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Abstract

We shed new light on the longstanding challenge of recruiting adult social care (ASC) workers through innovative textual analysis of an extensive database of job advertisements. Having confirmed the low pay offered, we provide a first systematic evaluation of two recent strategies employed in ASC recruitment, starting with a look at signing bonuses. While a short-lived burst of generous signing bonuses is shown to have helped alleviate acute shortages in some occupations, their use in ASC involves far smaller sums and record unfilled vacancies persist. The UK government's recent decision to offer visas to migrant workers coming to work in ASC is also found lacking. Few advertised roles are found to exceed the required salary threshold. This evidence adds weight to calls for significant government action, including long overdue funding reforms. Without this, unmet care needs will continue to grow, as will consequential problems within the UK's National Health Service.

Keywords:

adult social care, job advertisements, recruitment, shortage occupations, signing bonuses, textual analysis.

Acknowledgement

This research makes use of Adzuna data, made available through the Economic and Social Research Council. Adzuna Data, 2022 [data collection]. University of Glasgow - Urban Big Data Centre.

1. Introduction

Longstanding recruitment and retention challenges in adult social care (hereafter ASC) are widely acknowledged (Humphries et al. 2016, Moriarty et al. 2018, Glasby et al. 2020, Feeley 2021a, Forth and Bryson 2022, House of Commons 2022, MAC 2022). This situation has worsened in recent years as documented in successive annual reports (e.g. Skills for Care, 2022). Acute labour shortages, alongside the continuing legacy impact of Covid-19 and growing demographic pressures, have combined to make unmet demand for ASC a major political and policy issue (ASASS 2022, Care Quality Commission 2022).

Awareness of the wider impacts of the ASC crisis on the NHS and unpaid care providers is growing. For example, unfilled carer roles are increasingly identified as a critical factor behind delays in patients being discharged from hospital (Clifton 2022, Flinders & Scobie 2022, Limb 2022, Welsh Parliament 2022, Nuffield Trust 2021), with resultant bottlenecks increasing the challenge of tackling NHS waiting lists (BMA, 2022). Those responding by supplying unpaid care, and growing numbers of people on NHS waiting lists themselves, are often left with no alternative but to drop out of the labour force (Carers UK 2019, ONS 2022a, Paddison & Crellin 2022)

In tight labour markets, recruiters can typically use various strategies to attract and retain workers. These can include offering more attractive salaries, improved working conditions, training, progression opportunities, guaranteed hours, or other benefits and flexibilities valued by employees. However, within ASC, the nature of the work and the way the sector is predominantly funded limit the options available relative to other shortage occupations (Local Government Association 2022, MAC 2022, UK Parliament 2020, 2022).

Despite repeated promises from the UK government that they would 'fix' ASC, there has so far been no long-term workforce plan (Warren 2021, Bottery 2022, Care Quality Commission 2022, Oliver 2022). Instead, some ad-hoc strategies have been implemented. For example, short-term boosts in funding have been used by some recruiters to offer signing bonuses to attract new starters. Alongside this, the government has also recently made adult

social care roles eligible for Health and Care Worker visas, on condition that the roles provide a salary at or above a threshold of £20,482 (UK Government 2021).

In this paper, we use textual analysis of an extensive database of 49.6 million online job adverts covering openings throughout the UK between January 2018 and March 2022 to assess how successful such strategies have been. (The end point is determined by the availability of data to us via the UBDC's Adzuna licence, as such our analysis pre-dates much of the current cost of living crisis). We identify all adverts for ASC roles, record the pay offered, and draw comparisons with other jobs. Detailed interrogation of job descriptions enables us to evaluate the potential of each strategy aimed at boosting recruitment. First, we identify a recent trend toward offering signing bonuses in ASC and compare this to bonuses offered in other shortage occupations, some of which are also relatively low paid. We contrast experiences by comparing the size of the recruitment bonuses offered and recording how the volume of unfilled job openings evolves before and after bonuses are introduced. Secondly, we consider the prospect of recruitment difficulties easing now that ASC roles are eligible for Health and Care Worker visas (from late February 2022). We do this by checking the proportion of advertised roles that meet or exceed the required salary threshold in our database.

We conclude that neither strategy is likely to be sufficient to solve the ASC crisis. The short-term provision of additional funds used for sign-on bonuses has had little impact on the number of unfilled vacancies, not least when significantly more generous incentives have been offered in competing shortage occupations. The easing of visa requirements is also unlikely to impact on filling advertised ASC jobs, without first improving basic pay and raising contracted hours. Quite simply, the vast majority of advertised ASC jobs pay below the required threshold. Our evidence underlines the pressing need for a fully funded plan to support the ASC workforce remains. Without this, unmet care needs will continue to grow, as will consequential problems within the NHS.

2. Background

In the UK, ASC is organised separately by the UK Government (on behalf of England) and by the devolved administrations in Scotland, Wales and Northern Ireland. While there are some differences in approaches, there are also considerable similarities. For example, a commissioning process is relevant across all administrations. In England, Wales, and Scotland, commissioning of social care is done via Local Authorities (LAs) and by Health and Social Care Trusts in Northern Ireland. The providers of ASC are sometimes the LAs themselves or the NHS, but more often private-sector providers with additional support from third-sector providers. The qualifications ASC staff require also vary at the margin across the UK, as do current minimum hourly rates of pay. Yet while ASC administration is devolved, it intersects with some UK-wide policies, including immigration. As a result, across the UK, the data show a consistent picture of the ASC sector under stress from labour shortages (Alabi 2022, Economist 2022, Giles 2021, O'Connor 2022, Wilson 2021).

The UK's exit from the European Union (EU), and the ending of free movement, raised concerns of potentially pronounced adverse effects on the ASC labour market and prompted the UK Government to commission the Migration Advisory Committee (MAC) to undertake an independent review of ASC. The MAC report lays out several challenges the sector faces, including high vacancy rates and "high, and generally rising, rates of employee turnover" (MAC 2022:8). Two particularly stark figures are estimates that current demand for ASC already requires an additional 66,000 FTE staff, while anticipated future demand will require recruitment of 236,000 FTE by 2033 (MAC, 2022:7).

The MAC report summarises several features of the ASC labour market that explain why high vacancies persist. A key element is pay. ASC roles used to attract a pay premium relative to comparator occupations such as shopworkers and cleaners, reflecting the challenging nature of the work and anti-social hours. But this premium has been eroded:

"sales and retail assistants... earned 13p an hour less than care workers in 2012/13, but in 2019/20 they earned 21p an hour more on average" (O'Connor 2022).

Various reports and articles in the media make the point that many care workers could now earn more working in a supermarket, where they'd generally have less responsibility and more standard working hours (Feeley 2020, Bottery and Jefferies: 2022, Bottery 2022, MAC 2022, UK Parliament 2022). Pay compression at the lower end of the distribution has been linked to implementation of successive rises in the national minimum (or living) wage and funding pressure on Local Authorities by Machin, Manning, and Rahman (2003) and in subsequent work, most recently Vadean and Allan (2021). Additional evidence on the erosion of pay progression within ASC is provided in several reports (Bottery 2019, ADASS 2022, MAC 2022, Skills for Care 2022). For example:

“On average, care workers with five years’ (or more) experience in the sector are paid just seven pence (0.7%) more per hour than care workers with less than one year of experience. Before March 2017, this gap was between 26 pence and 37 pence per hour.” (Skills for Care 2022: 23).

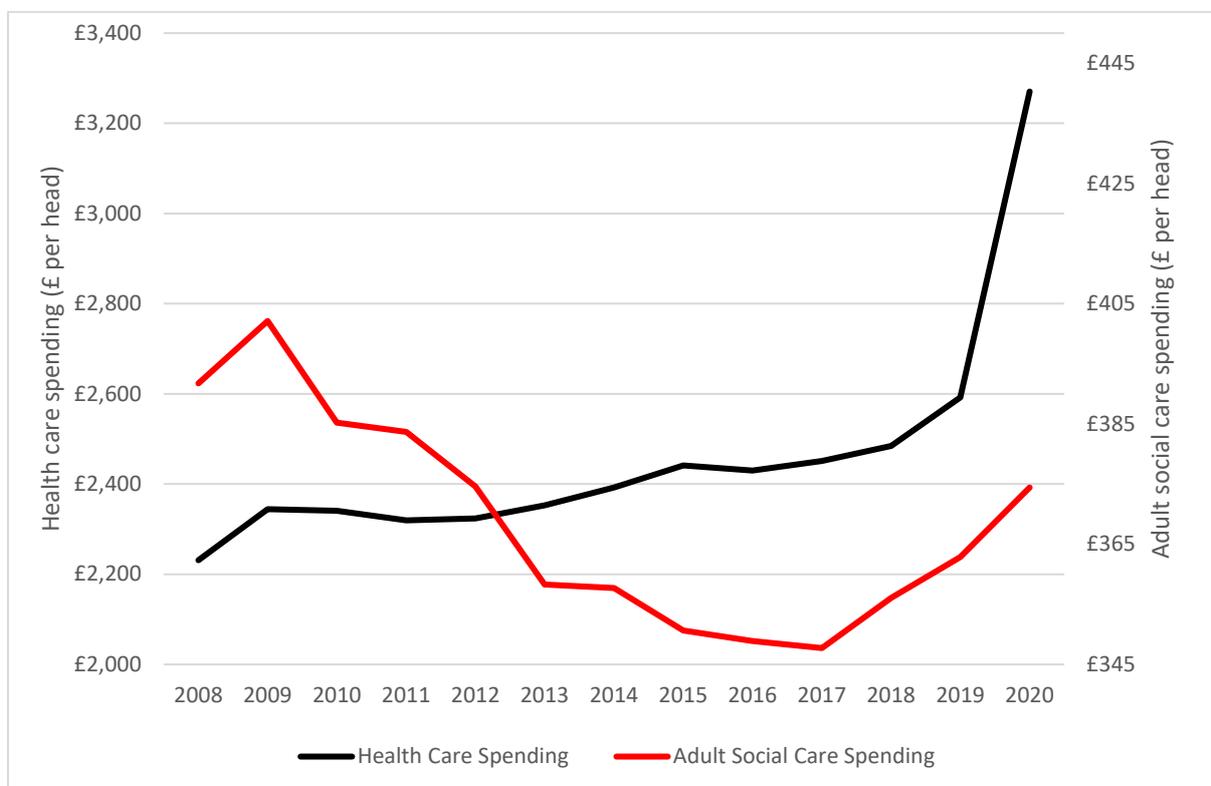
In summary, ASC workers have seen the pay premium relative to other sectors being eroded and increasingly struggle to realise pay progression within ASC.

‘Effective’ pay can be even lower than advertised headline rates. This is particularly the case in various kinds of domiciliary care when there where carers are often not paid for travel time or are paid below normal rates when providing ‘sleep-in’ services (MAC 2022:68). The UK Supreme Court recently ruled that carers do not need to be paid the minimum wage for these hours (BBC 2021). Deteriorating working conditions and employment practices in the sector “push the envelope of compliance” (Low Pay Commission, 2021:xiii).

A further challenge is presented by worsening funding of ASC relative to the NHS. Spending on ASC per-capita dropped from 2008-2017 and despite an overall increase between 2017 and 2020, it has fallen well behind per-capita spending on the NHS (Figure 1). This relative gap is important since the stronger position of the NHS has enabled it to offer better pay and conditions relative to ASC, and the NHS has a far larger budget to support its recruitment activities. Evidence submitted to the Feeley Review emphasises that ASC can no

longer compete with the NHS, and often “recruit, train and develop staff only to see them move to similar roles... that are better paid” (Feeley 2021b:143). The King’s Fund provide striking evidence on this point: while the difference in starting salaries in ASC and as a healthcare assistant in a hospital is small, salary progression, training and career development opportunities are far greater within the NHS (Bottery 2022).

Figure 1: Public per-capita spending on Health and Adult Social Care in the UK (£ per head)



Source: MAC 2022:16, accessed under Open Government licence.

The MAC report is unambiguous in calling out the persistent underfunding of the care sector and the need for new statutory minimum wages to raise pay for care workers:

“the single most important factor that underlies almost all the workforce problems in social care arise as a result of the persistent underfunding of the care sector by

successive Governments ...one cannot seriously address the workforce issues in social care unless pay is improved; this is essential to boosting recruitment and improving retention... what is needed is a minimum pay rate for care workers that is fully funded by Government and is above the NLW... Higher pay across the rest of the UK is a prerequisite to attract and retain workers in social care” (MAC, 2022:9).

Immigration policy also affects recruitment in ASC and has presented further challenges since the UK's exit from the EU. Cangiano & Walsh (2015) and Cangiano & Shutes (2010) make clear that immigration regulations define the targeted labour pools and shape recruitment activity. The MAC report stresses that the contribution of immigration to the ASC workforce cannot be looked at in isolation or as a sole solution to workforce challenges. Nevertheless, it considers the scope for immigration policy to alleviate some of the pressures the sector faces and offers recommendations to improve ASC employers' access to migrant labour.

In response to MAC (2022), the UK Government announced on 24 December 2021 it would add Adult Carers to the list of shortage occupations, (UK Government, 2021) The aim was explicit: to help address severe staffing shortages. Shortage Occupation Code 6145 encompasses care assistants, carers, care workers, home care assistants, home carers and nursing home support roles. To qualify, the employer must hold a Home Office-issued sponsor licence or successfully apply for one. Fees are £536 for small businesses and charities or £1,476 for medium and large organisations. Crucially, from 15 February 2022, an eligible worker must have an offer of employment which pays at least £20,480 gross per year (regardless of hours worked) or 39 hours per week paid at a minimum of £10.10 per hour. The same pay thresholds apply throughout the UK. The benefits of the health and social care visa for migrant workers include fast-track applications; exemption from the immigration health surcharge; reduced application fees; and the potential for indefinite leave to remain, once the visa holder meets the 5-year residence requirement (UK Government 2022b).

One challenge for employers meeting the salary threshold is the need to offer sufficient paid hours. The median contracted hours of care workers were 30.5 hours per week in 2022 reported in ASHE data for SOC 6135 'Care workers and Home Carers', with fewer than 25% of workers currently being paid for 37.5 hours or more (ONS 2022), very few workers have been contracted to work 39 hours per week. But given the high demand for carers and the fact that migrant workers are not eligible for in-work benefits available to British care workers, e.g. Child Benefit and Universal Credit, the fact that sponsorship is effectively restricted to full-time contracts is perhaps not unreasonable.

A recent independent report from Revealing Reality and MAC (UK Government 2022c) is not encouraging regarding the likelihood of the success of care worker visas. They record reactions of employers who point to affordability concerns, given tight funding budgets; that raising pay for migrant care workers would be inequitable without increasing the wages of their entire workforce and not affordable, alongside concerns that migrant workers would be likely to move to another sponsor, particularly to better-paid NHS jobs.

"We've lost one migrant worker to another sponsor already within three months." and "the NHS can pay more. It's the elephant against the mouse. We can't change that."
(UK Government 2022c:34)

In summary, the critical challenges in the ASC sector relate to funding, workforce planning, pay and pay progression. These are long-standing challenges, but the situation has worsened since funding has failed to keep pace with demand. In addition, the return of rising inflation – impacting transport costs getting to and from care visits – makes such issues even more pressing.

Amidst these pressures, and the significant excess demand for ASC now and in the future, we add to the evidence base on how ASC employers are trying to attract new workers.

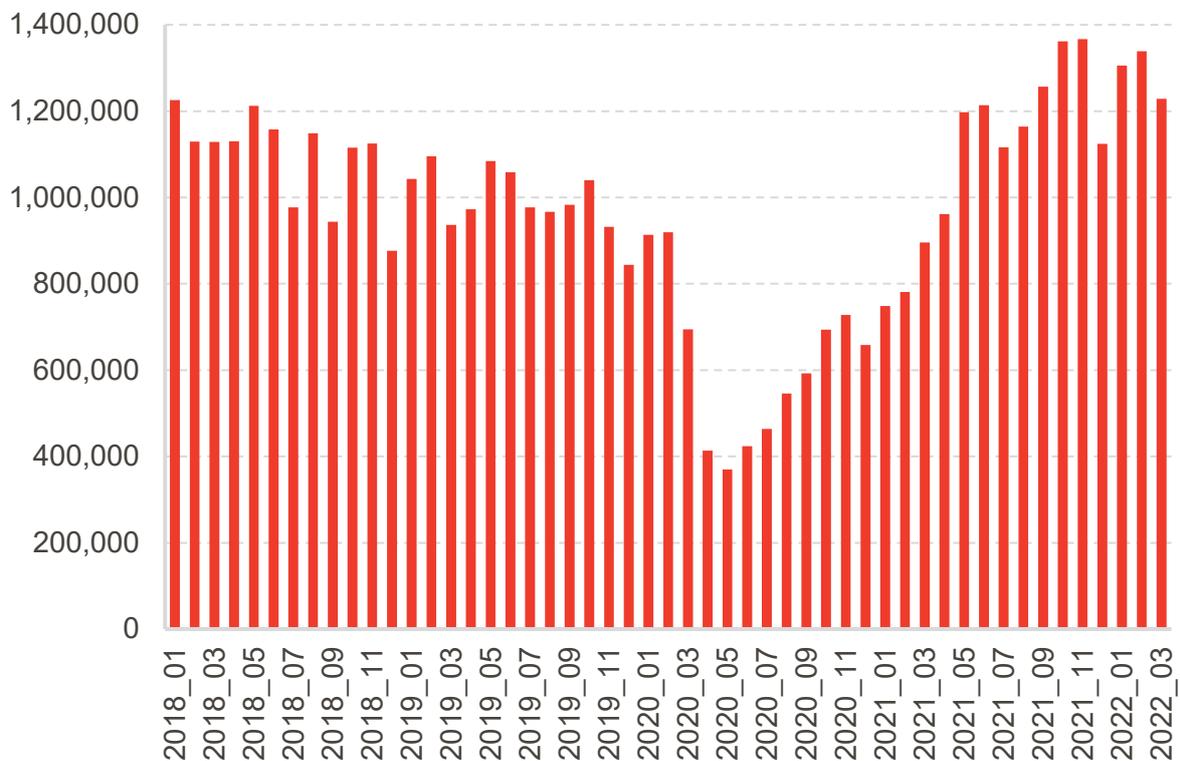
3. Data and Methodology

3.1 Data

The dataset we use is provided by Adzuna through the Urban Big Data Centre at the University of Glasgow. Adzuna, founded in 2011, provides an online job search engine that collates job advert information from several thousand sources including employers' websites, recruitment agencies, and traditional job boards. Adzuna's data achieves high coverage of all job adverts in the UK. Since 2020 they have been collaborating with the UK's ONS to develop experimental vacancy statistics (Evans, 2021).

Our dataset provides information on online adverts for jobs in the UK from the last week of each month from January 2018 through to March 2022. This gives fifty-one separate monthly data extractions, and 49.6 million job adverts in total, see Figure 2. The pandemic related drop in hiring is clear in the data: 60% fewer jobs were advertised online at the end of April 2020 relative to the end of January 2020, as is the subsequent recovery.

Figure 2: Total Number of Job Adverts



Source: Authors' calculations using Adzuna data.

For each job advert we have free-text information on job title and description. Adzuna allocate each advert to one of 29 job categories. Salary information is included but can be in the form of a salary/salary-band/hourly rate of pay or pay range. Coverage across these measures is patchy and no one measure is available for more than 65% of all jobs. However, Adzuna also supply a predicted salary for every job listed, which they obtain from a maximum likelihood model that draws upon keyword information in the job title, description, and advertising company name, amongst other things.

3.2 Methodology

ASC roles tend to be classified into the 'Healthcare' or 'Social Work' job categories. In what follows, we initially combine those two categories into 'Healthcare and Social Work' jobs. Later, for a much finer disaggregation that narrows our focus to ASC roles, we draw on the methodology developed in (Turrell et al. 2018). Specifically, we have developed and applied a textual analysis algorithm to appropriately clean the text fields representing job titles and descriptions and identify phrases listed under the specific 4-digit UK Standard Occupational Classifications (SOC) for SOC6145 'Care Workers and Home Carers' and SOC6146 'Senior Care Workers' (ONS 2021). Identified ASC roles include at least one of the following phrases in their job title or job description: "care assistant", "care worker", "carer", "care companion", "caregiver" "support worker", "night support", "care staff", "care professional". To ensure we select only ASC roles, the algorithm then drops any adverts focused on children, education, classroom, families, housing etc., along with any care roles requiring registered nurses.

We also use textual analysis to identify job adverts, within any job category, that offer signing bonuses. Another algorithm searches for phrases such as "golden hello", "joining bonus", "signing bonus" and "welcome bonus". By extracting the text immediately surrounding the bonus-related phrases and interrogating this the algorithm automatically identifies the sums of money on offer. We analyse the resulting quantitative data to assess how the value of bonuses offered differs by type of job and over time.

Examining these data on job adverts offering signing bonuses by job category reveals that adverts for warehouse operatives, another occupation subject to significant staff

shortages during the pandemic, provide a useful comparator for adult carers. We home in on warehouse operative roles within Adzuna's Logistics and Warehouse job category using an algorithm that identifies any one of the following phrases in their job description: "fulfilment associate", "warehouse associate" "warehouse operative", "warehouse worker", "warehouse team member", "order picker", "picker/packer", "general operative" or "sortation associate". Again, these phrases are taken from the detailed SOC 2020 descriptions (ONS 2021).

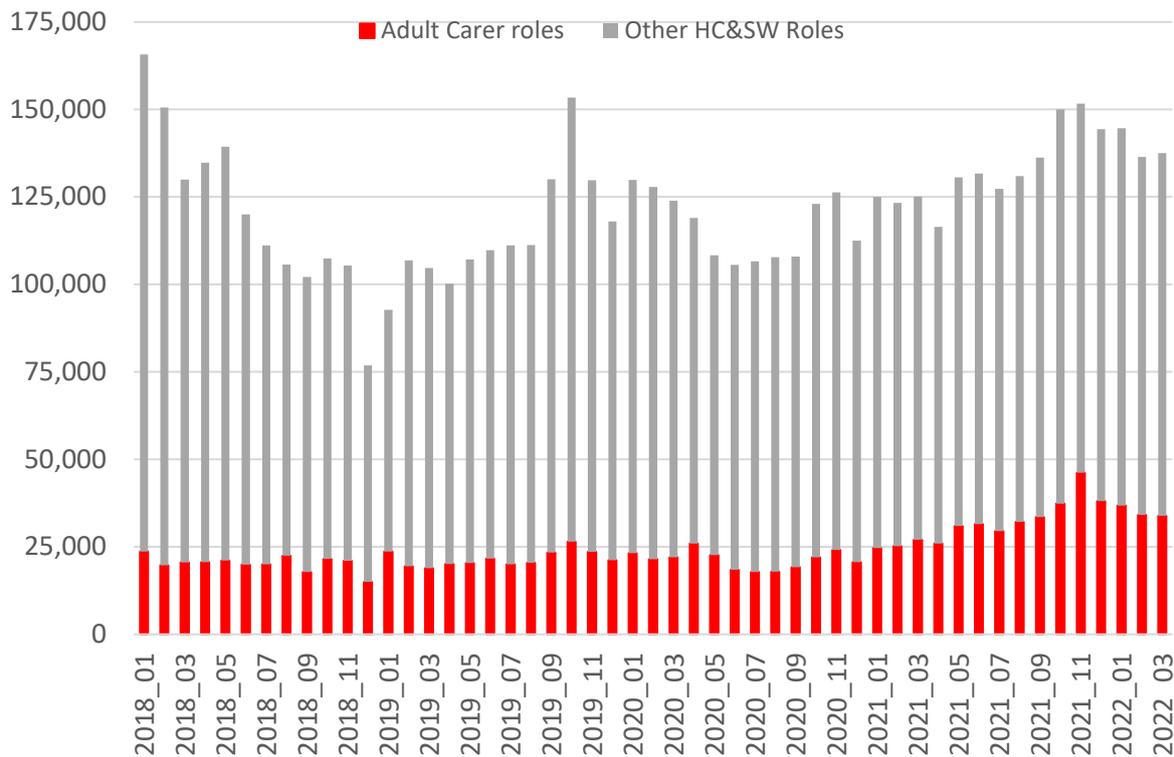
Having first explored how the number of job adverts for ASC roles has changed over time, we evaluate what the data generated from our textual analysis can reveal about recruiters' recent use of three specific strategies to boost recruitment. First, we look at pay, assessing how salaries have changed relative to the minimum/living wage, and compare pay offered in ASC relative to a supermarket sales assistant (a particular comparator often cited in reports, surveys, and the press). Second, we look at the use of signing bonuses, identify an uptick in their use to fill vacancies, and investigate the sizes of bonuses offered. Finally, we look at whether the decision to add ASC roles to the list of shortage occupations for which recruitment of immigrant workers can take place looks to be a sustainable solution to the sector's recruitment challenges.

4. Results

4.1 Recruitment effort to jobs in Healthcare and Social Work and Adult Social Care

While Figure 2 showed a sizable drop in the aggregate number of job adverts as Covid hit, once Healthcare and Social Work jobs in Figure 3 it is clear that recruitment efforts continued at pace. A particular pickup in the number of advertised ASC roles is evident between January 2021 and November 2021 with 96% more job openings than in the same period two years earlier. Openings were still at an elevated level relative in March 2022 (46% above January 2020 levels). We next seek evidence on the pay recruiters have offered in the advertised ASC roles.

Figure 3: Number of Job Adverts for Healthcare and Social Work Jobs and the number of these that are for Adult Carer roles



Source: Authors' calculations using Adzuna data.

4.2 Evidence on Salaries

While the number of job adverts for ASC roles has been persistently high and has increased, median salaries have declined in absolute terms and relative to other competing occupations. As explained in section 2, part of the problem here is that most ASCs work for private sector providers, often agencies, who have contracted to provide a service at an agreed cost for the duration of the contract to local authorities (or trusts in Northern Ireland). Even when local authorities and trusts directly provide care, constrained budgets, which have faced repeated cuts, tend to be cited as the main reason for poor pay. Often the local authorities with the greatest care needs are those least able to provide funds from local taxation.

The decline in median salaries offered in advertised ASC jobs and compression in the dispersion of pay is apparent in Table 1.

Table 1: Salary distribution for advertised Adult Carer roles

	November 2019	November 2021
25th percentile	£15,025	£15,009
Median	£16,133	£16,020
75th percentile	£17,546	£17,251

Note: this table uses Adzuna's predicted salary variable.

Source: Authors' calculations using Adzuna data.

Across the distribution, the advertised salaries for ASC roles have declined in nominal terms, although the percentage decline is greater for salaries that are higher up the overall distribution of advertised jobs – at the 25th percentile the November 2021 salaries are just over 0.1% lower than November 2019, 0.7% lower at the median, and 1.7% lower at the 75th percentile. It's important to point out that the predicted salaries shown above are based on typical paid weekly hours in care roles. Over the same two-year period, the NLW (for workers aged 25 and over) rose by 8.5% from £8.21 to £8.91 per hour. Here we are making comparisons at the pre-pandemic and post-pandemic peaks in the numbers of job adverts, but the point is more generally evident in the data. Our evidence on greater compression of pay in ASC complements the findings reported elsewhere and discussed in section 1 above.

Turning to relative pay, we previously pointed to employers' concerns that supermarkets now pay more than many employers in the care sector can afford. It's widely reported that supermarkets have responded to their recent recruitment challenges by raising pay (Bottery 2022b, Eley 2022). In our data adverts demonstrate Aldi's hourly rates for store assistants rose by 8.5% from £9.10 to £9.55 per hour (and by 10.7%, from £10 to £11.07 in the area within the M25). Assuming a 37.5 hour working week, these hourly rates would generate annual salaries of £17,745 or £18,623 per year.

These new findings from job advert data make clear that the salaries on offer for ASC roles are not keeping pace with the wages available in competing roles and confirm information from other sources, discussed in section 1, on the challenge of achieving pay

progression. The data we derive from the adverts confirms there are few opportunities to achieve pay progression in ASC by applying for roles that seek more experienced workers.

4.3 Signing Bonuses

Signing bonuses can be an important element of any recruitment incentive to help attract skilled employees. They can be seen as an incentive device and commitment mechanism to attract, motivate, and retain workers with the skills critical for a firm's success (Van Weesep 2010, Xu & Yang 2016).

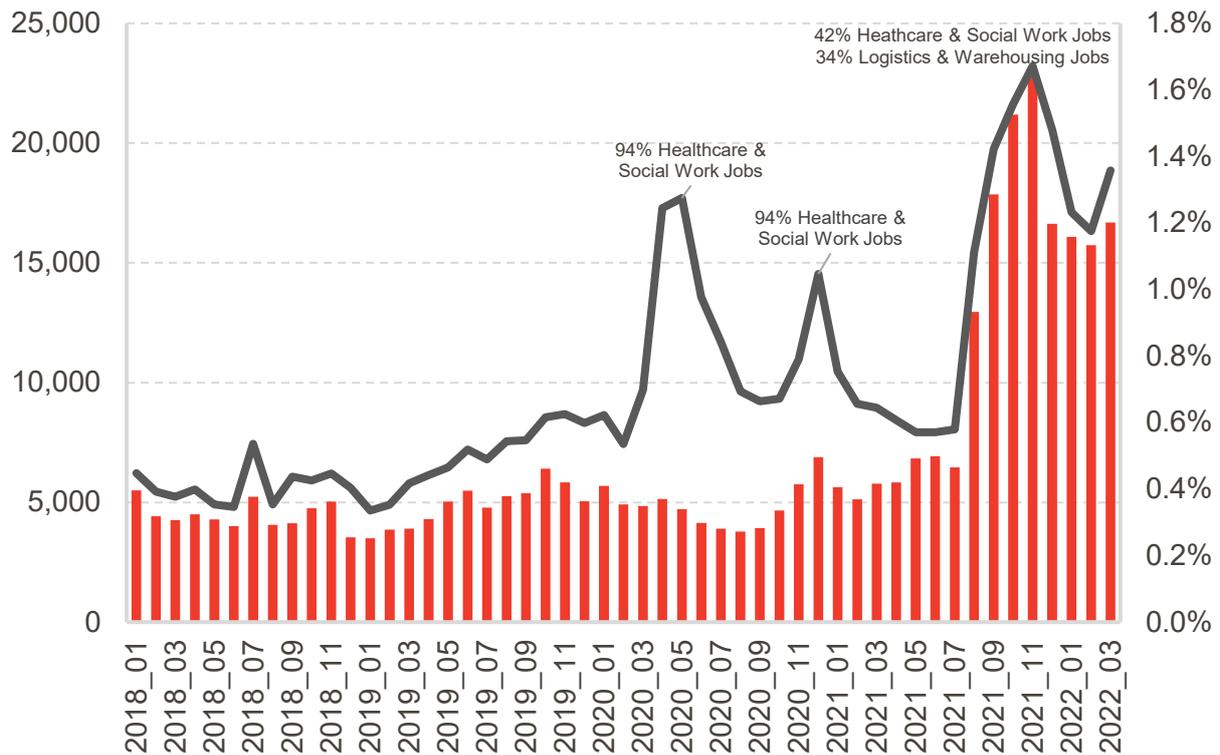
Signing bonuses have been used in the UK for some time within some occupations, such as Dentists, trainee GPs, registered Nurses, and new teachers, when employers have faced difficulties recruiting to specific localities or specialisms. For example, £20,000 payments are available to trainee GPs who accept a post in an area facing particular recruitment difficulties (Lee & Cunningham, 2019). Likewise, there are examples of incentives offered to newly recruited teachers of priority subjects in state schools (Morris et al. 2020, See et al. 2020).

A US study of recruitment and retention options for employers of nurses discussed an alternative strategy of guaranteeing a consistent and predictable income (Plank, 2019). In this case, nurses in some newly created perioperative positions were guaranteed to be paid a minimum of 40 hours at their base rate, despite sometimes working fewer hours than that, depending on procedural volume. The justification for this approach stressed the benefits of recruiting and retaining competent nurses, reducing substantial recurrent onboarding and training costs, and improving the quality of care. There were also benefits of the reduced need for agency staff, and for staff being on call or asked to cover absences. Some concerns on the use of signing bonuses when recruiting to healthcare roles are expressed in Bates (2017).

Returning to our results, we first identify all advertised jobs offering signing bonuses at any point in our sample and record their value. Figure 4 shows the number and percentage of job adverts offering signing bonuses each month from January 2018 to March 2022. Fewer

than 10,000 jobs offered signing bonuses in any month before March 2020 but this number more than doubled by October and November of 2021, highlighting the well-documented post-pandemic labour market shortages evident at that time.

Figure 4: Number and Percentage of Job Adverts offering Signing Bonuses



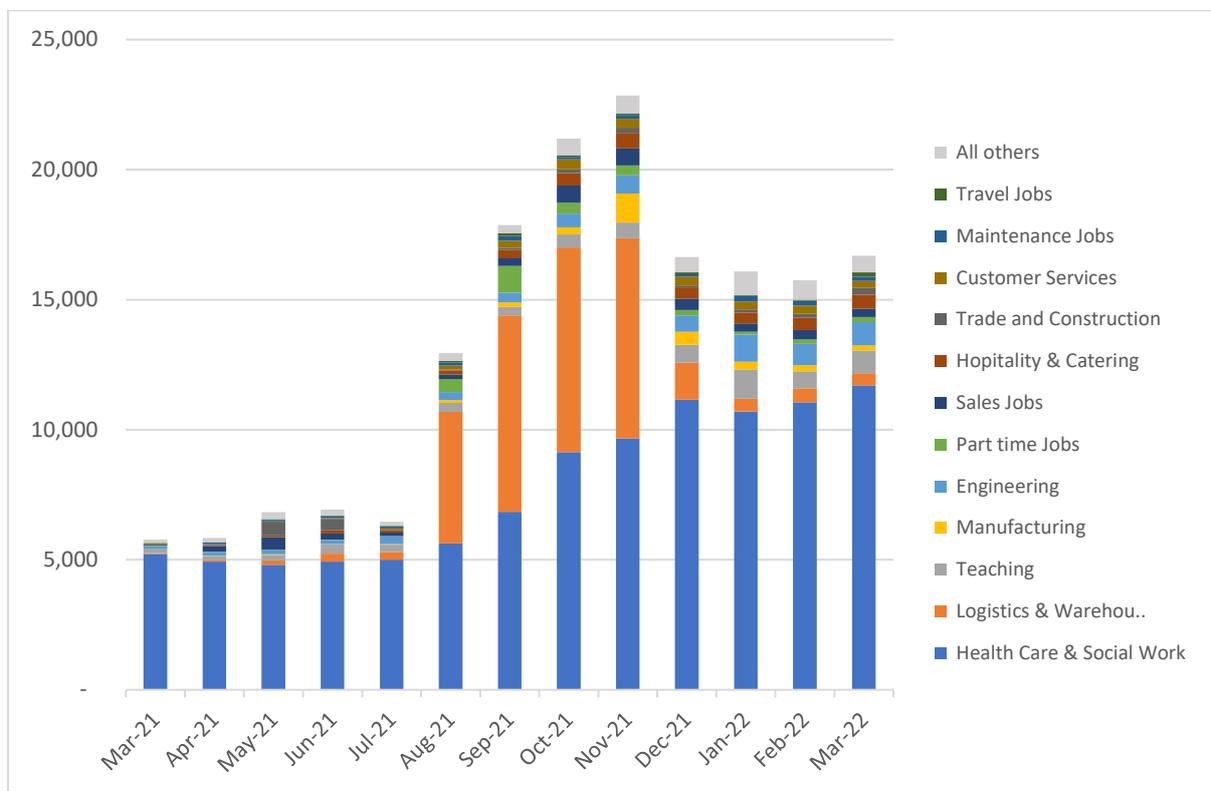
Note: the bars indicate the numbers of job adverts, across all occupations offering signing bonuses in a given month (left scale) while the solid line indicates percentage of all job adverts that offer signing bonuses (right scale).

Source: Authors' calculations using Adzuna data.

The Figure 4 shows clear local peaks in the proportion of job adverts offering signing bonuses in both May 2020, January 2021; analysis by job category reveals these openings are heavily concentrated in Healthcare and Social Work jobs (94% of all adverts offering signing bonuses in each case). Since August 2021, there has been a more widespread uptick in the numbers of job adverts offering bonuses involving several other job categories, in particular, at the November 2021 peak, 34% of the job adverts offering signing bonuses fell into the Logistics and Warehousing jobs category.

Figure 5 provides the wider breakdown of signing bonuses by job category. As lockdown restrictions were removed there is some use of bonuses when recruiting to hospitality & catering and some other shortage occupations, but by far the largest number of adverts offering signing bonuses outside of Health and Social Care, were within Adzuna's Logistics and Warehouse jobs category. Within Logistics and Warehouse jobs, we determine that the acute shortage that bonuses were trying to address was for warehouse operatives.

Figure 5: Logistics and Warehouse Jobs stand out among other job categories offering Signing Bonuses

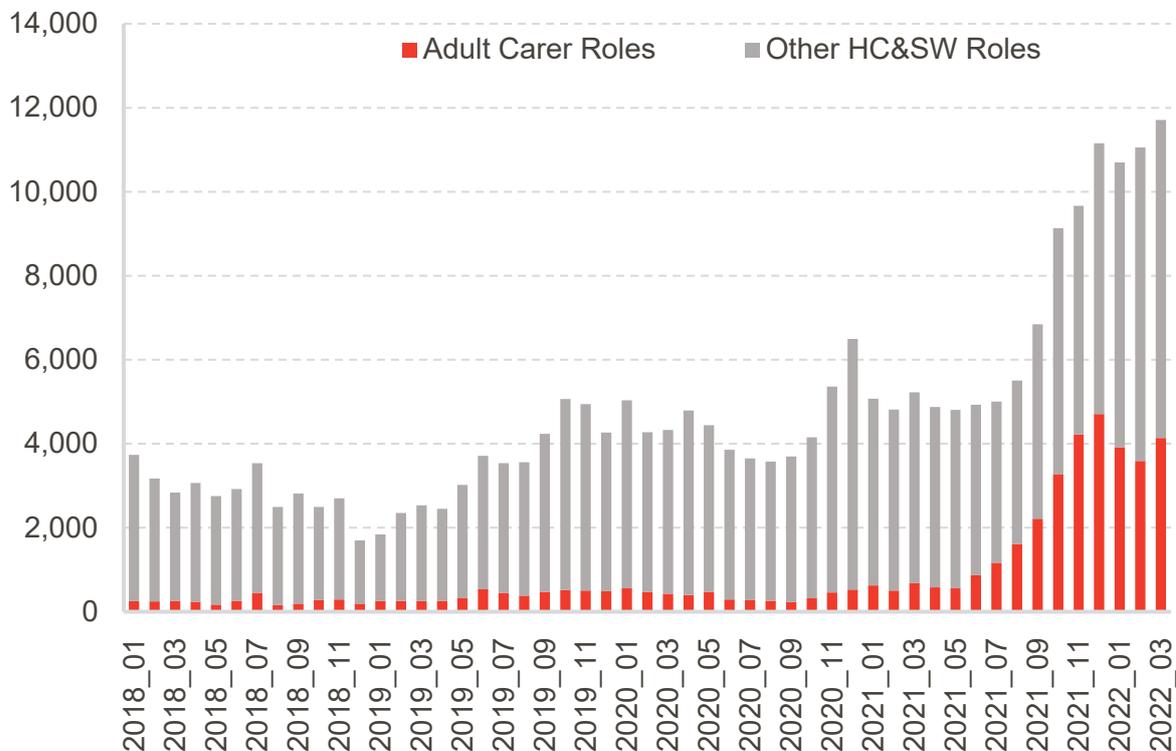


Source: Authors' calculations using Adzuna data.

Another point worth stressing from Figure 5 is that the acute shortages in the Logistics and Warehouse job category were short-lived. This is presumably as intended and suggests the initiative of offering signing bonuses was sufficient to achieve a recruiters' objectives. Consequently, the number of adverts for Logistics and Warehouse jobs dropped back by January 2022. In contrast, Figure 6 shows the number of adverts for Adult Carer roles offering

signing bonuses remained at elevated levels through to the latest data available to us and represent a growing proportion of Healthcare and Social Work jobs offering such bonuses.

Figure 6: Uptick in Signing Bonuses



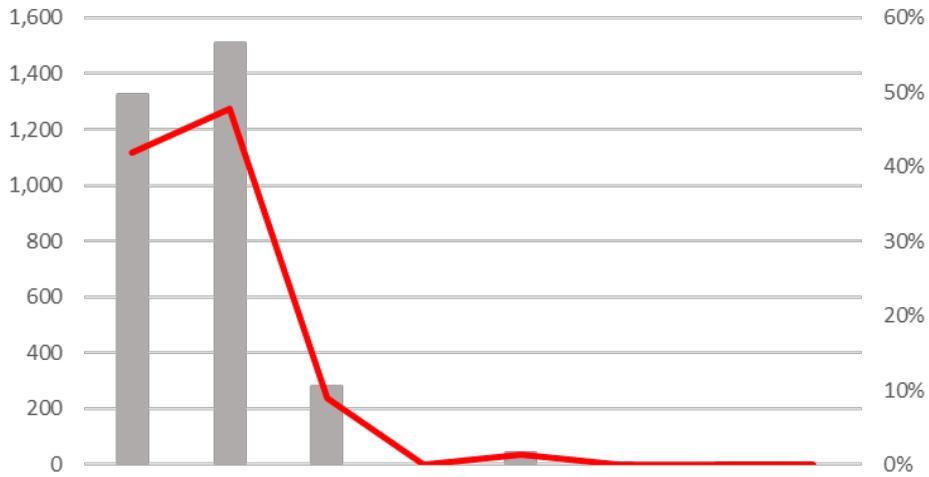
Source: Authors' calculations using Adzuna data.

How did the sizes of signing bonuses on offer in November 2021 compare across occupations?

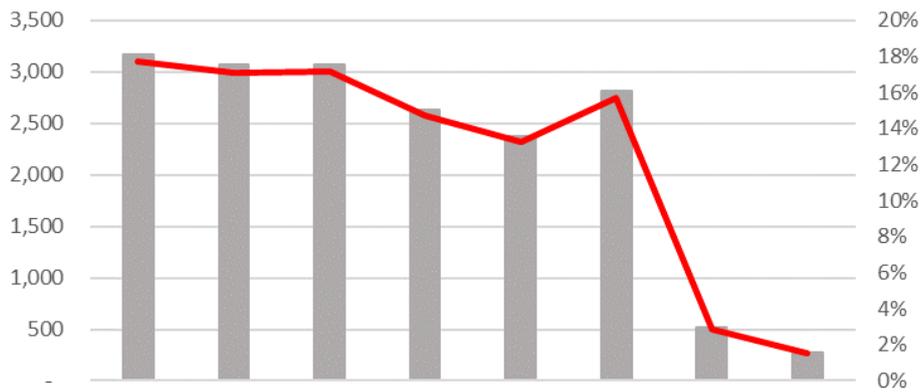
Figure 7 panel A shows the median value of signing bonuses on offer for ASC roles was £500 at the time of their peak use in November 2021. This sum is taxable and typically paid in two instalments, the first after a month and the second after 6-12 months in post. £500 is a small sum relative to signing bonuses on offer across occupations in general at that time, as indicated in panel B, and is less than 1/3 of the median of the signing bonuses on offer to ease the shortage of warehouse operatives at that time, panel C.

Figure 7: Distribution of Sizes of Signing Bonus Offered

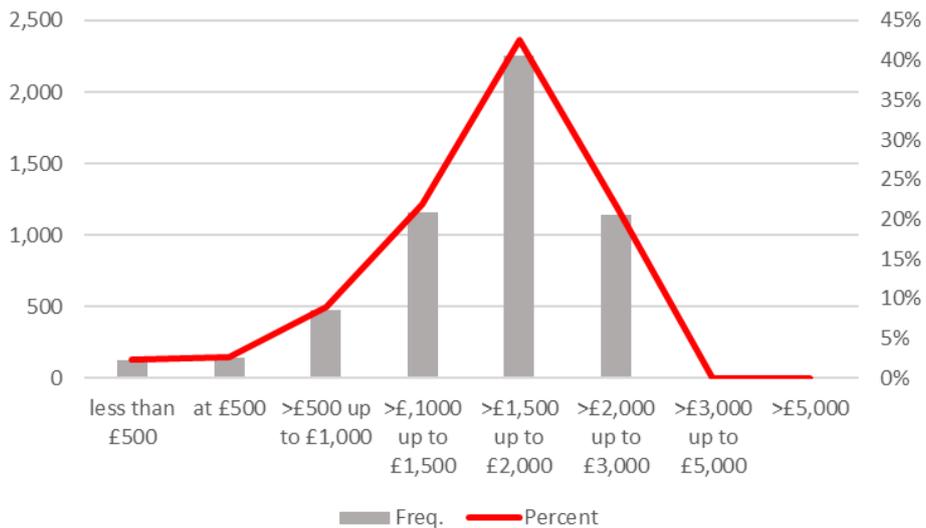
A. for Adult Social Care Roles



A. across All Advertised Roles



B. for Warehouse Operatives



Source: Authors' calculations using Adzuna data.

The signing bonuses offered to those taking on new Adult Carer roles were made feasible through the £162.5 million UK Government Workforce Recruitment and Retention Fund. In December 2021, a further £300 million was made available. But both funds provided money only until March 2022. The Workforce Recruitment and Retention Fund's primary purpose was "to support local authorities to address ASC workforce capacity pressures in their geographical area through recruitment and retention activity this winter. This allocation of the grant must only be used to deliver measures that address local workforce capacity pressures in ASC between 21 October 2021 and 31 March 2022 through recruitment and retention activity" (UK Government 2022a). A five-month national recruitment campaign – 'Made with Care' – also began in November 2021.

But our analysis shows that the scale of bonuses being offered is so low it is unlikely to have been sufficient to attract large numbers of additional workers (particularly given the tight labour market and offers from elsewhere). Most importantly, these temporary funding boosts have not solved the underlying issues of the sector's poor pay and working conditions. Instead, they may have increased churn, with workers moving agencies to receive a modest one-off payment at a particularly challenging time.

4.4 Adding ASC roles to the List of Shortage Occupations for Visa Purposes

What can our data reveal about the likely success of offering care worker visas? Table 2 details the distribution of salaries offered in ASC roles on selected dates. Again, we stress these salaries are based on the median paid hours in carer roles. It is abundantly clear that only the top-paid 5% of advertised roles would have met the required salary threshold that allows the recruitment of new immigrants even under this scheme if it had been in place during our sample period. Perhaps even more significant is that a smaller proportion of job openings met this threshold in March 2022 (the first full month of the scheme being operational) than four years earlier, a further illustration of pay compression and low median hours of work within the sector. The MAC report show evidence from similar Burning Glass data that is more optimistic (MAC 2022:67). However, these data refer to a broader range of social care roles

and are 'pro-rated', assuming 39 paid hours per week. Without a rise in basic pay, and more available roles offering full-time hours, expanding the shortage occupation list to include adult social care jobs can only have a very marginal impact on recruitment.

Table 2: (Predicted) Salaries Offered in Advertised Adult Care Roles in £ by percentile, on selected dates

	2018_03	2019_03	2020_03	2021_03	2021_06	2021_09	2021_12	2022_03
1%	11,875	11,620	10,757	12,083	12,191	12,282	12,494	12,224
5%	13,652	13,599	13,257	13,451	13,454	13,483	13,687	13,600
10%	14,289	14,224	14,048	14,038	13,996	14,010	14,214	14,181
25%	15,288	15,171	15,047	15,003	14,924	14,886	15,039	15,057
50%	16,427	16,324	16,146	16,103	15,993	15,963	16,080	16,080
75%	17,824	17,680	17,390	17,378	17,192	17,232	17,348	17,307
90%	19,800	19,378	18,965	18,949	18,661	18,801	19,030	18,840
95%	21,242	21,245	20,676	20,592	20,246	20,297	20,645	20,409
99%	25,734	27,516	25,209	25,311	25,179	24,738	24,078	23,875

Note: this table uses Adzuna's predicted salary variable.

Source: Authors' calculations using Adzuna data.

5. Conclusions

This article adds to the evidence on the workforce crisis in ASC through the lens of data generated from textual analysis of millions of UK job adverts. Our innovative use of these data allows us to shed new light on strategies to address acute labour shortages.

In contrast to recruitment to various other shortage occupations, we show that improving basic pay has yet to be a strategy adopted to help fill ASC roles. Employers in the sector continue to call for government intervention to provide a sustainable funding model.

One strategy we show has been used recently is the offer of signing bonuses, added by the UK Government's provision of additional but time-limited funding. However, we show that the bonuses offered have been small relative to those for other roles. Despite their availability, unfilled job openings have remained at high levels; this is unsurprising given the broader context of more responsive pay and larger bonuses offered elsewhere. The bottom line is that even if recruitment bonuses have successfully filled advertised posts in some occupations, there's no evidence from job advert data that this is the case in ASC roles.

Finally, we add new quantitative to existing qualitative evidence that the much-heralded strategy of easing visa requirements to allow migrants to fill ASC roles. However, we are pessimistic that easing visa requirements will have more than a marginal impact in addressing the sector's needs, given the pre-requisite of improved basic pay.

A pressing need for a long-term, fully funded plan to grow and support the ASC workforce remains. Without this, unmet care needs will continue to grow, and there is little hope of reducing the consequential pressure on the National Health Service.

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