A decade of pay erosion: The destructive effect on UK nursing staff earnings and retention

A report for the Royal College of Nursing

London Economics

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Executive Summary

London Economics were commissioned by the Royal College of Nursing to undertake a detailed analysis of the **evolution of registered nurses' and nursing support workers' NHS Agenda for Change pay over the last decade, across the UK**. This analysis provides an evidence-based assessment of the extent to which remuneration in the nursing profession has been impacted by years of pay stagnation and the current cost-of-living crisis. In addition to the analysis of ongoing and accumulating real-terms declines in pay, the analysis addresses a number of common misconceptions about the relative outcomes of nurses compared to other occupations; the particularly damaging effect of inflation on nurses; the relationship between turnover rates amongst the nursing profession and pay settlements; as well as the true costs to the Exchequer associated with ever-increasing nurse vacancies.

The analysis is based on a range of publicly available data sources and covers all countries of the United Kingdom, where the data permit. In some cases, due to better data availability, only data for England is used. In those cases, the data from England is illustrative of the issues across the United Kingdom. The analysis covers the whole nursing profession, but in some cases, it concentrates on registered nurses due to data availability and to provide illustrative examples.

The main findings of the report are as follows:

- Between 2010-11 and 2022-23, nurses' salaries in England, Wales and Northern Ireland at the top of Band 5 and Band 6[1] on the Agenda for Change (AfC) framework have declined by **at least 20%** in real terms (Figure 1). A similarly large decline applied to nurses in Scotland (based on the June 2022 pay offer). In other words, **an experienced nurse in 2022-23 is being paid the same amount for 5 days' work as for 4 days' work in 2010-11**. The findings are similar for nursing support workers: those at the top of Band 3[2] saw their real salaries decline by **17%** since 2010-11 in England, Wales and Northern Ireland and by **11%** in Scotland.
- Looking into the future, modelling from London Economics suggests that the very high expected levels of inflation mean that nurses at the top of Band 5 in England would need a **45%** cumulative pay rise in 2023-24 and 2024-25 (i.e., around **21%** per year) to achieve the same real earnings as in 2010-11. The modelling from London Economics also suggests that experienced nurses in Scotland would need a pay rise of **39%** above the June 2022 pay offer (i.e., around **18%** per year).
- Real earnings for nurses have **lagged behind employees in other professions** in the United Kingdom, particularly those in the private sector. In the private sector, real median earnings fell by **3.2%** between 2011 and 2021, while nurses' median earnings fell by **6.0%** (Figure 2). In addition, private sector employers have responded rapidly to the ongoing cost-of-living crisis, with the **gap between public sector and private sector pay growth being the largest on record** in June to August 2022. Average private sector nominal pay[3] in the United Kingdom increased by **6.2%** over the most recent 12-month period, compared to just **2.2%** in the public sector.

[1] Band 5, Point 23; Band 6, Point 29. Nurses on those spine points made up 30% of all nurses in September 2021 – the most recent data available (NHS Digital, 2022a).
[2] Band 3, Point 12.
[3] I.e., pay in cash terms, before taking account of inflation.

- From April 2020 to July 2022, the price of unavoidable expenditure items (which account for more than one third of a typical household's expenditure) increased by approximately **17.1%**. This is significantly higher than the nominal pay rise that an experienced[4] NHS nurse in England, Wales, Northern Ireland (**7.6%**) and Scotland (**9.2%**) experienced over the same period (Figure 3).
- 'From 2010-11 to 2021-22, as nurses' salaries in England declined substantially in real terms[5], the annual leaver rate for nurses and health visitors increased from **8.5%** to **10.9%** (Figure 4). The total number of leavers rose from **27,000** to **over 38,000** over the period (a **42% increase**). There were nearly **47,000** nursing vacancies in the NHS in England in June 2022 (the highest figure on record). Comparing the trend in the leaver rate and real-terms salary growth over time in England, the analysis suggests that there was a strong correlation between the two measures (**-0.75**)[6]. **This suggests that decreases in real salaries are strongly associated with increases in the leaver rate.**
- There are very **significant costs to NHS organisations associated with nurse turnover.** Modelling for NHS organisations in England shows that:[7]
  - **International recruitment** (the current main recruitment method adopted by the UK Government) costs approximately **£16,900** more than the cost of retaining a nurse in 2021-22 – and also **2.4 times the cost of a 5% + RPI pay rise** (which was estimated to be **£7,100** including on-costs).
  - In the short term, NHS organisations can cover vacancies using a mix of agency and bank staff, or through paid overtime; however, again, these options are very costly. Agency nursing costs NHS organisations around **£21,300** per year[8] more than the current cost of a permanent nurse, while bank nursing costs around **£5,100** more per year. An even split between bank and agency nursing would imply an additional cost of **£13,200** per year, which is **1.9 times the cost of a 5% + RPI pay rise**.
- In addition to the erosion of real wages, the recent fundamental changes to the English student loan repayment system will **adversely impact both prospective nurses** entering the profession as well as **nurses who have already taken out and are repaying student loans**. In particular, the recently announced reduction in the repayment threshold, the slower uprating of the repayment threshold (i.e. a 'stealth tax') and the extension of the repayment period to 40 years (from 30 years currently) will result in a significant increase in nursing graduates' lifetime loan repayments, and therefore have a significant adverse effect on the post-tax disposable income available to individuals starting nursing degrees from 2023-24 onwards[9].

The cost of poor staff retention and an underfunded NHS workforce also has **extensive implications on the growth of the UK economy**. **Poor health and NHS waiting lists have been one of the primary drivers of the increase in economic inactivity among the UK population**. The rise in economic inactivity due to ill health across the UK is exacerbating the tightness of the labour market when

[4] Band 5, Point 23.
[5] Again, based on Band 5, Point 23.
[6] This analysis excluded the data for 2020-21 (due to the impact of the COVID-19 pandemic on the data for that year).
[7] While the analysis relies on data for experienced nurses in England only (due to the better data availability compared to other countries of the UK), the results are illustrative of the high cost of turnover faced by NHS organisations across the UK.
[8] Based on advertised rates from the British Nursing Association (2021).
[9] See Annex 2 for more information. Due to accruing interest over what is likely to be a large, unpaid balance, the proposals will see new nursing graduates making higher repayments every year for longer – many never paying off the full amount. For women in nursing roles in the NHS in England, the average increase in the cost of loan repayments will be £15,300 (up by 142% compared to the current system). For men, the increase is £17,600 (up by 72%). The larger absolute increase for men is driven by the fact that male nurses generally remain in employment for a longer period of time, and have higher annual earnings (on average) than female nurses. This is especially important because the loan repayment period has been extended to 40 years post-graduation.

there are a record number of vacancies compared to those seeking work. The underfunding of the NHS (demonstrated by the erosion of nurses' real pay) has led to poor health outcomes, which is stifling economic growth. **Therefore, properly funding the NHS will lead to higher - *not* lower- economic growth**.

1 Introduction and overview

London Economics were commissioned by the Royal College of Nursing to undertake a detailed analysis of the **evolution of registered nurses' and nursing support workers' pay over the last decade, across the UK**.

The analysis is based on a range of publicly available data sources and covers all countries of the United Kingdom, where the data permit. In some cases, due to better data availability, only data for England is used. In those cases, the data from England is illustrative of the issues across the United Kingdom. The analysis covers the whole nursing profession, but in some cases, it concentrates on registered nurses due to data availability and to provide illustrative examples.

The report is set out as follows.

In **Section 2**, we outline the **real-terms erosion of nurses and nursing support workers' salaries** on the NHS Agenda for Change (AfC) framework across the UK since 2010-11. Based on current Bank of England expectations about future levels of inflation, we then present information on the size of the pay award that would be needed over the next two years that would make nursing staff pay comparable to what it was in 2010-11, in real terms. Finally, we address the misconception that nurses have outperformed the economy-wide pay outcomes achieved by private sector employees.

Having established the evidence base on pay erosion, in **Section 3**, we address **the impact of pay erosion on nursing staff**. To do this, we consider the extent to which nurses' earnings across the UK compare to key elements of inflation. In particular, we compare the change in nominal earnings of experienced nurses across the UK over time with changes in the price of specific goods and services within the overall UK inflation 'basket' that are unavoidable (i.e., essential items that cannot be substituted away from). We supplement this analysis with survey data for England illustrating the impact that the cost-of-living crisis and a decade of below-inflation pay increases are having on nurses' physical and mental wellbeing. We highlight the fact that the deterioration in working conditions and the wider economic outlook is in turn increasing staff burnout and turnover, as well as making nursing a significantly less attractive profession for the future.

In **Section 4**, we consider the **impact of a decade of real-terms pay erosion on turnover rates, and the consequences on the NHS** - which is already facing more than 47,000 nurse vacancies in England. In particular, over the last decade, we assess the relationship between the decline in real-terms pay and the proportion of nurses leaving the profession in England. In addition, we assess the true costs of *not* awarding nurses an above-inflation pay increase and attempting to fill a vacancy through international recruitment, increased reliance on bank and agency staffing and increased overtime[10].

[10] In Annex 2, we provide supplementary evidence on how the recent fundamental changes to the English student loan repayment system will adversely impact both prospective nurses entering the profession as well as those who have already taken out and are repaying student loans.

2 The pay erosion of nurses

2.1 What has happened to the real pay of nurses since 2010-11?

Since 2010-11, registered nurses and nursing support workers on the NHS Agenda for Change framework have experienced a **substantial decline in their real pay** across the United Kingdom.[11] Based on advertised AfC yearly full-time salaries from 2010-11 to 2022-23 (NHS Employers, 2022), nurses in England, Wales and Northern Ireland at the top of Band 5 and Band 6[12] have seen a decline in their real earnings of **at least 20%** since 2010-11 (Figure 1).[13] [14] [15]

The analysis in Figure 1 is applicable to all registered nurses and most nursing support workers on the Agenda for Change framework in Wales as Agenda for Change staff on Band 3 and above in Wales have the same salary rates as in England.[16] The analysis is also applicable to Northern Ireland, assuming that the 2022-23 pay award is implemented by the Northern Ireland Executive. At the time of writing, Northern Ireland did not have a functioning executive, so the 2022-23 pay award was accepted but not implemented. Therefore (at the time of writing) pay rates are *lower* for nursing staff in Northern Ireland than in the rest of the United Kingdom and overall pay declines are larger than the 20% figure stated. Nurses at the top of Band 5 and Band 6 in Scotland[17] have seen their real pay decline by **16%** and **17%**, respectively, based on the June 2022 pay offer (see Figure 9 in Annex 3).

In other words, in 2022-23, **an experienced nurse is being paid the same amount for 5 days' work as for 4 days' work in 2010-11**. In fact, the salary rates for **all spine points** on the AfC framework in England have declined in real term, with **at least a 15%** decline in real salaries since 2010-11 for **the majority** (48 of 79) of spine points.[18]

Considering the experience of nursing support workers, staff on the AfC at the top of Band 3 (Point 12) have seen a decline in their real salary of **17%** since 2010-11 in England, Wales and Northern Ireland, and an **11%** decline in Scotland.

Looking to the future, modelling from London Economics suggests that, nurses would need a substantial pay rise in the coming years to maintain their living standards in the face of high inflation forecasts (conservative estimates suggest **11.8%** Retail Price Index (RPI) inflation in April 2023, and **3.6%** in April 2024[19]). In order to restore their real salary to 2010-11 levels by 2024-25, our modelling

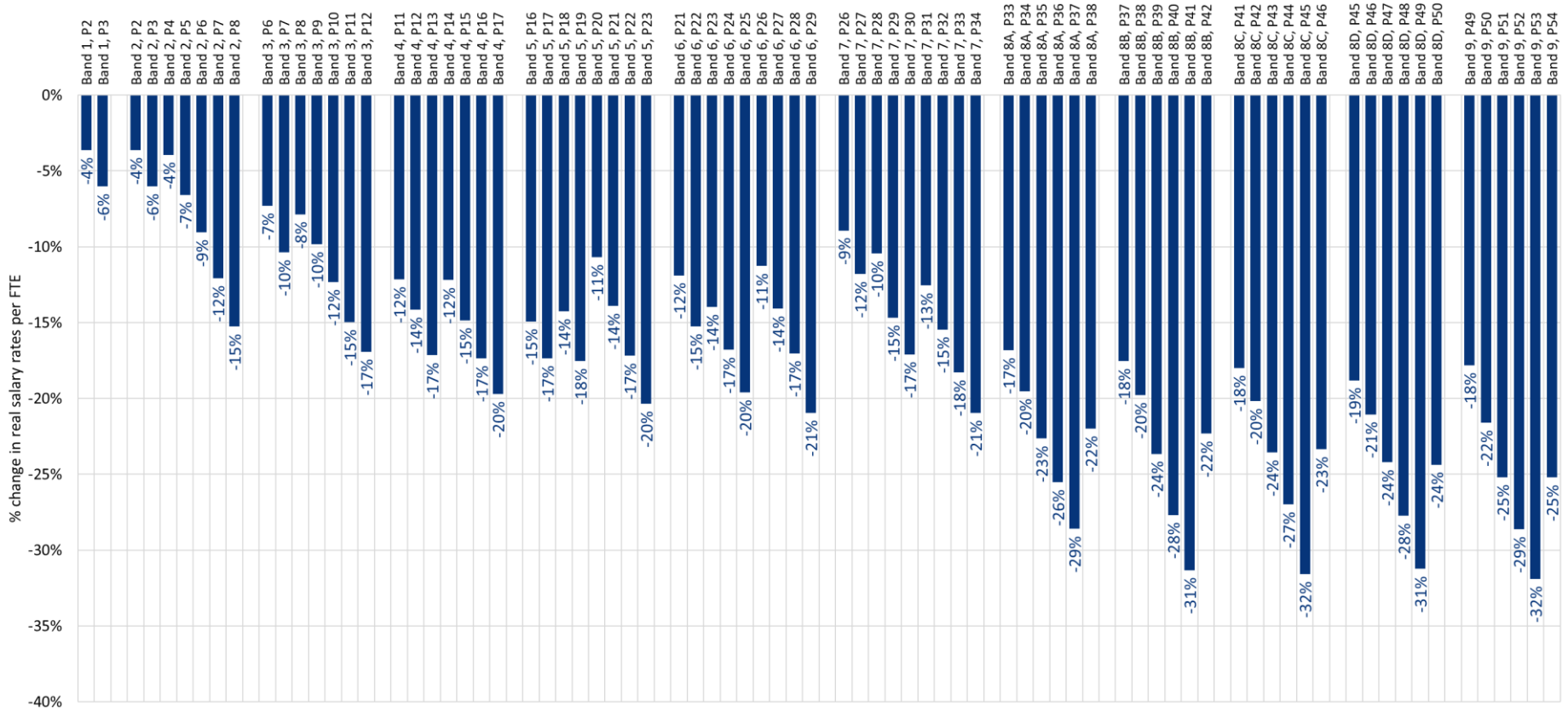
[11] On top of nurses (and nursing support staff), the AfC salary rates cover a wide range of other staff groups in NHS Trusts, Clinical Commissioning Groups, and Support Organisations.
[12] Band 5, Point 23 and Band 6, Point 29. Nurses on those spine points made up 30% of all nurses in September 2021 – the most recent data available (NHS Digital, 2022a).
[13] The analysis here uses NHS salary points rather than total pay (i.e. the analysis does not include overtime payments), as data for total pay for nurses in 2022-23 was unavailable for many AfC bands. However, where available, the results for total pay are very similar for the bands. For example, there was a 21% decline in total pay for Band 5, Point 23 and a 20% decline for Band 6, Point 29.
[14] Figures are calculated relative to the Retail Price Index in April of each year (starting in April 2010), based on data published by the Office for National Statistics, 2022a).
[15] The figures account for the pay award made by the UK Government on 19th July 2022 (Department of Health and Social Care, 2022).
[16] Registered nurses are typically on Band 5 and above, while nursing support workers are typically on Band 3 and above.
[17] Note that there are different income tax rates and thresholds operating in Scotland compared to the rest of the United Kingdom. As such, the erosion of real gross salaries identified above (i.e. before tax deductions) might underestimate the actual impact of inflation on net salaries (i.e. after tax deductions).
[18] In fact, considering those AfC pay scales where most nurses are located (Band 5 and above), there has been at least a 15% decline in real salaries since 2010-11 for over three quarters (43 of 56) of spine points.
[19] RPI forecasts were calculated using the Bank of England's August Monetary Policy Report CPI forecasts, which were then adjusted by the average historical difference between RPI and CPI between 2010 and 2022 (Monetary Policy Committee, 2022). RPI inflation may in

shows that an experienced nurse in England, Wales and Northern Ireland (at the top of Band 5) would need a cumulative nominal pay rise of **45%** in 2023-24 and 2024-25 (i.e., approximately **21%** *per year*).[20] In Scotland, a **39%** pay increase would be required (compared to the June 2022 pay offer), which is equivalent to approximately **18%** per year.

fact be higher than this forecast, depending on the movement in energy prices. For example, an August 2022 forecast from Citi suggested that the RPI could reach 21% in Q1 2023 (Lawson and Mason, 2022). However, it should be noted that these forecasts were made before the UK Government announced its Energy Price Guarantee in September 2022.

[20] Compared to 2022-23 salary levels offered to nurses in England by the UK Government in July 2022.

Figure 1 Change in real salary rates per FTE staff on the AfC framework in England between 2010-11 and 2022-23 (compared to RPI), by AfC spine point



Note: Real salaries per FTE staff were calculated by adjusting the corresponding nominal pay rates for changes in the Retail Price Index since 2010-11.
For consistency, the AfC bands and spine points are based on the more detailed AfC salary structure that was in place up until 2017-18, which included different salary levels for each individual spine point. From 2018-19 onwards, the structure was simplified/flattened over time to include fewer incremental changes across spine points, so that multiple spine points within a given band are subject to the same salary (e.g. in 2022-23, within Band 5, spine points 20-23 are all associated with the same salary rate).
The figure presents changes in the pay rates for each AfC spine point over time, but does not capture the extent to which staff progress to higher spine points over time.
The figure also does not account for overtime, payments for unsociable hours, or high-cost area supplements.
The figure is applicable to Wales for Band 3 and above (salaries are higher in Wales for Band 1 and Band 2); the figure is also applicable to Northern Ireland, assuming that the 2022-23 pay award is implemented.
Source: London Economics' analysis based on NHS Employers data and ONS Retail Price Index data.[21]

[21] See Office for National Statistics (2022a).

2.2 How has the pay erosion of nurses compared to other professions?

The pay erosion experienced by nurses over the last decade has been more acute than that experienced by other professions in the United Kingdom's wider economy[22]. We used data from the **Annual Survey of Hours and Earnings** (ASHE) (Office for National Statistics, 2021a), from 2011 to 2021[23], to analyse the real median gross weekly earnings of full-time nurses compared to other employees across the United Kingdom.[24] The use of this alternative data source, rather than the above-described AfC salary rates, was required in order to undertake a like-for-like comparison of earnings for nurses against other occupations (i.e. using earnings data that is comparable across occupations).

There **are several important caveats** to bear in mind with respect to the ASHE data compared to the above AfC salary data:

- The ASHE data cover **both public and private sector nurses**, while the AfC salary rates only consider public sector nurses directly employed in the NHS.[25]
- The ASHE data relate to **estimated median weekly earnings** among **all nurses** in each year, and therefore implicitly account for the distribution of nursing staff across the AfC pay scale (and progression between spine points) – whereas the AfC data provide the salary rates paid to individuals employed on each spine point (and do not account for nurses' progression across spine points over time).
- The Office for National Statistics consider the ASHE estimates for 2020 and 2021 to be unreliable, because of the **effect of the COVID-19 pandemic** (Office for National Statistics, 2021b), so results from those years should be treated with caution.
- The ASHE data relate to **total pay** (including 'non-basic' pay elements over and above salaries[26]); in contrast, the AfC salary rates relate to basic salaries only (although the trends in the AfC total pay data are similar to those seen in the AfC salary data).
- The ASHE data cover employees across **the whole of the United Kingdom**, while the AfC salary rates are different across the United Kingdom.
- Both data sources only consider ***employee* earnings** (i.e., they do not consider self-employed earnings or non-labour income, such as dividends or rents).

Due to these caveats, the reader should be cautious about using the ASHE data to analyse the erosion of absolute real earnings of nurses, as for that particular analysis, the AfC data is more

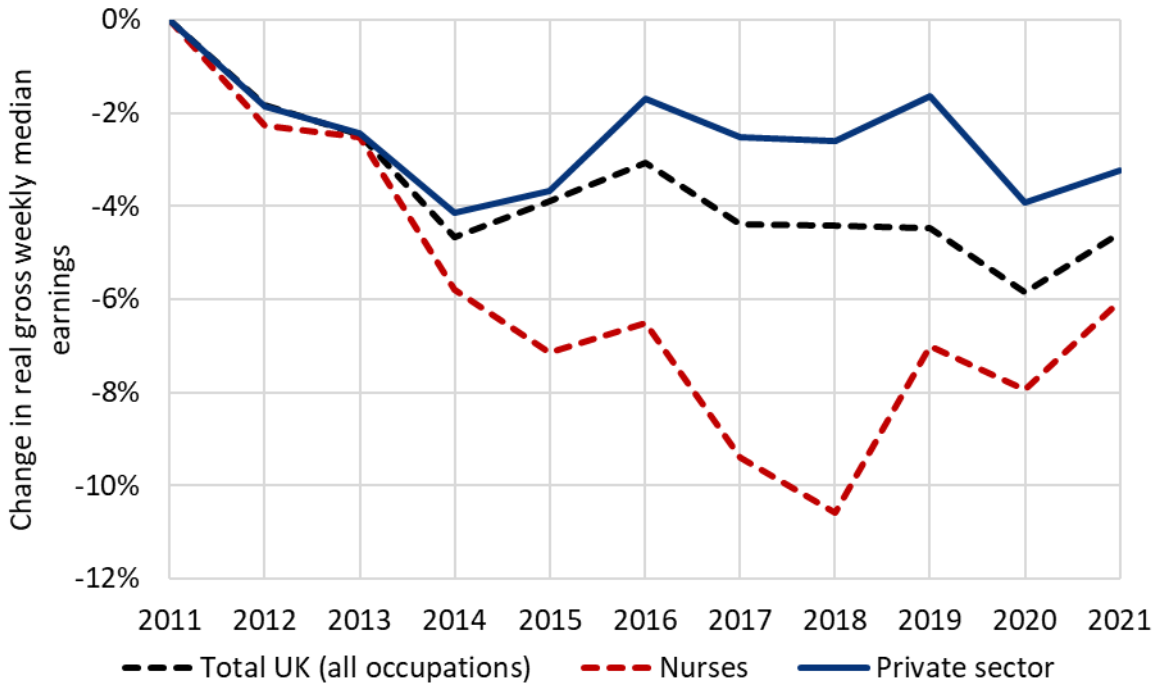
[22] In addition to the erosion of real wages, there have been a number of recent fundamental changes to the English student loan repayment system that will adversely impact both prospective nurses entering the profession as well as nurses who have already taken out and are repaying student loans. In particular, the recently announced reduction in the repayment threshold, the slower uprating of the repayment threshold (i.e. a 'stealth tax') and the extension of the repayment period to 40 years (from 30 years currently) will have a significant adverse effect on the post-tax disposable income available to individuals starting nursing degrees from 2023-24 onwards (see Annex 2 for more information). In addition, the 'stealth tax' is applied to all students who started higher education qualifications from 2012-13 onwards – and therefore, would affect all individuals who acquired nursing degrees since the abolition of NHS Bursaries in 2016.
[23] The ASHE data are based on April of each relevant year. 2011 is used as a comparison instead of 2010 because occupational codes used in ASHE changed in 2011 (from SOC2000 to SOC2010), so that the ASHE data for pre-2011 are not comparable with data from 2011 onwards. In addition, note that for 2021, only provisional estimates were available at the time of analysis. 2022 data was not available for ASHE at the time of the analysis.
[24] As in the analysis of AfC salaries, the Retail Price Index for April of each year is used to convert nominal earnings to real earnings (Office for National Statistics, 2022a).
[25] For reference, based on analysis of Quarterly Labour Force Survey data, in the third quarter of 2021, only 16% of UK nurses were classified as working predominantly in the private sector (Office for National Statistics, 2022b).
[26] Such as payments for additional activity, band supplements, medical awards, geographic allowances, local payments, on call, overtime, recruitment and retention premia, shift work payments, or other payments.

accurate. The ASHE data is most useful for examining the **relative real salary** of nurses compared to other occupations in the United Kingdom.

As presented in Figure 2, the ASHE data indicate that the growth in real median gross weekly earnings of full-time nurses has **lagged behind employees in other professions** in the United Kingdom, particularly those in the private sector. Across **all occupations**, real median earnings fell by **4.6%** between 2011 and 2021, while nurses' median earnings fell by **6.0%** (Figure 2). The difference is particularly stark when comparing nurses to the decline in private sector real median earnings of **3.2%** (i.e., a 2.8 percentage points lower real decline than for nurses).

Considering the more reliable data (up to 2019, i.e., excluding the years affected by COVID-19), the gap between the changes in nurses' earnings compared to the private sector is even wider, standing at **5.4** percentage points (a **7.0%** decline for nurses compared to **1.6%** for private sector employees). Due to successive below-inflation pay settlements for nurses across the United Kingdom, the gap between the private sector and nurses opened up between 2013 and 2018, when real median private sector wages remained declined by only **0.2%** (i.e. remained approximately the same), while nurses experienced an **8.3% decline** in their real pay.

Figure 2 Change in real gross weekly median earnings per full-time employee in the UK: Nurses compared to private sector and all occupations (2011 to 2021)



Note: Real earnings are calculated relative to the Retail Price Index.

Source: London Economics' analysis based on Annual Survey of Hours and Earnings and ONS Retail Price Index data.

It is important to note that these estimates do not account for the **substantial subsequent inflation rates in 2021 and 2022**, or the response of different employers to the cost-of-living crisis. In terms of subsequent inflation, official data has estimated a cumulative rate of **17%** of RPI inflation and **13%** of Consumer Price Index (CPI) inflation in the UK between January 2021 to August 2022 (see Office for National Statistics, 2022a and 2022c). In terms of employer responses, in June to August 2022, there was the largest gap between public sector and private sector pay growth on record in Great Britain, with average regular private sector nominal pay rising by **6.2%**, compared to only **2.2%** in the public sector (compared to the same period in 2021) (Office for National Statistics, 2022d).

Recent private sector pay rises have also been substantially higher than the July 2022 pay award in England of **4.4%** for experienced nurses at the top of Band 5 (Department of Health and Social Care, 2022). This recent data again highlights how public sector pay awards across the UK have lagged behind those of the private sector in the face of rising inflation, which has further cemented the trend of nurses' real pay erosion since 2010-11.

While real wage growth throughout the whole of the UK economy has been relatively stagnant throughout the entirety of the last decade, our analysis reveals that a decade of below-inflation pay settlements have led to nurses' wage growth consistently lagging behind other employees in the United Kingdom since 2011 – particularly compared to those in the private sector. In addition, recent AfC pay settlements have not come anywhere close to compensating for the unprecedented rises in the cost of living, let alone redressing a decade of real wage erosion.

3 Impact of pay erosion on nurses

3.1 Impact of pay erosion on nurses' living expenses

Over a decade of pay erosion has resulted in a substantial erosion in nurses' standard of living. Nurses are seeking pay rises to cover the cost of essentials, such as housing, utility bills and transport, which our analysis shows have increased in price substantially more than other goods and services.

Headline inflation figures do not fully capture how nurses have experienced the effects of inflation in recent years. Inflation is made up of a basket of goods based on typical expenditure, with an inflation rate for each item underlying the overall inflation figure. To examine the effect of recent UK-wide inflation on nurses, we analysed 'unavoidable' aspects of UK CPI inflation from the first full month of the first COVID-19 lockdown in the UK (April 2020) to July 2022.[27] [28] [29] This **unavoidable expenditure** is any expenditure that an individual cannot substitute away from, and includes items related to:

- **Housing, water & fuel** (e.g., electricity and gas);
- **Transport** (e.g., bus and train transport, car repair and maintenance and fuel);
- **Health** (e.g., prescriptions, pharmaceuticals and dentistry);
- **Childcare and compulsory education costs**;
- **Insurance** and other **financial products** (e.g., home and car insurance; bank charges); and
- **Communication costs** (e.g., postal services, phone rental etc).[30]

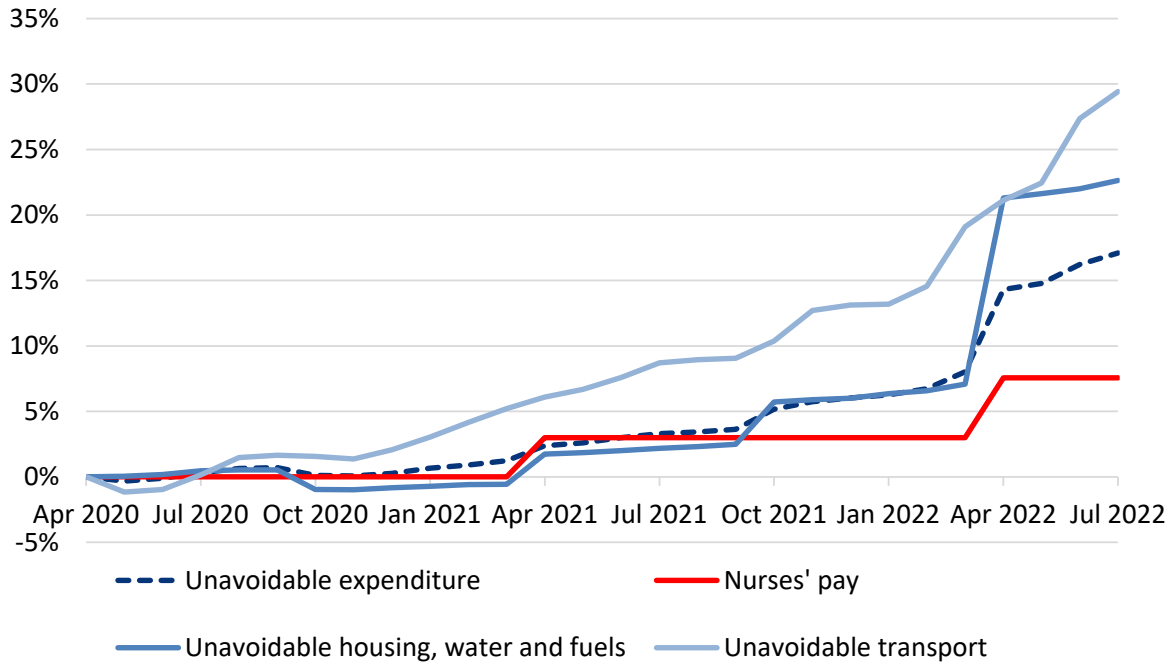
These unavoidable items made up an estimated **36.5%** of a typical household's expenditure in 2022, but the true proportion of household expenditure is likely to be higher, due to the unprecedented increase in prices of unavoidable items.[31]

As presented in Figure 3, from April 2020 to July 2022, the price of unavoidable expenditure items in the United Kingdom increased by significantly more (**17.1%**) than the nominal pay rise of an experienced[32] NHS nurse in England, Wales and Northern Ireland over the same time period (**7.6%**).[33] It is also substantially higher than the nominal pay rise in Scotland of **9.2%**.[34] In particular,

[27] The index was calculated based on the methodology provided in the Consumer Prices Indices Technical Manual (Office for National Statistics, 2019), incorporating the chaining methodology. The calculations used Office for National Statistics data on inflation by item (Office for National Statistics, 2022e) and January and February-December weights (Office for National Statistics, 2022f). Due to the rounding of the inflation data by item, our calculations may not exactly match published Office for National Statistics figures.
[28] CPI inflation is used rather than RPI to remain consistent with the Office for National Statistics' classification of non-discretionary expenditure, which the unavoidable expenditure definition is based on (see footnote 30).
[29] July 2022 is used as it was the most recent data available at the time of analysis.
[30] The definition of unavoidable expenditure is an amended version of the Office for National Statistics' definition of non-discretionary expenditure (Office for National Statistics, 2021c). The definition was amended to remove some components of non-discretionary expenditure that can be substituted. The most notable exclusion is food, where individuals can (in most cases) substitute to different types (or a lower quality) of food if an item increases in price. Note that using the Office for National Statistics' definition of non-discretionary expenditure instead of this definition yields similar results.
[31] The proportion of a typical household's expenditure spent on unavoidable items is based on the February to December 2022 weights published by the Office for National Statistics (Office for National Statistics, 2022f). However, these weights are based on spending patterns in 2020 and 2021 and the weights do not account for changing prices within 2022. It is likely that as prices rose for these goods in 2022, an increasing proportion of income was spent on these items by households, as they substituted from discretionary goods to this unavoidable expenditure.
[32] Band 5, point 23.
[33] The figure is applicable to Northern Ireland, assuming that the 2022-23 pay award is implemented and backdated to April 2022.
[34] See Figure 10 in Annex 3 for the same analysis for nurses in Scotland.

unavoidable components of **housing, water and fuels** (particularly electricity, gas and liquid fuels) and **transport** (particularly petrol and diesel) have risen in price substantially (by **22.6%** and **29.4%** respectively).[35] The increase in the cost of unavoidable items means that the below-inflation wage rises for nurses across the United Kingdom will scarcely cover the price rises of these items – let alone the cost of other essential purchases such as food and clothing.[36] It leaves nurses in a difficult position where, after already having experienced a decade of real pay erosion, they must further cut any 'discretionary' expenditure that they have remaining.

Figure 3 Unavoidable UK CPI inflation compared to salary growth of Band 5, Point 23 nurses in England, Wales and Northern Ireland (April 2020 to July 2022)



Note: Unavoidable housing, water and fuels and unavoidable transport contain the components of those CPI categories that are considered 'unavoidable'. The figure is also applicable to Wales. The figure is applicable to Northern Ireland, assuming that the 2022-23 pay award is implemented and backdated to April 2022.

Source: London Economics' analysis based on NHS Employers and Office for National Statistics data.

3.2 Effect of pay erosion on nurses' wellbeing

A cost-of-living crisis on top of a decade of real wage erosion and NHS understaffing has had substantial negative effects on nurses' wellbeing. A recent survey of NHS leaders[37] by NHS Providers (undertaken in August and September 2022) in England has highlighted the significant negative impact that the cost-of-living crisis has had on nursing staff (NHS Providers, 2022). This survey for England is indicative of the issues faced by the NHS across the United Kingdom.

Almost all NHS leaders surveyed were moderately or extremely concerned about the impact of the cost of living on staff's **mental wellbeing** (**99%**) and **financial wellbeing** (**100%**). The majority of surveyed NHS leaders indicated that the cost-of-living crisis had a significant or severe impact on **mental health absence**, while **42%** reported a significant or severe impact on **staff struggling to**

[35] These figures only give the combined price rise for the group of the unavoidable components included in those categories. Some sub-components have risen in price significantly more than the figures quoted – for example, the price of gas rose by 88% and the price of liquid fuels rose by 224%.
[36] See footnote 30 for additional detail.
[37] Specifically, "chairs, chief executives, finance directors, HR directors, medical directors and nursing directors".

afford to eat meals while on shift. These findings build upon long-run trends of burnout and work-related illness within the NHS in England and are indicative of issues across the United Kingdom. The 2021 NHS Staff Survey in England showed that **over half** of registered nurses and midwives felt **unwell as a result of work-related stress**, while over **three quarters** said that they **felt burnt out** because of their work (NHS, 2022).

The cost-of-living increases compared to nurses' real wage erosion have also had implications for the **attractiveness of the nursing profession**, with almost all NHS leaders (again, in England) being moderately or extremely concerned about the effect of the cost of living on **recruitment** (**93%**) and **retention** (**92%**) (NHS Providers, 2022). It is particularly concerning that the rising cost of living is pushing staff out of the nursing profession altogether: **over half** (58%) of NHS leaders in England believe there is a significant or severe impact of the cost of living on **nurses leaving to work in other sectors**, while the majority also believe it has led to **increases in staff retirement**. The survey further suggests that there are long-term negative effects of the current cost of living crisis, with **nearly half** of respondents believing there is a significant or severe impact of the cost of living on the **number of staff seeking careers in health and social care** (i.e., undertaking nursing degrees). These findings are corroborated by data from the 2021 NHS Staff Survey for England (conducted before the current cost-of-living crisis), which found that **8%** of all NHS nurses and midwives were considering moving to a job outside healthcare (NHS, 2022).

4 Impact of pay erosion on the NHS

As the previous chapter showed, more than a decade of pay erosion and underinvestment in the NHS workforce has had negative consequences on the wellbeing of nurses across the United Kingdom, which has become particularly serious with the ongoing cost-of-living crisis. However, there are also high costs for the NHS associated with the recruitment of additional registered nurses while existing staff are forced out of the workforce. Despite the UK Government's commitment to increase the size of the registered nursing workforce in England by 50,000 between 2019 and 2024, there were nearly **47,000** registered nursing vacancies in the NHS in England in June 2022 (the highest figure on record) (NHS Digital, 2022b). In addition, there were an estimated **2,900** registered nursing vacancies in Wales (Royal College of Nursing Wales, 2022), **4,500** in Scotland (NHS Education for Scotland, 2022) and **2,000** in Northern Ireland in 2022 (Department of Health, 2022).[38] At the same time, staff retention has worsened over the past decade, and the NHS has incurred high costs associated with a temporary workforce (i.e., filling shifts with bank and agency staff).

4.1 Staff turnover

Over the last decade, as real salaries of NHS nurses have eroded, the proportion of nurses leaving the NHS each year has increased. From 2010-11 to 2021-22, as nurses' salaries in England declined by **15%** in real terms (again compared to RPI based on nurses at the top of Band 5 (Point 23)), the annual leaver rate for nurses and health visitors in England increased from **8.5%** to **10.9%** (see Figure 4).[39] To put these figures in context, the total number of leavers in England rose from **27,000** to **over 38,000** between 2010-11 and 2021-22 (a **42% increase**). In fact, most of the increase in the leaver rate arose in the period with the most substantial wage erosion (2010-11 to 2017-18).

This increase in the leaver rate in England is indicative of issues throughout the United Kingdom. For example, there has been a similar increase in Scotland, with the leaver rate rising from **6.1%** in 2011-12 to **10.7%** in 2021-22 (NHS Education for Scotland, 2022).[40] There is no comparable data available for Wales and Northern Ireland.

Over the whole period (2010-11 to 2021-22), in England, real salaries and leaver rates have a **correlation of -0.49**[41], suggesting that decreases in real salaries are strongly associated with increases in the leaver rate.[42] When removing the anomaly of 2020-21 (due to the COVID-19 pandemic), the correlation is even stronger (**-0.75**).

While there are many factors that have contributed to retention issues (such as understaffing, overworking, and staff burnout), this data highlights how pay is a contributing factor to these issues. Even if it is not directly causing staff to leave, it is a symptom of a workforce that has seen a decade of underinvestment. With the **majority of NHS nursing shifts being below recommended NHS safe**

[38] Data for Wales is based on RCN freedom of information requests about the number of registered nursing vacancies in Wales in July 2022. Official vacancy data is not published in Wales. Data for Scotland considers all vacancies for registered nurses in Band 5 and above on 30th June 2022. Data for Northern Ireland considers all registered nursing vacancies on 30th June 2022.

[39] The leaver rate is the number of nurses and health visitors leaving the NHS (starting from March of each year), divided by the average number of nurses and health visitors in the NHS during that time period.

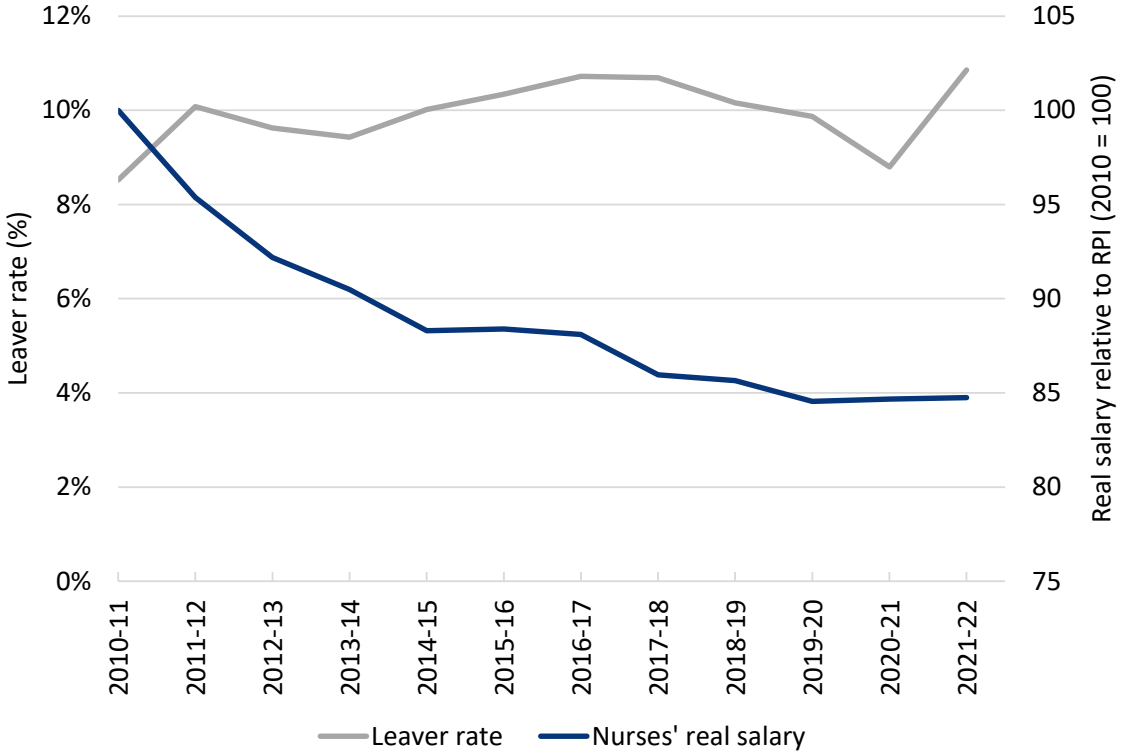
[40] 2011-12 is used as a comparison point as no data is available for 2010-11 in Scotland.

[41] Correlations can range between -1 and 1, with a negative value indicating an inverse relationship (i.e. as one variable increases, the other decreases) and a positive value indicating a positive relationship (i.e. as one variable increases the other increases). A value of 0 indicates no correlation; a value closer to 1 indicates a stronger positive relationship; and a value closer to -1 indicates a stronger inverse relationship.

[42] However, this correlation does not imply that decreases in real salaries specifically *cause* increases in the leaver rate – instead, the analysis suggests that there is an association between the measures (i.e., move in opposite directions over time).

staffing levels in the UK in 2022 (Royal College of Nursing, 2022), it is unsurprising that **nearly a third** of NHS nurse and health visitor 'voluntary' leavers[43] in England in 2020-21 cited **work-life balance** as their main reason for leaving (NHS Digital, 2022c).

Figure 4 Leaver rate for NHS nurses and health visitors in England, compared to index of top of Band 5 real salaries relative to RPI (2010-11 = 100), 2010-11 to 2021-22



Note: Nurses' salaries refer to salaries for Band 5, Point 23 nurses in England at 1st April of each financial year. The leaver rate considers the leaver rate by headcount at the year to March (e.g. 2010-11 would be March 2010 to March 2011).

Source: London Economics' analysis based on NHS Employers data, ONS Retail Price Index, and NHS Digital data.

4.2 Cost of staff turnover

The cost of staff turnover to the NHS is extremely high. We estimated this turnover cost by considering the cost to an NHS organisation (over a year) in England of a nurse leaving that organisation, in terms of the costs of filling that vacancy. This modelling was undertaken for an experienced nurse at the top of Band 5,[44] based on 2021-22 AfC salary rates (i.e., before the UK Government offered a below-inflation increase in nurses' salaries in England in July 2022). While the analysis relies on data for experienced nurses in England only (due to the better data availability compared to other countries of the UK), the results are illustrative of the high cost of turnover faced by NHS organisations across the UK. The analysis considered the following options available to NHS organisations for filling a vacancy:

- **Domestic recruitment:** The analysis presented here only considers the **short-term** cost of domestic recruitment (i.e., the cost of recruitment, onboarding and having a vacancy open while searching for a new nurse) – but does *not* account for the (higher) domestic nurse training costs to the Government (i.e. the long-term costs of domestic recruitment);

[43] 'Voluntary' leavers are those who voluntarily resigned, as opposed to other reasons for leaving such as retirement and redundancy.
[44] Band 5, Point 23.

- **International recruitment**;
- Covering shifts with **bank** staff;
- Covering shifts with **agency** staff; and
- Covering shifts with **overtime**.

All of these costs were calculated for 2021-22, and estimated relative to the **'Baseline'** scenario of retaining the nurse, rather than having to fill the vacancy. This 'Baseline' cost was based on the 2021-22 AfC salary rates for a nurse at the top of Band 5, but also including relevant on-costs incurred by employers (i.e., National Insurance contributions and pension contributions).

Note that:

- The cost estimates are conservative in the sense that they do not account for the **substantial institutional knowledge** associated with nurses leaving the NHS, nor the **relatively lower productivity** of new nurses upon joining the NHS organisation.
- To ensure that comparisons are like-for-like, the analysis focuses on a nurse working regular shifts (i.e., no night or weekend shifts) and does not consider high-cost area supplements. If these factors were accounted for, the cost of staff turnover (i.e., of filling a vacancy) would be higher, which again reflects the conservative approach taken.
- The costs relating to agency, bank and overtime work are ongoing costs. If an NHS organisation used agency staff, bank staff, or overtime in the longer term to accommodate a nurse vacancy, then those costs would recur each year.
- However, some recruitment costs are one-off costs (e.g., the cost of interviewing applicants). When considering recruitment, we assume that after a nurse leaves an NHS organisation, it takes 12 weeks to recruit a new nurse, with a subsequent two-week handover period. In this 14-week period, we assume that shifts are covered by a combination of agency and bank staff.[45]

The results of this analysis (presented in Table 1) reveal the **high costs associated with nurse turnover**. Considering nurse recruitment (the only long-term option to fill vacancies), **international recruitment** (the current main recruitment method)[46] costs NHS organisations around **£16,900** more than the Baseline cost of retaining a nurse in 2021-22 (i.e., **40%** more than the cost of a nurse at the top of Band 5 (including on-costs)). This figure is also equivalent to **2.4 times the cost of a 5% + RPI pay rise** (which was estimated to be **£7,100** (including on-costs) on top of the Baseline).

To some extent, international recruitment is only a short-term fix, as it relies on continued nursing supply from abroad as well as maintaining a competitive international salary. The estimated (short-term) cost of **domestic recruitment** is **£5,800** after a nurse leaves an NHS organisation.[47] However, note that this figure does not account for the (long-term) cost to the Exchequer of training a nurse (since, when a nurse moves organisations, it creates a vacancy in another organisation, which is then costly to fill; while these are necessary long-term costs incurred to ensure that there is an adequate domestic supply of nurses, the high turnover of nurses due to the continued underinvestment in the workforce leads to these training costs being wasted).

[45] Based on assumptions from the NHS (NHS England, 2022).
[46] Over half of new joiners to the Nursing and Midwifery Council (NMC) register in the 6 months to 31st March 2022 were trained outside of the UK (Nursing and Midwifery Council, 2022). 99.7% of international joiners to the NMC register were nurses (as opposed to midwives and nursing associates).
[47] i.e., the cost of recruitment (Fitzgerald, 2015), onboarding (based on data provided to London Economics by the RCN) and having a vacancy open while searching for a new nurse (based on AfC salary rates, on-costs, and NHS England (2022)).

Table 1 Additional cost to NHS of filling a vacancy for a top of Band 5 nurse in England, in the first year after leaving (relative to Baseline of 2021-22 salary rates + on-costs)

Option	Total cost, £	Difference to Baseline, £
Baseline (2021-22 salaries + on- costs)	£39,400	-
Bank staff	£44,600	£5,100
Domestic recruitment	£45,200	£5,800
International recruitment	£56,300	£16,900
Overtime	£59,900	£20,400
Agency staff	£60,700	£21,300

Note: Figures are rounded to the nearest £100 (and may not add up exactly due to this rounding). Costs are compared to the yearly salary of a Band 5, Point 23 nurse in 2021-22 (including on-costs such as pension contributions and employer National Insurance contributions).

Source: London Economics' analysis based on data from NHS Employers, NHS England, NHS Improvement, Gloucestershire Hospitals, British Nursing Association, Fitzgerald (2015), Royal College of Nursing, Nuffield Trust and Health Foundation.

In the short-term, rather than recruiting additional nurses into the NHS, organisations can also cover vacancies using the **temporary workforce** (through agency and bank nursing) or through paid overtime. This method is relied upon by NHS organisations due to the high number of nursing vacancies in the NHS – nearly half of nurses surveyed by the Royal College of Nursing across the UK reported that there was **at least one bank or agency nurse working on their last shift** (Royal College of Nursing, 2022).

The financial cost to the NHS of the temporary workforce is high. **Agency nursing** costs NHS organisations in England around **£21,300** per year[48] *more than* the current cost of a permanent nurse, while **bank nursing** costs around **£5,100** per year.[49] The bank nursing costs reflect 'regular' bank pay, and the costs may be higher for hard-to-fill shifts. Assuming that half of shifts are covered by bank nurses and half by agency nurses, then the additional cost of using bank/agency nurses to cover shifts when a nurse leaves the NHS is **£13,200** per year above the Baseline (assuming that those shifts can be filled[50]). Filling shifts with **overtime** is even more expensive – with the additional cost as compared to retaining the nurse standing at **£20,400** - and is an unsustainable long-term solution which further risks staff burnout (as evidenced in Section 3).

Overall, the analysis highlights that **staff turnover is extremely costly to the NHS**, and that it is substantially less expensive to retain the existing nursing workforce. In part, this can be achieved **by giving nurses an above-inflation pay rise** through ensuring that nurses can **afford to remain in the profession**, and by **increasing the attractiveness of the profession** to prospective nurses both domestically and internationally. An increased focus on both recruitment and retention should create a virtuous circle, as safer staffing levels should decrease burnout and increase satisfaction amongst NHS nurses, which should in turn increase staff retention. While not a silver bullet, an above-inflation pay rise is a key part of increasing staff retention and decreasing NHS reliance on expensive alternatives, particularly in the context of a cost-of-living crisis.

4.3 The affordability of a pay rise

The high costs of staff turnover suggest that **staff retention is a cost-effective policy for the NHS**. An above-inflation pay rise is an effective way to help retain staff. In fact, previous analysis by

[48] Based on advertised rates from the British Nursing Association (2021).
[49] Based on advertised rates from Gloucestershire Hospitals NHS Foundation Trust (2022).
[50] In many cases, shifts cannot be filled, which compromises patient safety: **83%** of nurses believed that staffing levels on their last shift were not sufficient to meet the needs and dependency of patients (Royal College of Nursing, 2022).

London Economics (for England) highlighted that **81% of the Exchequer cost associated with a 10% nominal pay rise for AfC staff would be recouped** through additional tax receipts and cost savings from recruitment, retention, and lower student loan write-offs (London Economics, 2021).

The cost of poor staff retention and an underfunded NHS workforce also has **wider implications on the growth of the UK economy**. The poor health of the nation is driving individuals out of work: over 700,000 individuals in the UK have left the workforce permanently since the beginning of the COVID-19 pandemic (Tinson et al., 2022).[51] While an increase in economic inactivity is to be expected following a recession, **poor health and NHS waiting lists have been the primary driver of the increase in economic inactivity**, particularly in 2022. Over half of the increase in the number of inactive 50-69 year-olds in the UK in Q2 2022 was driven by poor health (Tinson et al., 2022). Nearly 1 in 5 50-65 year-olds who left their job since the beginning of the COVID-19 pandemic in the UK are on NHS waiting lists, rising to over 1 in 3 for those who left due to poor health (Office for National Statistics, 2022g).

In October 2022, the rise in economic inactivity due to ill health is exacerbating the tightness of the labour market when there are a record number of vacancies compared to those seeking work.[52] The underfunding of the NHS (including the erosion of nurses' real pay) has led to poor health across the United Kingdom, which is preventing individuals from working and in turn is stifling economic growth. **Properly funding the NHS is a win-win for policymakers and will lead to additional economic growth by helping individuals back into the workforce.**

[51] Defined as those who are 'economically inactive': those who do not have a job and have not looked for work in the past 4 weeks and/or are not ready to start work in the next two weeks (Office for National Statistics, 2020).
[52] The number of unemployed people per vacancy was 0.9 in June to August 2022, which is the lowest on record (Office for National Statistics, 2022h).

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Annex 1 References

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Annex 2 Understanding the changes to student loan repayments in England

A2.1 Baseline

Under the **current English higher education (HE) funding system in 2021-22 (i.e. the Baseline)**, the public purse contributes approximately **£697 million** per cohort of English domiciled students starting **full-time first degrees in nursing** at higher education institutions in England (see Table 2)[53]. In terms of constituent cost components, given that the RAB charge (i.e. the proportion of the loan not expected to be repaid) associated with these students stands at approximately **74%**, maintenance loan write-offs cost the public purse **£306 million** per nursing cohort, while tuition fee loan write-offs cost **£378 million**. The provision of Teaching Grants to HEIs (based on funding for high-cost subjects in Band C1.1)) costs **£14 million** per cohort.

Table 2 Costs per nursing cohort associated with Baseline system of HE fees and funding in England

Item	£/%
Cost of maintenance loans	£306m
Cost of tuition fee loans	£378m
Cost of Teaching Grants	£14m
Total Exchequer cost	**£697m**
Average debt on graduation	**£47,600**
Average lifetime repayments (M/F)	**£24,400/£10,700**
RAB charge	**74%**
% never repaying full loan	**100%**

Note: All monetary values have been discounted to net present values (NPV) and are presented in constant 2021-22 prices. All monetary values per student have been rounded to the nearest £100, and all totals have been rounded to the nearest £1m.

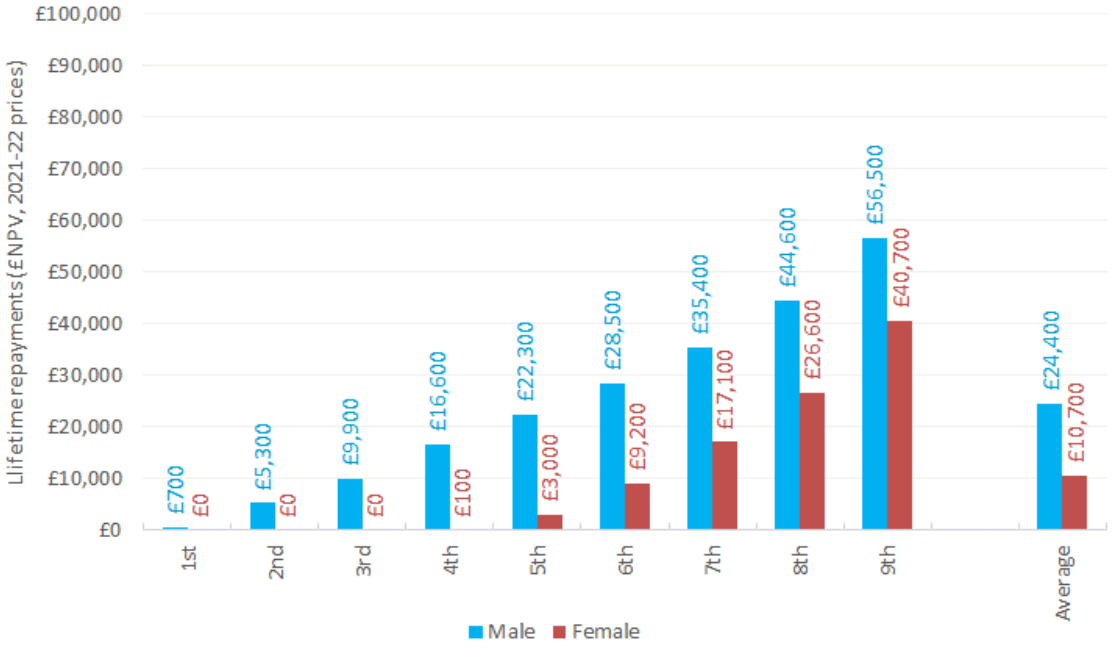
Source: London Economics' analysis

The average debt on graduation per student in the nursing cohort (including accumulated interest) was estimated at **£47,600**, with average lifetime repayments of **£24,400** for male graduates and **£10,700** for female graduates. However, there is considerable variation across the earnings distribution, and, reflecting differences in earnings (and employment probabilities), lifetime loan repayments are considerably larger for men than for women (see Figure 5):

- While the average repayments made by male nursing graduates stand at **£24,400**, repayments range from only **£700** (1st decile) to **£56,500** (9th decile).
- Female graduates in the bottom four earnings deciles are expected to make no loan repayments or very small repayments over the current 30-year repayment period. However, repayments increase sharply thereafter. However, repayments increase sharply thereafter, with female graduates on the 7th, 8th and 9th earnings deciles expected to make repayments of **£17,100**, **£26,600**, and **£40,700** respectively (with an average of **£10,700** across all deciles).

[53] The analysis focuses on the 2021-22 cohort of English domiciled students undertaking first degrees in nursing in England, including students enrolled in Adult Nursing, Children's Nursing, Learning Disabilities nursing, and Mental Health Nursing subjects only (but excluding any other nursing subjects).

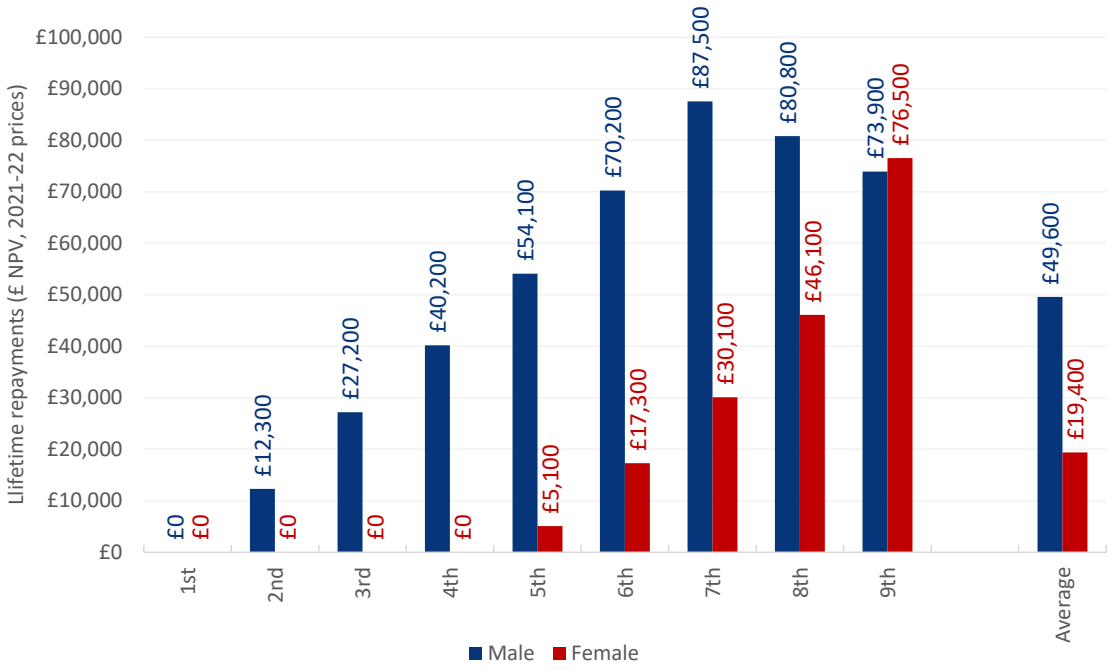
Figure 5 Total loan repayments by full-time first degree students under the current system, by earnings decile and gender: Nursing graduates



Note: All values have been discounted to net present values, are presented in constant 2021-22 prices, and have been rounded to the nearest £100.

Source: London Economics' analysis

Figure 6 Total loan repayments by full-time first degree students under the current system, by earnings decile and gender: 'Average' graduates



Note: All values have been discounted to net present values, are presented in constant 2021-22 prices, and have been rounded to the nearest £100.

Source: London Economics' analysis

In addition to the results for nursing students graduates specifically (presented in Figure 5), Figure 6 presents the corresponding lifetime loan repayments for 'average' full-time first degree graduates in the 2021-22 cohort (i.e. irrespective of subject studied and subsequent occupation). As evidenced by comparing the two figures, **under the current funding system, the lifetime loan repayments of nursing graduates are significantly lower than for 'average' graduates** – for all deciles - driven by nursing graduates' much lower lifetime earnings:

- The repayments of nursing graduates were estimated at **£24,400** for male graduates and **£10,700** for female graduates, with a RAB charge of **74%**.
- This compares to an average across all full-time first degree graduates of **£49,600** for men and **£19,400** for women, with a RAB charge of **31%**.

When considering the results across 'average' graduates in Figure 6, it is also important to note that **the current loan system is (locally) regressive at the upper end of the graduate earnings distribution**. Specifically, up until the 7th earnings decile, male graduates contribute an increasing amount of loan repayments over their lifetimes, with male graduates on the 7th decile expected to make repayments of **£87,500**. However, illustrating the 'local regressivity' of the repayment system, for higher deciles, lifetime loan repayments decrease to **£80,800** and **£73,900** on the 8th and 9th deciles, respectively.

A2.2 The Department for Education's response to the Augar Review

Compared to the above Baseline (current) funding system, we then modelled the costs associated with the **Department for Education's (DfE) long-awaited response to the Augar Review of Post-18 Education and Funding**. The main features of the Department's Augar response include[54]:

- The removal of real interest rates (during and after study);
- A reduction in the repayment threshold to £25,000 (frozen until 2026-27), and a 'stealth tax' slowing down the subsequent uprating of the repayment threshold (to be uprated with RPI, rather than (higher) average earnings growth); and
- The extension of the repayment period to 40 years.

Implementing all of the DfE's proposed changes to student finance arrangements would save the public purse **£308 million** per nursing cohort (see Table 3). This is equivalent to a **44%** decrease in the cost of funding per cohort. These savings are driven by lower loan write offs for both maintenance loans (**£138 million**) and tuition fee loans (**£170 million**).

The RAB charge associated with the cohort would be expected to decline by **33 percentage points**, to **41%**. The proportion of graduates not making *any* loan repayments over the *40*-year repayment period would decline to **87%**.

The average debt on graduation declines as a result of the removal of real interest rates (by **£1,400**). Average lifetime repayments for **both male nursing and female nursing graduates increase very significantly** - to **£42,000** for men, and **£26,000** for women. There are very important **distributional**

[54] See Department for Education (2022) for more detail. All of these changes will apply to English domiciled students starting undergraduate qualifications in the UK from 2023-24 onwards (i.e. for the 2023-24 onwards); here, the analysis assesses the impact on graduates and the public purse if these changes had been applied to the 2021-22 cohort of students (to provide a like-for-like analysis with the above Baseline (current) funding system).

effects associated with these funding changes – and, **crucially, nursing graduates are disproportionately negatively affected**.

Table 3 Costs per nursing cohort associated with Baseline and Augar system of HE fees and funding in England

Item	Baseline system	Augar system	*Difference*
Cost of maintenance loans	£306m	£168m	*(£138m)*
Cost of tuition fee loans	£378m	£207m	*(£170m)*
Cost of Teaching Grants	£14m	£14m	-
Total Exchequer cost	**£697m**	**£390m**	***(£308m)***
Average debt on graduation	**£47,600**	**£46,200**	***(£1,400)***
Average lifetime repayments (M/F)	**£24,400/£10,700**	**£42,000/£26,000**	***£17,600/£15,300***
RAB charge	**74%**	**41%**	***-33pp***
% never repaying full loan	**100%**	**87%**	***-13pp***

Note: All monetary values have been discounted to net present values (NPV) and are presented in constant 2021-22 prices. All monetary values per student have been rounded to the nearest £100, and all totals have been rounded to the nearest £1m.

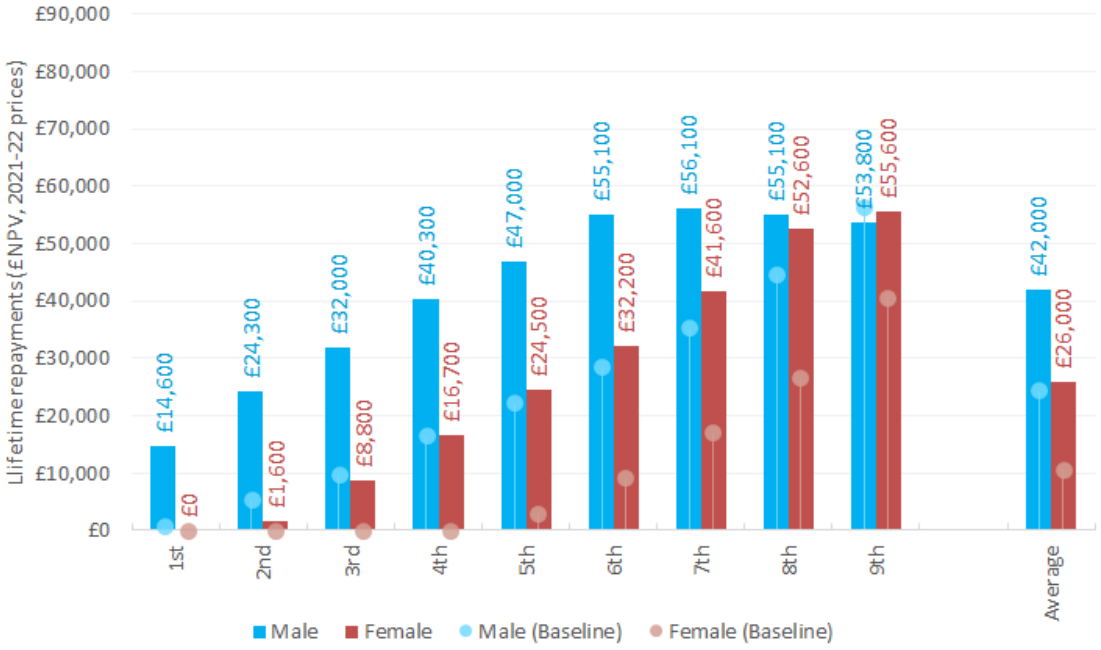
Source: London Economics' analysis

Specifically, under the Augar system, the reduction in the repayment threshold (and slower uprating) and the extension of the repayment period ***increase*** **the costs borne by low- and middle-income graduates**: They typically repay more, for longer. As a result, as presented in Figure 7, **under the Augar system, almost all nursing graduates will experience a significant increase in their lifetime loan repayments**. For men, average repayments are expected to increase by **£17,600** (from **£24,400** to **£42,000**). For women, the increase stands at **£15,300** (from **£10,700** to **£26,000**).

In contrast, the elimination of real interest rates essentially guillotines the repayments made by the highest earning (predominantly male) graduates, as they are able to pay off their loans more quickly. Therefore, as shown in Figure 8 (again for 'average' graduates), **high-earning (predominantly male) graduates benefit significantly** from the Augar proposals. **The result is a direct transfer of costs from the highest earning graduates to low- and middle-income graduates**.

The proposed changes are therefore poorly designed, and deeply regressive. The Augar system will disadvantage an overwhelming proportion of low- to middle-income graduates – including nurses - whilst benefitting those (high-income) graduates that need the least financial subsidy.

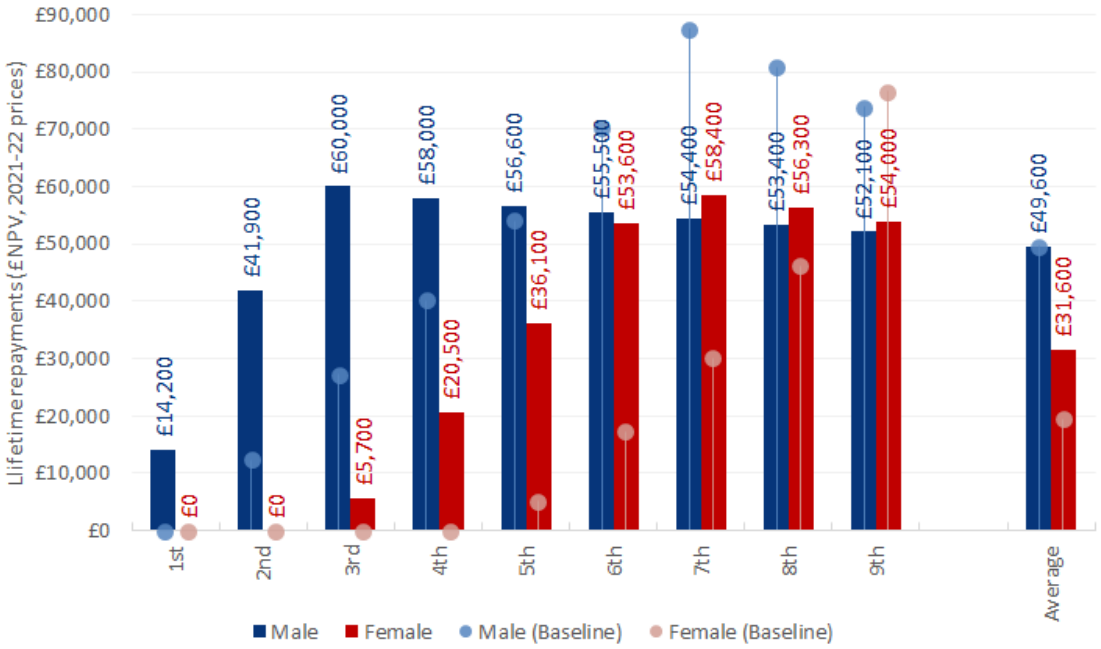
Figure 7 Total loan repayments by full-time first degree students under the Augar system (vs. Baseline), by earnings decile and gender: Nursing graduates



Note: All values have been discounted to net present values, are presented in constant 2021-22 prices, and have been rounded to the nearest £100.

Source: London Economics' analysis

Figure 8 Total loan repayments by full-time first degree students under the Augar system (vs. Baseline), by earnings decile and gender: 'Average' graduates



Note: All values have been discounted to net present values, are presented in constant 2021-22 prices, and have been rounded to the nearest £100.

Source: London Economics' analysis

A2.3 Summary

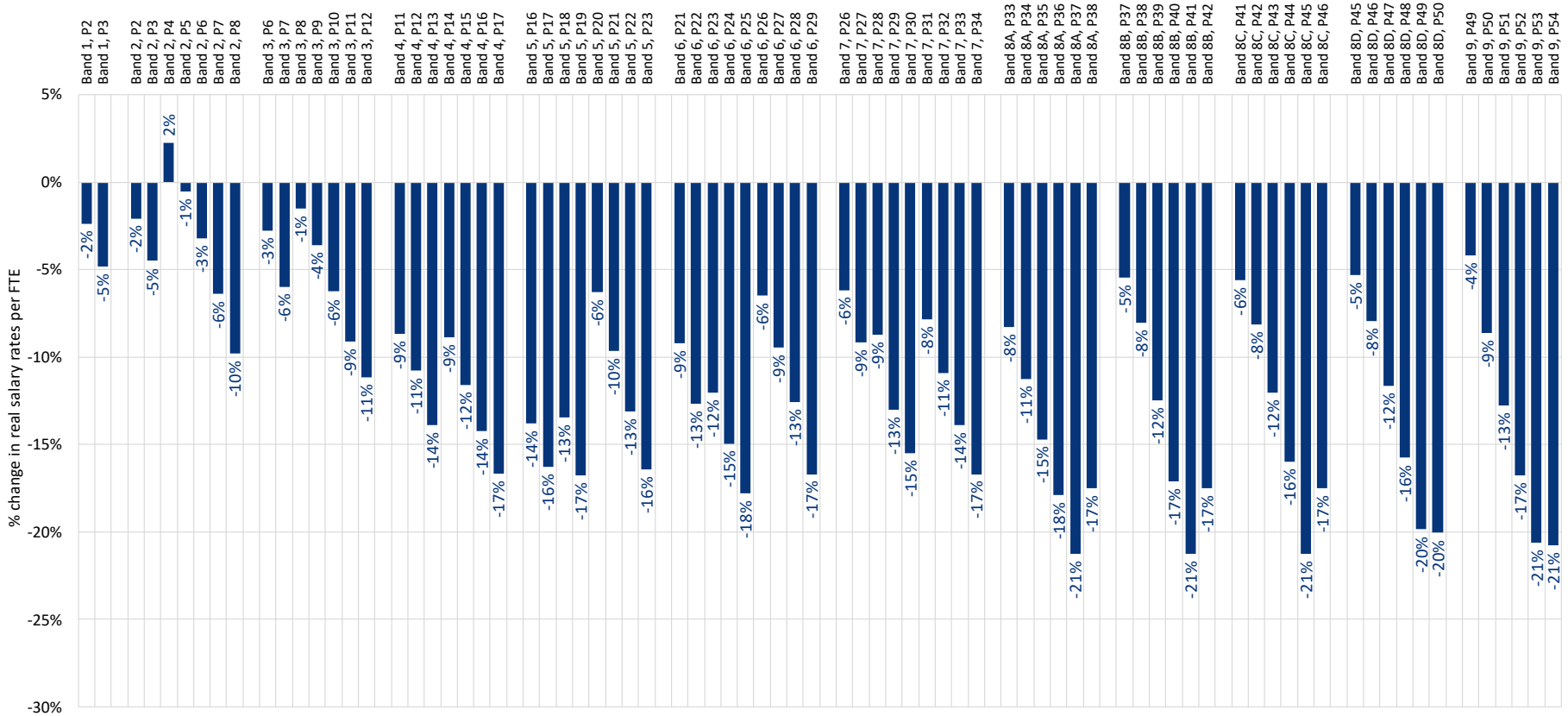
High-earning (predominantly male) graduates are expected to benefit significantly from the Augar proposals; however, the proposals are deeply regressive. As nursing is a relatively poorly paid profession, the combination of the reduction in the repayment threshold to £25,000, the 'stealth tax', and the extension of the repayment period to 40 years will result in a significant increase in the cost of graduate loan repayments for the majority of future cohorts of nursing students. Therefore, **the government's response to the Augar Review will have a significant adverse impact on nursing graduates' disposable income over their entire working lives**.

Annex 3 Supplementary information

A3.1 Erosion of real nurse pay in Scotland since 2010-11

Figure 9 provides the same results as the analysis for England presented in Figure 1 (in Section 2.1) but using corresponding data on AfC salaries for Scotland.

Figure 9 Change in real salary rates per FTE staff on the AfC framework in Scotland between 2010-11 and 2022-23 (compared to RPI), by AfC spine point

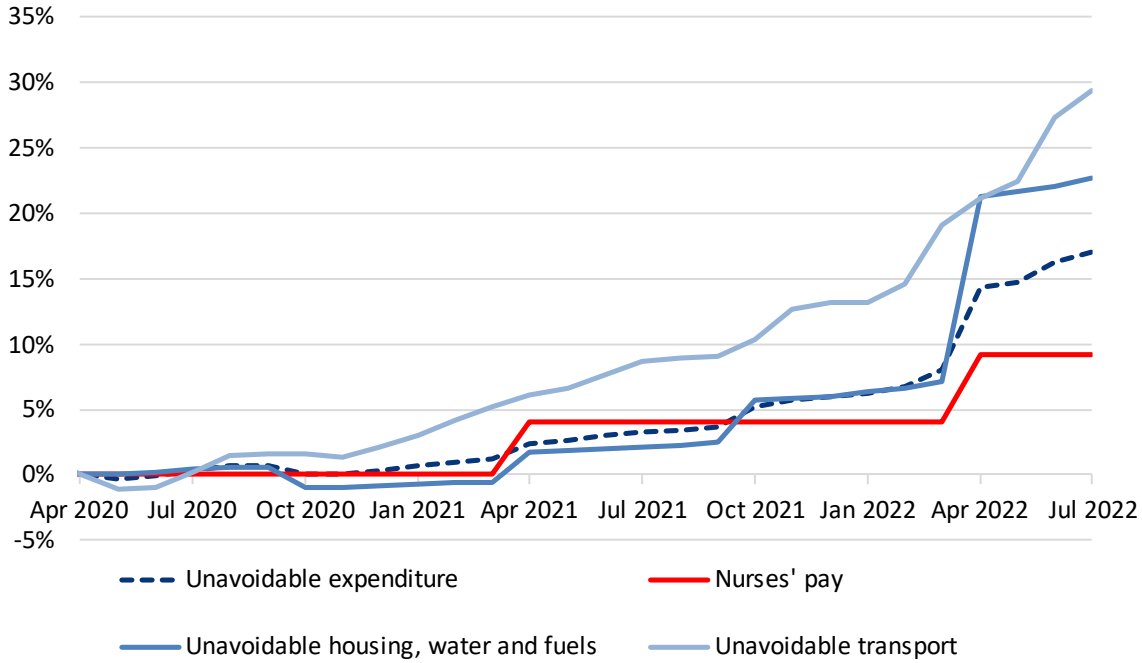


Note: Real salaries per FTE staff were calculated by adjusting the corresponding nominal pay rates for changes in the Retail Price Index since 2010-11.
For consistency, the AfC bands and spine points are based on the more detailed AfC salary structure that was in place up until 2017-18, which included different salary levels for each individual spine point. From 2018-19 onwards, the structure was simplified/flattened over time to include fewer incremental changes across spine points, so that multiple spine points within a given band are subject to the same salary (e.g. in 2022-23, within Band 5, spine points 20-23 are all associated with the same salary rate).
The figure presents changes in the pay rates for each AfC spine point over time, but does not capture the extent to which staff progress to higher spine points over time.
The figure also does not account for overtime, payments for unsociable hours, or high-cost area supplements
UK-wide salary rates are used for 2010-11, while 2022-23 data is based on the pay offer letter published by the Scottish Government on 15th June 2022 (Scottish Government, 2022).
Source: London Economics' analysis based on NHS Employers data, Scottish Government pay offer letter and ONS Retail Price Index data.[55]

[55] See Office for National Statistics (2022a).

A3.2 Impact of pay erosion on the living expenses of nurses in Scotland

Figure 10 Unavoidable UK CPI inflation compared to salary growth of Band 5, Point 23 nurses in Scotland, April 2020 to July 2022



Note: Unavoidable housing, water and fuels and unavoidable transport contain the components of those CPI categories that are considered 'unavoidable'.

Source: London Economics' analysis NHS Employers data, Scottish Government pay offer letter, Scottish Government Agenda for Change pay circulars and Office for National Statistics data.

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