adult NHS patients, while the best access was in London where almost 25% of practices were taking on new NHS patients.

Data from the **GP Patients Survey 2024** shows substantial variation in access to NHS dental services in general. By far, the largest difference in an appointment success rate – if the person tried to get an NHS dental appointment in the last 2 years – was if a person has been a patient of the dental practice before (84% appointment success rate) or not (33% appointment success rate). However, ethnicity was also a factor, with people of White background being more likely to get an appointment (74%) compared to those of Asian, Black or other background (66%). A large share of respondents (over 47%) did not try accessing NHS dental services, with one of the main reasons cited being that they did not think they would be able to get an NHS appointment (25%). Further reasons for not seeking NHS dental appointments were preference for private dental services (27%) or the opinion that a visit to a dentist is not needed (20%). However, rather worrying, a not unimportant share (6%) cited too high patient charges as reason for not seeking an NHS dental appointment.

Regionally, the highest share of respondents to the **GP Patients Survey 2024** who cited that they were either not successful in getting or thought they would not be able to get an NHS appointment was in the South West (34%). This explains why, according to a survey of over 2,000 British adults in 2021, over 50% of patients in the South West stated they had to choose private care for their last dentist appointment, more than in any other part of the country. They were also twice as likely compared to the national average to live more than 30 miles away from a dental practice (**Mydentist, 2021**).

Nonetheless, for many households, private dental care is not an affordable alternative to the lack of access to NHS dental services. From the respondents of the Mydentist 2021 survey stating they did not visit a dentist within the last year for a routine check-up, 16% cited that they cannot afford to do so (**Mydentist, 2021**). The private costs of more complex treatments is likely prohibitive for even more people, with important equity implications for oral health.

Inequalities in oral health

Although oral health (e.g., proportion of people with natural teeth, proportion with no tooth decay, and percentage of people with no impact on their daily life due to oral conditions) has improved in the last thirty years, inequalities based on deprivation and geography have widened. For example, in 2008 the proportion of 5-year old children with dental decay was 2.9 times higher in the most deprived compared to least deprived areas of England, and this has increased to 3.8 times in 2019 (**Public Health England, 2021**). The incidence of hospital tooth extractions in 2019 for children aged 0 to 19 were over three times higher in the most deprived compared to the least deprived quintile in England: 466 and 132 per 100,000 population, respectively, despite the fact that NHS dental services are free for children aged under 18. Moreover, the incidence of oral cancers was higher in the North of England compared to regions in the South and East.

Importance of prevention in avoiding higher costs elsewhere

NHS dentistry can have an important role in early detection and prevention of avoidable health conditions and increased health care utilisation, including GP appointments and, at the extreme margin, hospital admissions. There is evidence showing prevention offers benefits of maintaining health and cost savings (**Public Health England, 2018**), they can also alleviate the burden on other public services and be beneficial to economic growth (**Public Health England, 2021**). Currently dentistry is not well integrated with other ill-health prevention policies, while it could be instrumental for reducing the development of obesity and diabetes in the population (**Health Foundation and Nuffield Trust, 2017**).

The Scottish Government implemented in the 2000s Childsmile, an oral health action plan aimed at improving child oral health in Scotland, reducing inequalities in dental care access and outcomes, and shifting the focus of supply from treatment to prevention through targeted and universal components in educational settings, community, and dental practice (**Ross et al., 2023**). Childsmile is undergoing a comprehensive multidisciplinary evaluation commissioned by the Scottish Government. To date, no similar programme has been replicated in other parts of the UK.

The adult social care market in England

Market structure

The ASC system supports people with learning or physical disabilities, mental health issues, as well as long-term-health conditions, including dementia. Care services are provided in peoples' own homes (i.e., home care, also referred to as domiciliary care), in specialised housing, in which people have help at hand but maintain their independence (i.e., housing with care), in the community (e.g., day care centres) and in care homes with or without nursing.

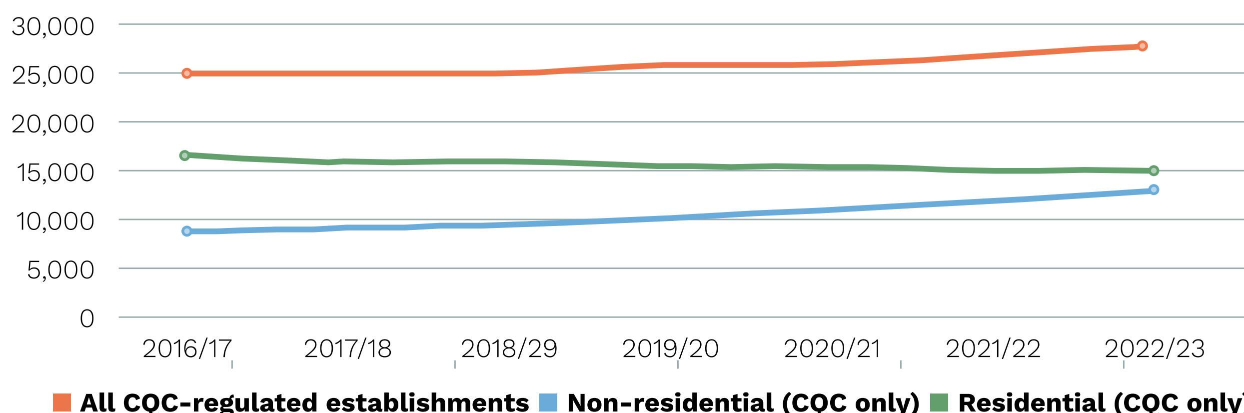
ASC services in England are supplied by about 18,000 care providers operating about 39,000 care establishments as well as about 100,000 personal assistants employed directly by care recipients. The majority of care establishments are owned by independent providers (i.e., for-profit and not-for-profit), with about 85% of care staff being employed in the independent sector while only small fractions are employed by either LAs (8%) or the NHS (7%) (**Skills for Care, 2023**).

A large share of ASC providers are rather small: about 50% had fewer than 10 employees and 85% fewer than 50 employees in 2022/23. Only about 2% of ASC organisations (including groups) were large (with over 250 employees), but employed almost half (47%) of the total ASC workforce in 2022/23 (**Skills for Care, 2023**). Some of the biggest care providers in the UK are Barchester (over 200 care homes; over 15,000 staff), HC-One (over 200 care homes), Home Instead (250 local offices; over 10,000 staff), and Bluebird Care (200 local offices).

In terms of care setting, the size of the non-residential ASC market was much larger in 2022/23 in terms of the share of the workforce employed (59%) compared to the care home market (41%). This

is (at least partly) the result of (a long-term) Department of Health and Social Care (DHSC) vision for ASC, e.g. as expressed in the white paper **People at the Heart of Care**, which aims to support more people with care and support needs to live independently at home or in the community, and a shift away from services in institutional settings. This reflects both shifting preferences in society as well as cost-saving considerations for public spending. This policy shift can be recognised in the declining number of care homes and increasing number of domiciliary and community care establishments (see Figure 4). Since 2016/17 the number of Care Quality Commission (CQC) regulated care homes decreased by about 10% to 15,000 in 2022/23, while the number of CQC-regulated non-residential care establishments increased by almost 50% to 13,000 in 2022/23 (**Skills for Care, 2023**).

Figure 4: Trends in ASC service provision by care setting



Source: Skills for Care, 2023. Note: y axis shows number of establishments

Funding

Publicly-funded ASC in England is mainly commissioned by 152 local authorities with responsibility for social care in their localities. Compared to access to health care, publicly-funded ASC is needs- and means-tested, meaning that eligible people will have impairment exceeding nationally defined levels as well as financial assets below nationally set thresholds.

Although Net Current Expenditure on ASC increased since 2016/17 by 15% in real terms, reaching just over £20 billion in 2022/23, the increase has not translated in support for more people and likely covered the increase in care provider operation costs, in particular payroll costs, due to the steep increase in the statutory minimum wage and the large share of staff in ASC paid at minimum wage.

The number of LA supported people has slightly decreased, from 868,000 during 2016/17 (**NHS Digital, 2017**) to 835,000 during 2022/23 (**NHS England, 2023**), despite population ageing and the increase in number of people with multiple long-term health issues and complex needs. This might reflect fewer people qualifying for LA-funded ASC, as thresholds for the financial means test have not been adjusted with inflation, and potentially tighter needs eligibility criteria, as

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cash strapped LAs may have to ration care (**Schlepper and Dodsworth, 2023**). The waiting list for ASC is also rather significant: in August 2022, about 30,000 people were waiting for care and support to begin, while almost 250,000 adults were waiting for an assessment, with 33% waiting over 6 months. The delays were due to a decline in LA employed social care workers combined with a limited capacity within providers to take on new clients (**Schlepper and Dodsworth, 2023**).

Evidence also suggests that in order to make savings, LAs are shifting to asset-based approaches (e.g., signposting to services provided by voluntary, private and community sectors) aimed at making more use of local skills and connections without relying on formal state-funded support (**Schlepper and Dodsworth, 2023**).

Data on privately-funded ASC is rather limited. Depending on the source, in 2022/23 self-funders represented between 37% (**ONS, 2023**a) to 46% (**LaingBuisson, 2023**a) of care home residents, and between 20% (**LaingBuisson, 2024**) and 23% (**ONS, 2023**b) of people receiving care in their own homes. The high share of public funding in ASC markets is giving LAs substantial market power.

Market failure in ASC markets

The monopsony power of the public sector in the market for ASC services has led to two types of market failure:

- Market failure in the market for services, with fee rates paid by LAs (sometimes) below levels sustainable for care providers, and the amount not matching demand/care needs of those requiring support and
- Fee rates paid by LAs have led to market failure in the ASC labour market, with low pay levels accompanied by high turnover and job vacancies.

Market failure in the market for ASC services

Whilst there are other potential explanations as to the difference in price paid for ASC by LAs and those self-funding, e.g. product differentiation, price discrimination, economies of scale (**Forder and Allan, 2011**; **Allan et al., 2021**), it is generally understood that, due to budget constraints and pressures from an increased demand for publicly funded ASC services, LAs are using their market power to keep prices down. Existing evidence suggests that public organisations in England were paying in 2023/24 on average 20% below the minimum price needed by homecare providers (estimated at £25.95 per hour) to cover care workers pay at statutory minimum wage level, oncosts (e.g., annual leave, sick leave, National Insurance, pension contributions, and training), travel time, business costs, and some profit or investments (**Homecare Association, 2023**). Moreover, only 5% of public organisations were paying in 2023/24 an hourly price at or above the minimum required, a substantial drop from 14% in 2018.

Similarly, LAs were paying in 2022/23 on average 16% less than the *fair cost of care home services without nursing* for older people and people with dementia (estimated to be £892 per person per week) and 9% less than the *fair cost of care home services with nursing* for older people and people with dementia (estimated to be £1,152 per person per week) (**LaingBuisson, 2023**b).

To compensate for the underpayment by LAs, care providers charge higher prices, often above fair cost of care levels, to people self-funding their care. The average price paid by those self-funding their homecare was £29.10 per hour in 2023/24, or about 35% higher than the average price paid by public organisations (**Homecare Association, 2023**), while the average weekly fees paid by self-funding care home residents were £1,136 in care homes without nursing (37% higher than LA fees) and £1,409 in care homes with nursing (23% higher than LA fees) (**LaingBuisson, 2024**).

Self-funders, however, cannot fully compensate for low LA fee rates, in particular for care providers that have only a small share of self-funding clients. Care providers in economically unviable situations may not be able to fulfil contracts and 'hand them back' to LAs. The Association of Directors of Adult Social Services (ADASS) reported that 66% of LAs have been affected by provider closure or contract 'hand-backs' in a six months period to May 2023. 'Hand-backs' are having an evident negative effect not only on care providers but also on those receiving care, with 8,334 care recipients reported to have been directly affected during that period (**ADASS, 2023**).

Fee rates paid and contracting models also put considerable (negative) pressure on care quality. Self-payers are reported to be a higher share of residents of care homes with an 'Outstanding' Care Quality Commissions (CQC) quality rating. The higher care intensity (i.e., higher number of hours of care per resident per week) provided by 'Outstanding' care homes is likely possible only through higher revenue from a larger share of self-funders (**LaingBuisson, 2023**b). Similarly, people self-funding their homecare may have a choice of more convenient time slots and (paying for) longer visits. Also, despite increasing use of framework agreements, personal budgets and direct payments provided to individuals to choose how to support their own care, LA contracting models to provide services can put pressure on quality and availability of services. For example, there is at least some indication that lower LA prices from higher levels of provider competition leads to lower quality (**Forder and Allan, 2014**).

CQC regulation of the care sector is important for ensuring service quality and the safety of people receiving care. Moreover, quality ratings are aimed to provide families and public commissioners valuable information about available care services for informed choices when purchasing care. The Homecare Association reveals, however, important shortcomings of the CQC regulation of community care providers, with a significant share of them (23%) having had no rating as at June 2024, while a further 37% had a rating older than 4 years. This issue is believed to be a result of the proliferation of small homecare providers (i.e., the number of registered homecare establishments doubled in the last 10 years), while CQC resources (including staff) remained unchanged. This led to CQC conducting too few inspections and assessments to ensure quality and safety of services and LAs likely having unreliable data for homecare tender processes (**Homecare Association, 2024**). Further, personal assistants, i.e. those directly employed by the person they support, do not have to register with the CQC.

Market failure in the ASC labour market

Despite the large number of employers, the market failure in the ASC market for services has knock-on effects on the ASC labour market, limiting care providers' revenue and profit margins and their capacity to compete by offering better wages and conditions (**Vadean and Allan, 2023**). In fact, independent care providers are passing on the low fee rates received from LAs to low wages and employment conditions for their employees. For example, care workers (i.e., the main frontline staff group accounting for over 50% of ASC staff and 80% of direct care staff) are among the lowest paid job roles in the UK (many at statutory minimum wage), domiciliary care workers are often employed on contracts without guaranteed working hours (i.e., zero-hours contracts) and are not paid for travel

time between clients, and most care staff employed by independent providers get only statutory sick pay (i.e., £116.75 per week in 2024/25), which makes sick-leave often unaffordable (**Skills for Care, 2023**). This has led to endemic recruitment and retention challenges illustrated by high staff turnover rates (over 35% in the case of care workers) and job vacancies (12% for care workers jobs), which often can be filled only through recruitment from overseas (**Skills for Care, 2023**).

These workforce shortages add to the ASC service supply issues. For more details on recruitment and retention of ASC workforce as well as international recruitment see REAL Supply Pathfinder 2 “Pay and working conditions for recruitment and retention” and Pathfinder 3 “International migration of health and care workforce” (links TBA).

Consequence of ASC market failure outside the sector

Market failure in ASC can have negative consequences on the NHS by increasing the number of occupied beds by people who cannot be discharged to ASC (i.e., delayed transfers of care (DToC) and increasing unplanned hospital admissions caused by an inadequate care (i.e., falls/fractures, bed sores, respiratory infections, etc.). Moreover, insufficient and/or unaffordable formal care services can increase pressures on families and friends to provide (more) unpaid care.

Delayed transfers of care

The Darzi report shows that, due to the poor state of the ASC sector in England, in June 2024 13% of hospital beds were occupied by people medically fit to be discharged, up from 10% in April 2021. This significantly affected the delivery of acute healthcare treatments and translated into 7% fewer daily outpatient appointments per consultant, 12% less surgical activity per surgeon, and 18% less activity for each clinician working in emergency medicine (**Darzi report, 2024**).

The ASC sector is, though, not solely responsible for DToC, and most delays are in fact attributed to the NHS. The latest DToC data published by NHS England, show that in February 2020 ASC had sole responsibility for 30.3% of DToC days, down from a peak of 38.1% in April 2017 (**NHS England, 2020**). A considerable share of the delays in February 2020 were due to patients awaiting a placement in a care home with or without nursing (24.6%; down from 35.4% in October 2016) and patients waiting for a care package in their own home (20.8%; down from 27.1% in December 2016).

At the peak of DToC in 2016, the costs to the NHS was estimated at around £820 million (**National Audit Office, 2016**). There are, however, additional costs to the ASC sector as well. A large share of DToC (85%) involve people aged 65 and over and evidence suggests that unnecessary prolonged stays have detrimental effects on their health, with prolonged inactivity reducing older peoples’ functional ability and increasing their care needs (**Gridley et al., 2022**). The **National Audit Office (2016)** estimated the additional costs to community health and ASC related to DToC to be around £180 million.

Since 2015, the Better Care Fund (BCF) requires the NHS and LAs with ASC responsibility to pool budgets, plan and work together to provide better integrated care and support people live healthy, independent and dignified lives (**DHSC, 2024**). This includes both tackling DToC and reducing demand for hospital admissions.

Unpaid care

Unpaid (or informal) carers are people that care, without pay, for a friend or relative that is physically or cognitively impaired and would not cope with daily activities without their support. According to figures from the 2021 Census, there are around 4.7 million unpaid carers in England, about three times the size of the formal ASC workforce (**ONS, 2023**).

People become unpaid carers for various reasons, the main reasons being they want (46%) and have the right skills (19%) to provide unpaid care. Nonetheless, a significant minority do it primarily because they perceived to be 'the only one in a position to care for that person' (27%), 'could not afford to rely on [formal] paid services' (15%) or 'don't believe formal care services will give appropriate care' (11%) (**Jitendra and Bokhari, 2024**).

The burden of unpaid care is unequally distributed in the population, with women (10.9%) more likely to provide unpaid care compared to men (7.6%) as well as people before retirement age (around 16% at age 55 to 64 compared to 9% overall) and people in more deprived areas (10.1% in the most deprived areas [1st decile] compared to 8.1% in the least deprived areas [10th decile]) (**ONS, 2023**). Moreover, the regions in England with the highest shares of unpaid carers providing 35 or more care hours per week are the North East (4.7%) and the North West (4.3%) (compared to only 3.2% in the South East and London), regions that also experienced a decline in domiciliary care provision (**Allan, 2021**).

Unpaid care provision does come both at financial and wellbeing costs for carers, and has important equity implications. A study by the Joseph Rowntree Foundation estimated that unpaid carers experience substantial penalties from leaving or reducing paid work. For example, an average pay penalty of about £5,000 per year in the first year of providing unpaid care, and increasing to about £8,000 after six years, with benefits like Carer Allowance (i.e., £81.90 per week in 2024/25 if providing at least 35 hours of care per week) and/or Universal Credit rather ineffective at incentivising labour market attachment or at replacing lost earnings (**Thompson et al., 2023**). The study further found that the caring penalty disproportionately falls on women, deprived households/areas as well as people with health conditions.

Research topics on the supply of health and social care services

Discussions between team members as well as engagement with other academics (REAL Demand Research Unit, PSSRU University of Kent, Cardiff University) and sector stakeholders (British Dental Association, Oral Health Foundation, College of General Dentistry, Homecare Association, Care England, Skills for Care, Care Quality Commission) led to the identification of four topics with long-term implications for Primary Dental Care and Adult Social Care supply:

- The drivers of public-sector commissioned vs. self-funded services;
- Equity with respect to access to services and patient outcomes;
- The impact of reduced publicly funded services on the demand for avoidable hospitalisations and delayed transfer of care; and
- The impact of reduced publicly funded services on families and unpaid care provision.

This section looks at each topic, highlighting existing academic research evidence as well as research gaps that could be covered in Phase 2 of the research programme.

The drivers of publicly commissioned dental care and ASC

Private vs NHS dental care supply

Existing evidence shows that the 2006 dental care reform failed to improve access to NHS primary dental care in areas with highest need and low use. Using BHPS data for England from 1991 to 2008, **Whittaker and Birch (2012)** found that contrary to the policy aims, the 2006 dental reforms led to a contraction in use of NHS dental care among those with previously good access to services, and a shift toward more use of private dental care. They interpreted these results by a strategy of individuals with good access to dental care to either maintain an existing relationship with a dentist who no longer provides NHS care or to avoid the inconvenience associated with potential increased waiting times for NHS care arising from dentists' capacity redistribution. Nonetheless, the study could not establish whether the shift was provider led (i.e., providers reducing NHS dental care provision because they were dissatisfied with the new Dental Contract) or demand led (i.e., demand for private treatments no longer provided under the NHS or to cut waiting times).

Research on factors affecting dental care provision in the UK has mainly focused on NHS dental care. For example, evidence shows NHS dental care attendance among older adults (i.e., 65 and over) decreased with increasing age, from 49% in the age group 65-74, to 23% in the age group 85 and over (**McKenzie et. al., 2017**). The study did not find any direct explanation for the inverse relationship between age and dental attendance, although a possible explanation offered was the preference of older frail adults for dental care in their own home (**Lester et al., 1998**), which may also relate to transportation barriers to health care access (**Seyd et al., 2013**).

With respect to neighbourhood characteristics **Clark (2024)** found that availability and access to NHS dental care in England in 2022/23 was best where most needed (i.e., in more deprived areas). The results confirm similar findings for Scotland and Wales (**Jo et al., 2020**). However, for all neighbourhoods, NHS dental provision was found to be generally less than would be needed to provide basic dental care (**Clark, 2024)**. Assuming that demand for private dental care is lower in deprived areas, these findings may provide some evidence that the type of dental provision is at least to some extent demand led.

There is also evidence of a complex relationship between the type of treatment, complexity of treatment and socio-economic characteristics among older adults (i.e., 65 and over): more deprived patients had a relatively higher rate of NHS examinations, extractions, dentures and preventative advice compared to the least deprived, while the less deprived patients had a relatively higher rate of fillings and complex restorative treatment (**McKenzie et. al., 2017**). This relationship may be related to the higher patient charges for more complex NHS treatments that more deprived patients may not afford. However, a study by **Dale et al., (2021)** could not identify a statistically significant negative relationship between affordability of NHS care (i.e., charges as proportion of weekly gross disposable household income) and NHS dental care attendance (or NHS courses of treatment).

The rather limited evidence on the willingness to pay (WTP) for dental care in the UK shows that the general adult population in 2016 was estimated to be willing to pay for dental check-ups around £30

to £35 (depending on the inclusion/exclusion of outliers and protest answers). This was higher than the NHS patient charges for the relevant Band 1 treatments (£19.70 a the time), higher for individuals with higher income as well as those with university education, but lower for those with fee access to NHS services (i.e., living in Scotland) (**Van der Pol et al., 2023**).These results showed that although people in UK value dental check-ups, respondents seem to base their WTP on their out-of-pocket costs for these services.

Most of the above literature is, however, rather descriptive and not attempting to identify causal effects. Moreover, we could not identify any studies assessing factors that drive dentists' (or dental practices') decisions about their FTE and the FTE split between NHS vs private service provision. Such evidence would be crucial for understanding the role of various policy levers in reversing the downward trend in NHS dental care provision and would need to be addressed in future research. Bespoke data would be needed for such research that could potentially be obtained from larger dental care providers.

Drivers of ASC care provider supply of publicly commissioned services

There is limited research evidence on the reasons behind public contract 'hand-backs' for UK care providers. In social care, reasons given for the 'hand-back' of contracts in Scotland included financial (e.g., running at a loss, with contracts not covering costs such as travel time and appropriately covering minimum wage increases), demand fluctuations, contract type (e.g., framework agreements which passed risk onto the provider), potential quality deterioration, and workforce issues (e.g., inability to recruit enough staff, staffing issues created from contracts, pressure on employment conditions beyond wage) (**Cunningham et al., 2019**; **James et al., 2022**). There were similar financial concerns over funding rates not increasing over time and the implications for workforce in Wales, which was putting pressure on quality and resulting in an increase in contract 'hand-backs' (**Atkinson et al., 2016**). Moreover, in England and Wales, spot contracts and brokerage systems placed no obligation on providers to supply care. In effect they would only provide care in certain geographical areas if the unit price offered was sufficient and, therefore, likely excluding certain people with complex needs (**Atkinson et al., 2016**; **Baxter 2018**). For England, changes in tender could cause supply problems and differences in unit price between contract types (block vs spot) also presented potential supply issues in terms of workforce recruitment, with impact on the ability to meet contract obligations (**Kleinsmith et al., 2018**).

There is a larger evidence base for provider closure than for public contract 'hand-backs' in adult social care. Some of the older US literature identified nursing home withdrawals from Medicaid and/or Medicare certification as (potential) closures (**Castle, 2005**). Findings from this literature could thus apply to drivers of public contract 'hand-back', with homes of lower quality, with low occupancy, a high share of Medicaid residents and in states with stronger quality enforcement more likely to terminate their certification (**Angelelli et al, 2003**; **Castle, 2005**; **Li et al., 2010**).

For England, evidence on closures have been identified from legally required registration data with the Care Quality Commission (CQC). (Higher) competition and (lower) quality increase the likelihood of both care home and home care provider closure (**Allan and Forder, 2015**; **Allan, 2022**; **Allan, 2024**; **Bach-Mortensen et al., 2024a**, **Bach-Mortensen et al., 2024b**). However, closure rates, and the effect of quality on closure, differs by sector (**Bach-Mortensen et al., 2024a**) and there is little evidence of a substitution effect in supply between home care and care home services (**Allan, 2022**).

Contract 'hand-backs' and provider closures will have an effect on the supply of formal social care services in a local area, either for all (potential) consumers (i.e., in case of closure) or only those who require publicly-funded services (i.e., if the provider were to remain in the market providing services for self-funders). Geographical supply of adult social care has been mapped for England pre-Covid-19 (**Allan and Nizalova, 2020**; **Allan 2021**), but the effect of contract 'hand-backs'/closures on supply and quality has not been quantitatively assessed for the UK. There is descriptive and empirical analyses of this kind for the US which could be the basis of future UK work (e.g., **Feng et al., 2011**; **Rahman et al., 2013**; **Bowblis and Vassalo, 2014**; **Hughes et al., 2023**; **Sharma et al., 2024**).

An ongoing project in the NIHR Policy Research Unit in Adult Social Care (ASCRU2) will analyse variation in adult social care supply, including mapping post-Covid-19 and in particular assessing if supply, quality and viability of adult social care are linked to demographic factors in the local market as well as institutional health care factors (i.e., hospital bed supply and funding decisions).

Inequalities in oral health

The impact of dental care in preventing particular avoidable health conditions and hospital admissions has been mainly studied from the perspective of inequalities in oral health. A **Public Health England (2021**) report identified a significant body of research on inequalities in dental care and oral health. Most studies focused on and found evidence of socio-economic and area deprivation inequalities in oral health, with consistent evidence of social gradients in the prevalence of dental caries, tooth loss, oral cancer, self-rated oral health, OHRQoL, oral hygiene, and service use. The literature also suggests absolute inequalities have narrowed over time, but not the relative ones, with some evidence that differences in access to dental care partly explain some of the inequalities (**Bernabe, 2014**; **Jagger et al., 2013**).

The **Public Health England (2021**) report argues that the pathways between socio-economic characteristics and poor oral health are still under-researched. There is some evidence that access to dental care is a contributing factor, particularly noted among older adults and children. For example, untreated caries and signs of severe caries have been found to be relatively more common in older age groups compared to the adult population overall, with care home managers reporting difficulties accessing dental care (**Moore and Davies, 2016**). Access to public transport may play a role in accessing NHS dental care in the UK (**Jo, Kruger & Tennant, 2021**). Moreover, deprivation based inequalities were also persistent and consistently greater among children (**O'Connor et. al., 2023**), with disproportionately higher rates of hospital admissions due to dental caries among children in more deprived areas (**Kaddour et al., 2023**).

Even where access was not an issue, patients in the most deprived quintile were twice more likely to miss dental appointments (free at the point of delivery) compared with the least deprived. This suggests that besides financial constraints, differences in attitudes to dental care by socio-economic status were a barrier to access too, with missed dental appointments higher among male patients, and highest among children (**West et al., 2020**).

Furthermore, existing evidence showed that education level and poor lifestyle choices (e.g., smoking and alcohol consumption) partly explain inequalities in oral health as well (**Conway et al, 2010**; **Greenwood et al, 2003**).

The **Public Health England (2021) report** reviewed oral health inequalities among a variety of population characteristics. Evidence on inequalities by ethnicity was found to be inconsistent and having methodological limitations around representativeness. Studies on the association between disability and oral health found, overall, more difficulties in accessing dental care and poorer oral health for people with certain disabilities. The findings are, however, limited by small sample sizes and the heterogeneity in disabilities. Moreover, very few studies assessed pathways or mechanisms through which people with disabilities might be disadvantaged with respect to oral health. Findings of the impact of pregnancy and religion were inconclusive, while research on oral health of vulnerable groups (i.e., homeless, prisoners, travellers, looked-after children) was scarce, but overall identifying poorer oral health and worse access among them.

The report concludes that further research is needed on inequalities in oral health, in particular studies of the causal pathways and mechanisms explaining why oral health inequalities exist, and revealing how these could be reduced.

Market failure in publicly funded ASC, avoidable hospitalisations and delayed transfers of care (DToC)

The main reasons for delayed discharges from hospital for older people in England is usually attributed to limited ASC capacity, with quantitative research evidence supporting this (**Fernandez and Forder, 2008**; **Gaughan et al., 2015**; **Gaughan et al., 2017a** **Gaughan et al., 2017b**; **Allan et al., 2021**). For example, home care supply affects delayed discharge, with an extra domiciliary care provider per 10 sq km in the average LA decreasing DToC by 14.9% (or 449 days per year) (**Allan et al., 2021**). When looking beyond the number of care home beds and home care providers, more nuanced evidence suggested the importance of fit between the available care provision and the needs of people leaving the hospital. Pinch points of high demand in the system are often created by complex care packages needing more than one care staff to make a homecare visit at the same time and/or multiple visits per day and/or visits at specific peak hours. The issue is similar in residential care, where finding the right kind of capacity for placements of people with challenging behaviour (e.g., linked to dementia) or with mobility problems (i.e., requiring additional staff to support them) can be more difficult. Issues of placements of people with more complex needs in care homes can sometimes be linked to LAs offering 'standard rates' per resident, regardless of need (**Gridley et al., 2022**). The lack of adequate capacity is very closely linked to workforce availability, with recruitment and retention issues reported in more remote (i.e., rural areas), but also for night-shifts, weekends and holiday seasons (**Gridley et al., 2022**).

A system level evaluation of the Better Care Fund (BCF) examined its impact on outcomes such as delayed transfers of care (DToC) and non-elective hospital admissions at Local Authority level (**Forder et al, 2018**). The study found a statistically significant negative relationship between higher BCF expenditure and DToC, but no significant relationship with non-elective admissions. Using quarterly DToC data for April 2013 to March 2017 from NHS England quarterly BCF reports supplemented with DHSC monthly DToC returns, the total effect of BCF was estimated to be a reduction of about 10% in delayed days. Moreover, the study further finds that expenditure on protecting social care services (i.e., related to protecting funding of continued home care, day care and care home placements) was more effective than other types of BCF funded activity at reducing delays due to ASC, and had a similar effect compared to expenditure on intermediate care and prevention activities.

As part of the NIHR Quality Systems and Outcomes PRU, a team of researchers at PSSRU (University of Kent) is currently extending the above research by evaluating the impact of the BCF on a wider range of potential outcomes.

Impact of reduction in formal care on unpaid care

There is a large literature on the substitution effect between informal/unpaid and formal social care, with studies from a variety of countries, e.g., England (**Pickard, 2012**; **Urwin et al., 2019**; **Lyu et al., 2023**; **Saloniki et al., 2024**), continental Europe (**Litwin and Attias-Donfut, 2008**; **Bolin et al., 2008**; **Bonsang, 2009**; **Bremer et al., 2017**; **Duell et al., 2021**; **Perdrix and Roquebert, 2022**), USA (**Van Houtven and Norton, 2004**); Canada (**Stabile et al., 2006**; **Sun et al., 2019**; **Zhang et al., 2021**), and Japan (**Hanaoka and Norton, 2008**). Most of this literature focused on the impact of informal care availability on reducing the extensiveness and/or intensiveness of formal home care and/or delaying the transfer of the cared for person in an institutional care setting.

Existing evidence shows, for example that the substitution effect between formal and informal adult social care was stronger for publicly funded care in England (i.e., more deprived households not affording to self-fund their care) compared to privately funded home care (**Urwin et al., 2019**) as well as in older people with lower levels of care needs that could be safely met by a family member (**Bonsang, 2009**). The substitution effect was also dependent on opportunity costs: the effect being stronger if the cared for person lived with unmarried children with a lower education level, and therefore had less to lose in terms of forgone earnings (**Hanaoka and Norton, 2008**). Moreover, **Bolin et al.(2008)** found cultural differences in informal caregiving in Europe, with the substitution effect between formal and informal care more salient in Southern than Central and Northern Europe. With respect to policy effects, **Lyu et al. (2023)** identified that by making public formal care support in England more "carer blind", the Care Act 2014 has weakened the substitution effect after 2015.

Two studies from England have looked at the opposite effect of formal care provision on informal care. **Saloniki et al. (2024)** used data from the British Household Panel Survey between 1991 and 2009 and found that formal domiciliary care provision reduced the amount of informal care used by older people aged 75 and over. Similarly **Nizalova and Forder (2023)** found that formal care use leads to an approximately 12% decline in the probability of receiving informal care, when accounting for individual heterogeneity. Back-of-the-envelope calculations showed that for people aged 75 and older, one extra hour of formal care would have led to up to 40 fewer minutes of informal care, with estimated effects smaller for men than for women.

A systematic review of literature on the effects of informal care on employment commissioned by the Department of Work and Pensions shows that the age at which a person is most at risk to leave employment to care is between 50 and 64, with the risk increased by a weak labour market attachment (e.g., through fewer formal qualifications), by having more caring responsibilities (e.g., for both dependent children and a parent) as well as the difficulties in finding formal care (**Dixley et al., 2019**). In terms of workplaces issues, the most cited among the factors associated with carers leaving employment was access to flexible working arrangements. While the main barriers for re-engaging with employment were the length of disengagement from the labour market (e.g., due to outdated skills or health issues).

There is also substantial literature on the negative effects of informal caregiving on the carers' health (for a systematic review see **Bom et al. (2019)**) or mental health (or a systematic review see **Ervin et al. (2022)**). This literature found negative effects on the carer's physical health when measured by drug intake and reported pain, with women, married carers and those providing more intensive care more likely to have experienced a deterioration of their health status. However, positive effects on health were found if physical health was measured by self report, with potential biased results related to carers potentially using as reference point the (poorer) care recipient's health. Negative health effects were larger for women, married individuals, as well as carers providing more intensive care.

There are a few studies who attempted to capture the impact of caring on the carers' wellbeing, beyond the narrower aspect of health. For example, studies assessing carers' subjective (or evaluative) wellbeing (e.g., life satisfaction) found evidence of negative effects (**Chen et al., 2019**; **van den Berg et al., 2014**; **Leigh, 2010**). On the other hand, a study assessing experienced wellbeing associated with time use found an overall higher daily average wellbeing score for carers than non-carers, but lower wellbeing scores associated with carers with longstanding illnesses or those unemployed **Urwin et al. (2022)**.

With the aim to support the economic evaluation of social care services, ASCOT-Carer was designed to capture aspects of carers' quality of life (QoL) beyond health (i.e., feeling encouraged and supported, space and time to be yourself, social participation and involvement, personal safety, looking after yourself, control over daily life, and occupation). Similar to the ASCOT QoL measures for people receiving care, ASCOT-Carer is a validated measure that has been shown to capture different aspects of QoL compared to health related measures like EQ-5D, and more suitable for social care contexts (**Rand et al., 2019**). A mixed methods study using ASCOT-Carer has found that social care has the potential to improve carers' QoL, given that interventions are accessible, of adequate quality and intensity and tailored to carers' needs (**Rand et al., 2020**). The findings of this study were, however, limited by a rather small analysis sample. More research is needed on the cost-benefit of social care services, both those aimed at cared for persons and those specifically aimed at carers, on carers' QoL. In this respect, a NIHR funded project on The Benefits and Costs of Domiciliary Care led by PSSRU, University of Kent will to collect primary data from a large sample of people receiving different type of homecare support, with the aim to evaluate their impact on care recipients QoL and their carer.

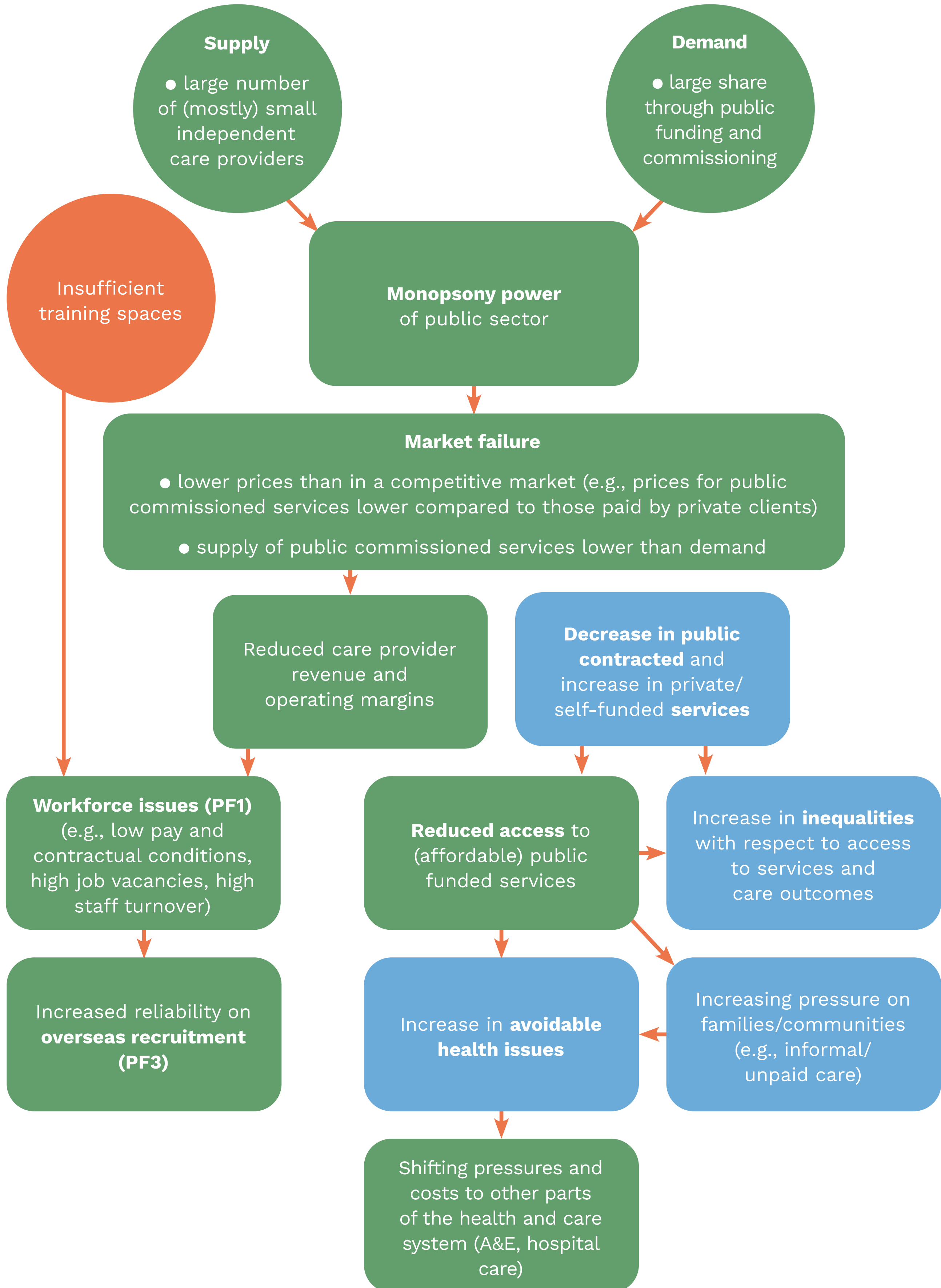
Opportunity of REAL Supply research: Phase 2

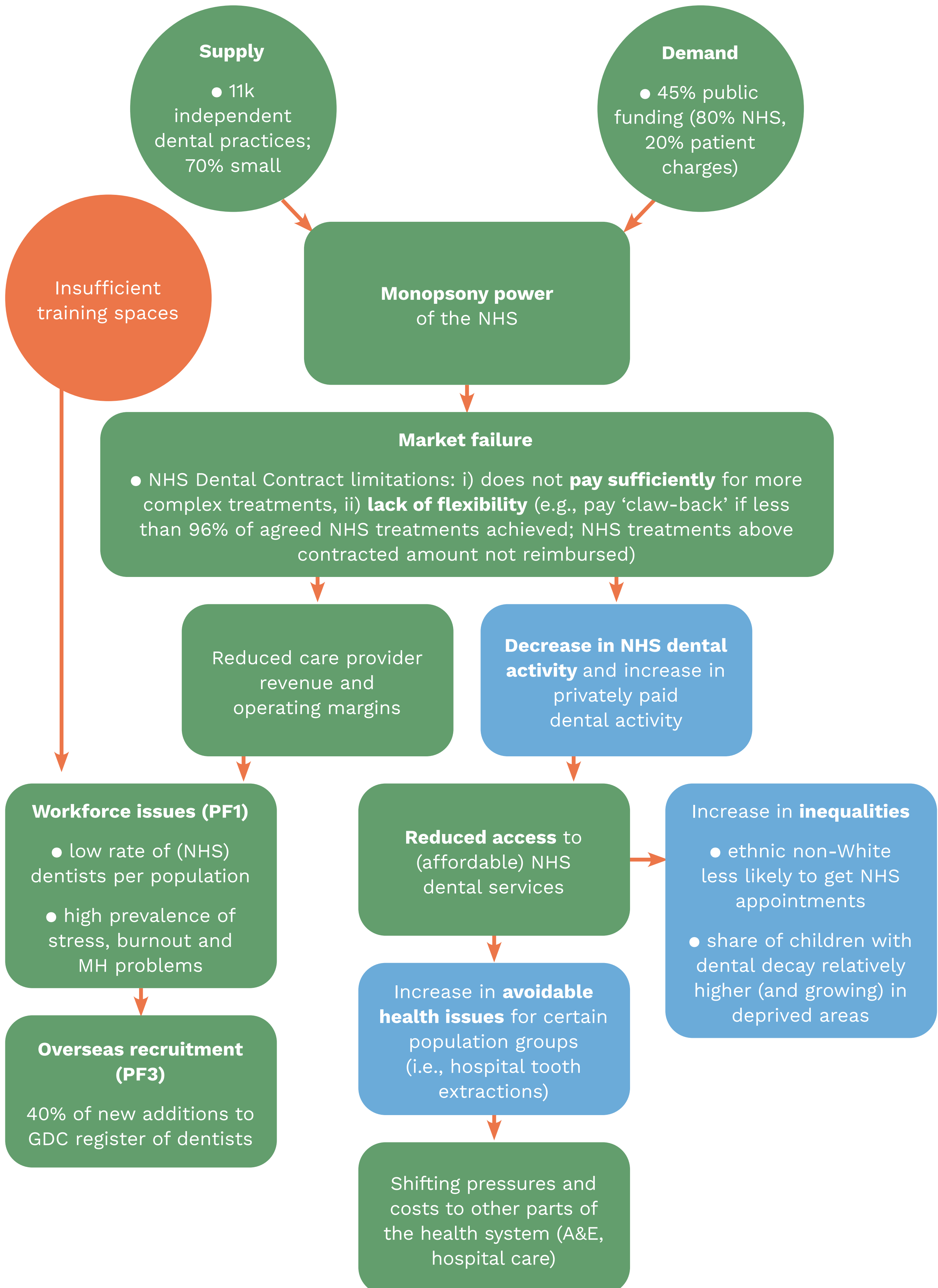
Based on the literature review and the identified research gaps, we propose that the REAL Supply Research Unit should address in Phase 2 the research questions summarised in Table 2.

Table 2: Opportunities for research

#	Key questions	Methods and data	Opportunities for collaboration
1.	What drives care providers' decisions to supply public commissioned services as compared to privately paid ones?	For primary dental care, required data for this research would ideally be at dental practice level and include information on FTE used on NHS dental care vs private dental care linked to local area data on income/wealth (i.e., households capacity to pay for private dental care), local supply/competition in primary dentistry, etc. Longitudinal data would allow to identify changes in FTE on NHS vs. private dental care. Bespoke data collection would be needed or digital records from one (or more large providers). Data on the share of ASC publicly funded and self-funded clients at provider level is emerging and available from CQC Provider Information Returns as well as LaingBuisson. This could be used to assess drivers of public/self-funded mix. Data on ASC contract 'hand-backs' is currently not available. We will explore with both LaingBuisson and CQC the possibility to include this information in future data collections, although noting the relatively low number of 'hand-backs' that occur. Alternatively (or additionally), 'hand-backs' could be assessed in qualitative analysis of structured interviews with care providers.	PSSRU Kent, CHE York, Cardiff University To be further explored
2.	What impact has primary dental care on avoidable hospital admissions and long-term care illnesses?	To assess the impact of primary dental care on avoidable hospital admissions one would need data at local area level (e.g., ICB) on total primary dental activity (NHS and private) linked to HES data on unplanned hospital admissions for a list of conditions that can be directly linked to oral health. This research would rather be more speculative as, to our knowledge, information on total primary dental activity is currently not available at any geographic level.	PSSRU Kent, CHE York To be further explored
3.	What impact (i.e., value-for-money) have social care services aimed at carers like information and advice, equipment and adaptations, respite care, etc. on quality of life outcomes of unpaid carers?	The NIHR funded project on The Benefits and Costs of Domiciliary Care (led by PSSRU, University of Kent) will collect in 2026 primary data from a large sample of people receiving different types of homecare support of homecare services on cared for persons and their carers. We are exploring the possibility of adding to the carer questionnaire (to be designed in 2025) specific questions about services received by carers, with the aim to evaluate their cost effectiveness.	Potential collaboration with REAL Demand. To be further explored

Public sector market power in health and care markets supplied by independent providers




Public sector market power in Primary Dental Care
Supply
● 11k independent dental practices; 70% small
Demand
● 45% public funding (80% NHS, 20% patient charges)
Insufficient training spaces
Monopsony power of the NHS
Market failure
● NHS Dental Contract limitations: i) does not pay sufficiently for more complex treatments, ii) lack of flexibility (e.g., pay 'claw-back' if less than 96% of agreed NHS treatments achieved; NHS treatments above contracted amount not reimbursed)
Reduced care provider revenue and operating margins
Decrease in NHS dental activity and increase in privately paid dental activity
Workforce issues (PF1)
● low rate of (NHS) dentists per population
● high prevalence of stress, burnout and MH problems
Reduced access to (affordable) NHS dental services
Increase in inequalities
● ethnic non-White less likely to get NHS appointments
● share of children with dental decay relatively higher (and growing) in deprived areas
Overseas recruitment (PF3)
40% of new additions to GDC register of dentists
Increase in avoidable health issues for certain population groups (i.e., hospital tooth extractions)
Shifting pressures and costs to other parts of the health system (A&E, hospital care)

Public sector market power in Adult Social Care

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