Opportunity unlocked

How UK medicine spend policy can free the life sciences sector to drive growth

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About this report

This report has been researched and written by WPI Economics – a specialist economics, data insights and policy consulting – and was commissioned by the ABPI.

The analysis was informed by ABPI survey data from UK branded pharmaceutical companies within and outside of the ABPI membership.

Contents

Key messages

A cornerstone of UK health policy over the past decade has been increasingly undermining the UK's international competitiveness in life sciences and lowering future levels of research and development (R&D), growth, tax revenue and employment, jeopardising patient access to medicines.

Crucially, while this report highlights the negative impacts of this policy, it also presents evidence that these negative impacts can be reversed, unlocking a substantial economic and health opportunity.

The issue centres on one of several mechanisms used by the government to control the cost of branded medicine purchases. The government caps total sales to the NHS through the voluntary scheme for branded medicines pricing, access, and growth (VPAG). If spending exceeds the cap, the VPAG imposes a mandatory levy on pharmaceutical companies, so that spending above the cap for newer, more innovative medicines is repaid to the government.

In 2024, medicines usage grew beyond expectations, meaning that companies must pay an effective rate of 23.5 per cent on their revenues for newer, more innovative, medicines in 2025 (a 22.9 per cent payment rate + 0.6 per cent for the pre-agreed investment programme). This rate, 7.6 percentage points higher than the government's forecast, was communicated to companies in late December to take effect from January 2025.

This coincides with a period where the NHS received additional funding and increased its activity, with use of newer medicines significantly above what either the life sciences sector or the Department of Health and Social Care (DHSC) anticipated when the VPAG was agreed. The UK is an outlier in maintaining a hard cap on the medicines market, with other countries sharing risk between government and industry. This has led to much higher levies in the UK than in similar countries – France's rate is 5.7 per cent, Italy's is 6.8 per cent, Germany's is 7 per cent, and Spain's is 7.5 per cent.[1]

The government has recognised that this cost-control mechanism is having unintended consequences – creating an obstacle to the UK realising life sciences ambitions and creating an opportunity cost for the UK economy through lost investment.

There is a growing evidence base on the UK's declining global R&D position, with a number of widely reported cases of investments in R&D and manufacturing going to other countries. For instance, the UK's share of global R&D declined between 2022 and 2023 from 4.1 per cent to 3.7 per cent.[2] This is especially salient at a time when competition for global investment has escalated, and pharmaceutical companies are stepping up their investments in the US – J&J has announced $55bn worth of investments, Roche $50bn, Gilead $32bn, Lilly $27bn, and Novartis $23bn.

The government has therefore brought forward to June a review of the VPAG payment rate, providing a real opportunity to fix one of the most urgent issues undermining the UK's commercial environment and driving new medicines launches and increased investment.

To understand the potential upsides to fixing these rates, the ABPI surveyed its members on how their plans for new medicines launches, new R&D, and headcount figures have changed since the announcement of the rates, and how they would change in a range of potential future scenarios.

All these metrics are important in their own right – new medicines launches directly benefit patients, and indicate competitiveness for future clinical trials placements – which provides revenue directly to the NHS; R&D investment offers a range of benefits, including large economic spillovers; investment is also linked to headcount – the sector is a key source of high-skill and high GVA employment, 60% of which is outside London and the South East and West of the country.[3] These are all strong proxies for the way pharmaceutical companies are prioritising the UK, and in

some cases, the acuity of their immediate response to increased levies. Key survey findings from some of the UK's most prominent life sciences companies were:

- one in five companies (19 per cent) anticipate a reduction in R&D investment as a result of the 2025 VPAG payment rate
- in 2022, 30 per cent of respondents stated that the UK was in the top three countries globally to launch medicines; in 2025, only 13 per cent stated that this was the case

Despite the expectation that rapidly rising payment rates would be addressed through the VPAG negotiations before 2024, the survey sample of 33 companies found that the 2023 payment rate of 26.5 per cent (the highest in UK history) contributed to:

- 15 new active substances and 38 new indications not being launched in the NHS in the UK since the start of 2023
- 27 medicines, including new indications, made available only on the private market, further risking the creation of a two-tier health system

But it is not just the current voluntary scheme that is having an impact on life sciences activity. There is evidence to suggest that the previous scheme's high payment rates also had an impact. Moreover, this impact would be amplified if high payment rates were to continue into the next voluntary scheme.

Even on conservative assumptions, when assessing the impact of a subset of R&D investments in the UK, our analysis suggests that the combined impact of past and present payment rates of above 20% will result in lost pharmaceuticals R&D of £7.3bn across 2024–2033.

But the survey responses suggest that there is an opportunity to recover lost R&D. If payment rates are set below 10% from 2026 then £2.2bn of R&D would be recovered by 2028 and a further £4.9bn would be recovered by 2033.

These are again conservative assumptions, and the R&D opportunity from below 10% payment rates could be as high as £3.4bn recovered by 2028 and a further £7.5bn recovered by 2033, a total of £10.9bn over the next 8 years.

The DHSC agrees with the principle that higher payment rates can lead to a loss of spillover economic effects given lower R&D investment – which means lower economic growth in the future, alongside lower tax revenues, lower employment and worse patient outcomes.

Turned on its head, the current problems in the UK commercial environment for life sciences represents an opportunity for government to deliver its ambitions to boost economic growth by encouraging R&D investment, add thousands of high-value jobs, and ultimately increase tax revenue. The opportunity could be even greater when factoring in the full range of investments that life sciences brings to the UK beyond R&D.

Key numbers

Estimating the previous R&D impact of previously high payment rates, the R&D impact of current high payment rates and the R&D impact of continuing high payment rates in the future (the period 2024–33) for the whole pharmaceutical sector means that:

The R&D opportunity from reducing the payment rate to <10% could be as high as £3.4bn recovered by 2028 and a further £7.5bn recovered by 2033, a total of £10.9bn over the next 8 years.

Reducing the payment rate to <10% from current levels (20–30%) would boost R&D and deliver a cumulative GDP gain over the next 30 years of around £61bn.

Reducing the payment rate to <10% from 20–30% would boost R&D and deliver a cumulative tax revenue gain over the next 30 years of around £20bn.

The survey finds that there is a clear link between the impact of VPAG payment rates and company launch, investment and footprint decisions.

A single year of a historically high payment rate of more than 20% in 2023 has already contributed to negative impacts:

15 new active substances not launched or had appraisals terminated in the UK market between January 2023 and March 2025.

38 new indications not launched or had appraisals terminated in the UK market between January 2023 and March 2025.

The 2025 payment rate for newer medicines is having a direct negative impact on UK pharmaceutical outcomes:

19% of companies anticipate a reduction in the value of R&D investment as a result of the 2025 payment rate

A headcount reduction in almost half (45%) of companies surveyed

Companies expect the future negative impacts to be even more significant, unless a change to payment rates is made urgently:

Under the scenario of a payment rate of more than 20%, more than a quarter (27%) of companies said that they would expect to decrease their spending on R&D.

Just fewer than a third of respondents stated that planned new medicine launches will be reduced in the period 2025–2028.

15% of companies state that the higher 2025 payment rate will reduce headcount by more than 10% in the 2025–2028 period.

But there is an opportunity from lowering payment rates towards their historic average:

A payment rate of less than 10% would see 23% of companies increase R&D, with no companies reporting that they would decrease R&D.

12.5% higher R&D investment in 2028 vs. 2024 for a <10% payment rate. Whereas under a future >30% payment rate, R&D investment would be **14% lower**.

A continuation of current payment rates would see an 8% reduction in FTE headcount by 2028. But a payment rate of less than 10% suggests an increase in headcount of 6% by 2028.

Introduction

The life sciences sector is vitally important to the UK's economic success.

The government recognises this, identifying life sciences as one of eight 'growth-driving' sectors to receive a bespoke policy deal in its Industrial Strategy.[4] The sector will also benefit from a £540 million Life Sciences Innovative Manufacturing Fund[5] and infrastructure improvements to support the world-leading life sciences cluster around Oxford and Cambridge.[6] Moreover, plans for a £600 million investment to establish a national health data research service by late 2026 have been set out.[7]

These are all welcome initiatives, and in June the government plans to publish its full Life Science Sector Plan, alongside the NHS 10 Year Plan.

Yet this report highlights how the VPAG – a cornerstone of the UK's policy and commercial environment for life sciences – has unintentionally led to harmful economic impacts. This is a situation that is likely to get worse if the policy is not reversed.

Our research shows that reversing the downward trend in the UK commercial environment has the potential to unlock billions more in R&D investment by 2028, generating billions more in GDP and tax revenue over the next 30 years.

Alongside economic growth, restoring this policy to internationally competitive levels will yield greater R&D investment, improved patient outcomes and increased high-skill employment.

The policy context

The policy regime that governs the sale of branded medicines sold to the NHS is extremely complex,[8] but a simplified version of the VPAG price mechanism and its history gives a sense of its limitations and unintended consequences:

- **The VPAG is one of a number of controls in place to restrict the growth of branded medicines costs to the NHS.** The VPAG is the most recent of the 'voluntary schemes' between the pharmaceutical industry and government, which have existed since the 1950s. Companies not part of the voluntary scheme must be part of a 'Statutory Scheme' that enforces similar terms.
- **Both schemes have set a hard cap on the growth in cost of branded medicine sales to the NHS.** Until 2024, the voluntary scheme cap on growth has been fixed between 1-2 per cent over the past decade.
- **The voluntary scheme has three objectives:** first, to promote better patient outcomes and a healthier population; second, to support UK economic growth; third, to contribute to a financially sustainable NHS.[9]
- **The value of branded sales above the cap are subject to a 'payment rate' that sees companies pay back a percentage of sales value to the government.** Recent higher growth in medicines sales to the NHS has seen the payment rate increase from 5.1 per cent in 2021 to 23.5 per cent for newer medicines in 2025.

Higher payment rates have increased industry payments to government from around £590 million in 2021 to £3.5 billion in 2025. This has been compared to an additional tax by some pharmaceutical companies, although it is applied to sales rather than their profits.[10]

As a result of voluntary scheme design, over the past 10 years there has been an 11 per cent real-terms decline in NHS branded medicines spending, even while the NHS budget has grown by 33 per cent in real terms.[11] The same decade saw declines in the number of clinical trials being hosted in the UK,[12] in the UK's share of pharmaceutical R&D,[13] and on numerous important medicines access and uptake indicators.[14]

It has now been recognised by government at the highest levels that the VPAG is an obstacle to making progress on medicines policy and to supporting growth in life sciences, and that the system risks generating poorer outcomes for patients and health inequalities. A commitment to bring forward the VPAG review point to conclude by June has been implemented.[15]

The evidence in this report will inform the government's case for change by demonstrating the impact of higher payment rates on companies and quantifying the size of the potential benefit of reforming the VPAG.

Why this matters

Addressing this issue will support the government in its 'number one mission' to support growth. The government states that it wants to:[16]

- deliver growth by working in partnership with business
- drive innovation, investment and the adoption of technology to seize the opportunities of a future economy

The life sciences sector can support both ambitions. However, the UK commercial environment for life sciences, for many reasons, has become much less attractive in recent years. When assessing potential investments, from relatively mobile ventures like clinical trials, to long-term ones like manufacturing facilities, companies consider a range of locations and weigh several criteria. A country's domestic market is a critical element of this – without the right standard of care, clinical trials cannot be held. Companies are also ethically obligated to place clinical trials in countries where they have a strong expectation of being able to launch their medicines. Elements of the pharmaceuticals ecosystem are deeply interlinked, and companies will prioritise manufacturing investments in countries where they have the best hopes of coming to market quickly and having uptake scaled up rapidly.

VPAG impacts these interests substantially, by decreasing the net price of products below headline prices and below the levels assessed as being cost effective by NICE. Companies often struggle to agree prices at these levels – fixed for the last twenty years – and VPAG has become such an outlier internationally that it is now perceived by companies as a global contagion risk that urgently needs addressing.

This was recently raised at the Business and Trade Select's Committee into the failed £450 million investment in a planned manufacturing facility in Speke. Tom Keith-Roach, President of AstraZeneca UK, cited the VPAG 'clawback tax' as one factor behind the decision, and among the most urgent and critical elements of the commercial environment that is in need of reform.[17]

This report shows that the VPAG has already had a broader negative impact, including on R&D, medicine availability, and staff headcount across many other companies in the sector, including for some of the largest companies operating in the UK.

Yet there is cause for optimism. While lost investment reduces GDP terms, this report also shows that reversing the increases in the VPAG payment rate will mean higher employment and output in the future, through attracting companies' pipeline investments.

The rest of this report

The analysis in this report is set out in the following chapters:

- **Results of a survey of branded pharmaceutical companies, conducted by the ABPI**, which asked questions about VPAG's impact on medicine launches and life sciences investment.

- **Presentation of quantitative analysis.** Looking at how lost R&D due to higher payment rates has had a deleterious impact on life sciences growth, employment and tax revenues.
- **A conclusion about what the results of the analysis means for the future of VPAG.**

Life sciences investment and VPAG payment rates

The following research findings are taken from a survey of 33 pharmaceuticals companies. These companies are all engaged in developing, testing and launching branded medicines that are sold to the NHS (and therefore are affected by the terms and application of the VPAG).

The sample includes some of the largest life sciences companies in the country (and in the world). These companies:

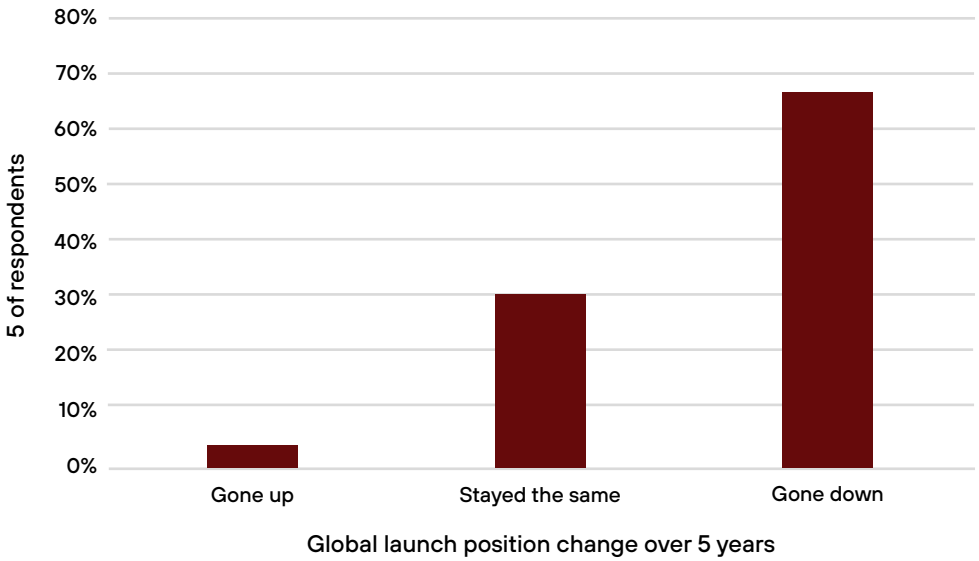
- **collectively undertook £6.1 billion of R&D in 2024**, an estimated 63 per cent of all life sciences R&D activity in the UK [18]
- **collectively employed 31,000 FTEs in 2024**, a significant share of the estimated 150,000 people employed in the pharmaceuticals sector in the UK [19]

Taken together, the survey results provide insight into the relationship between VPAG payment rates and industry decision-making around launches, investment in R&D and investment in the life sciences workforce.

The UK has become less attractive to global firms deciding where to locate life sciences activity

Survey respondents were asked how, over the past five years, the UK's global launch position for new medicines had changed for their company (see Chart 1). Two-thirds (67 per cent) stated that the UK's global launch position had gone down and only 3 per cent stated that it had risen. The rest (30 per cent) responded that the UK's global launch position was unchanged.

Chart 1: Responses to the question: "In general, over the past five years, has the UK's global launch position for your company: gone up, gone down, stayed the same"



Source: ABPI survey, N = 33

Companies were also asked what position the UK occupied in global launch sequencing, a repeat of a question asked in 2022. Chart 2 compares the answers. In 2022, 30 per cent of respondents stated that the UK was in the top three countries globally to launch medicines. In 2025, only 13 per cent stated that this was the case – a marked

deterioration. Looked at another way, 10 per cent of respondents in 2022 put the UK at seventh or lower in terms of global launch sequencing of countries to launch new medicines in comparison to 27 per cent in 2025.

Another demonstration of this problem within the survey is that a single year of a historically high payment rate of more than 20 per cent in 2023 has already contributed to negative impacts for UK life sciences activity. Companies reported that 15 new active substances were not launched or had appraisals terminated in the UK market between January 2023 and March 2025. In addition, 38 new indications were not launched or had appraisals terminated in the UK market between January 2023 and March 2025.[20]

Box 1: Selected comments on the UK's international competitiveness

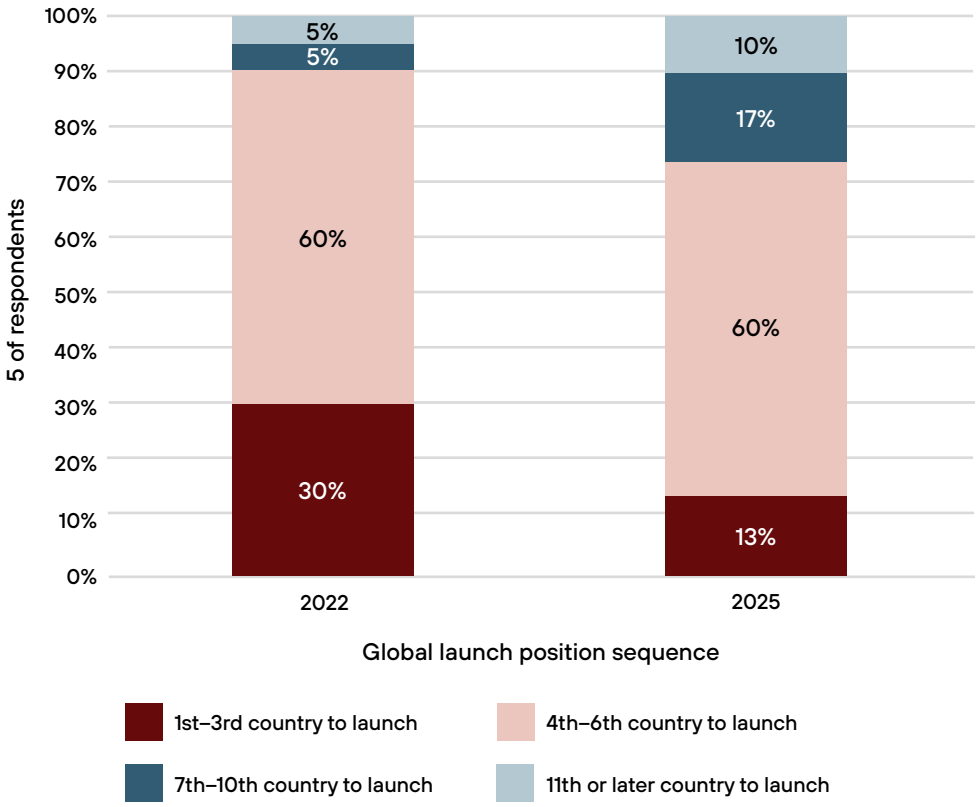
"The reason [for the UK's decline] is multi-faceted… The overall terms of the proposed Statutory Scheme significantly erode the value of individual medicines and indications in the UK, making more of them commercially unviable than if an internationally competitive (or pre-2021) rebate rate was in place. Decisions to launch are based on the expected commercial success of a medicine, within the known discounts and levies likely to be applied throughout its life cycle…The terms of the aggregate rebate rates of the proposed Statutory Scheme will make it harder to find the flexibilities required throughout negotiation processes and thus reduce the probability of success."

"UK global standing has declined due to several interrelated factors. A significant issue is the escalating rebate rates under the VPAG. These rates have risen sharply, with companies now required to rebate a substantial portion of revenues. Despite expectations the VPAG would return rates to more internationally competitive rates, this has not borne out in reality. Such high rates render the UK less attractive for investment, leading to delayed launches or no launches. Additionally, the UK's lower investment in medicines compared to its peers also diminishes the UK's appeal as a priority destination for new launches or investment. Wider barriers also persist in terms of access environment (with a willingness to pay threshold that has not been updated in line with inflation) or slow and low uptake of new medicines. Collectively, these factors have eroded the UK's competitiveness on a global footing."

"We have seen a general worsening of position in launch sequence…UK market not seen as a priority (based on falling rank in global sales), standalone MHRA licence following BREXIT (FDA/EMA are prioritised), and more recently VPAS (even though NAS are exempt, future VPAG payments are still a topic for discussion in launch planning)."

Source: ABPI Survey

Chart 2: Responses to the question: "In general, where does the UK currently stand in your company's global launch sequence?"



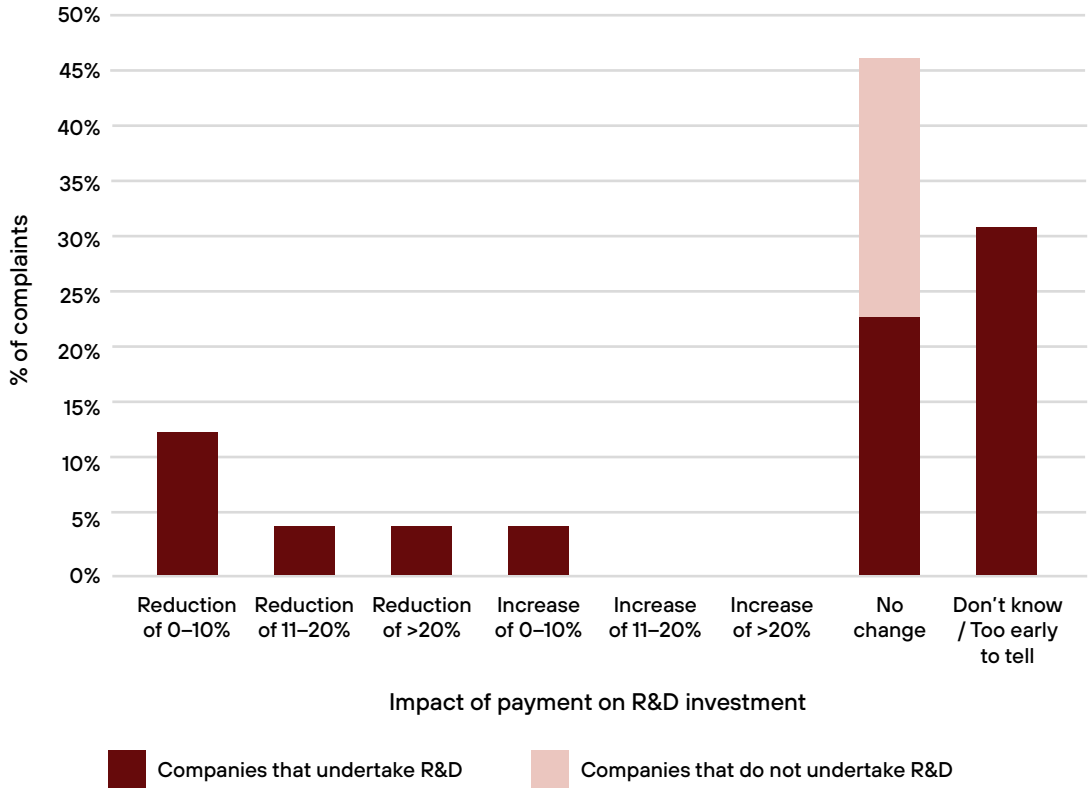
Source: ABPI survey, N = 33

The 2025 VPAG payment rate will reduce R&D investment, medicine launches and headcount

One in five companies (19 per cent) anticipate a reduction in the amount of R&D investment as a result of the 2025 VPAG payment rate. A small proportion stated that R&D investment would fall by more than 10 per cent (see Chart 5). Almost half of companies reported no change – however, of these companies only six companies (59 per cent) currently perform R&D. This may change in the future, given the long timeframes that R&D spending can be subject to, and almost a third (31 per cent) said that it was too soon to tell what the impact of rates would be.

Some comments pointed to the cumulative effect of high payment rates under the previous voluntary scheme reducing investment (see Box 2). Of note are the comments that highlight how some R&D investment had been pre-planned and based upon the first year of the current VPAG agreement, when the payment rate for newer medicines was closer to 15 per cent.

Chart 3: The impact of the 2025 payment rate on R&D investment (£)



Source: ABPI survey, N = 27

Box 2: Selected comments on the 2025 VPAG payment rate on R&D investment

"...since the recent high rates of 2022 and 2023, our global R&D leaders have made it clear to the UK government that a rebate rate at this uncompetitive level will have an impact on future investment in clinical research. If we cannot commercialise the treatments in the UK, then we cannot locate the relevant clinical trials here and furthermore, if the standard of care drops to a certain level, then we cannot locate comparator studies."

"...extra investment was already committed to before the 2025 VPAG rates were announced and was a decision based, in part, on the acceptable VPAG settlement when the scheme was agreed."

"R&D decisions for 2025 were taken before the VPAG rate was known. Should rates remain high then it is likely that it will start to negatively impact our R&D investments in the UK. This will become more likely still if high rates mean that the UK standard of care begins to deviate from international norms (e.g. through fewer launches or unsuccessful reimbursement applications)."

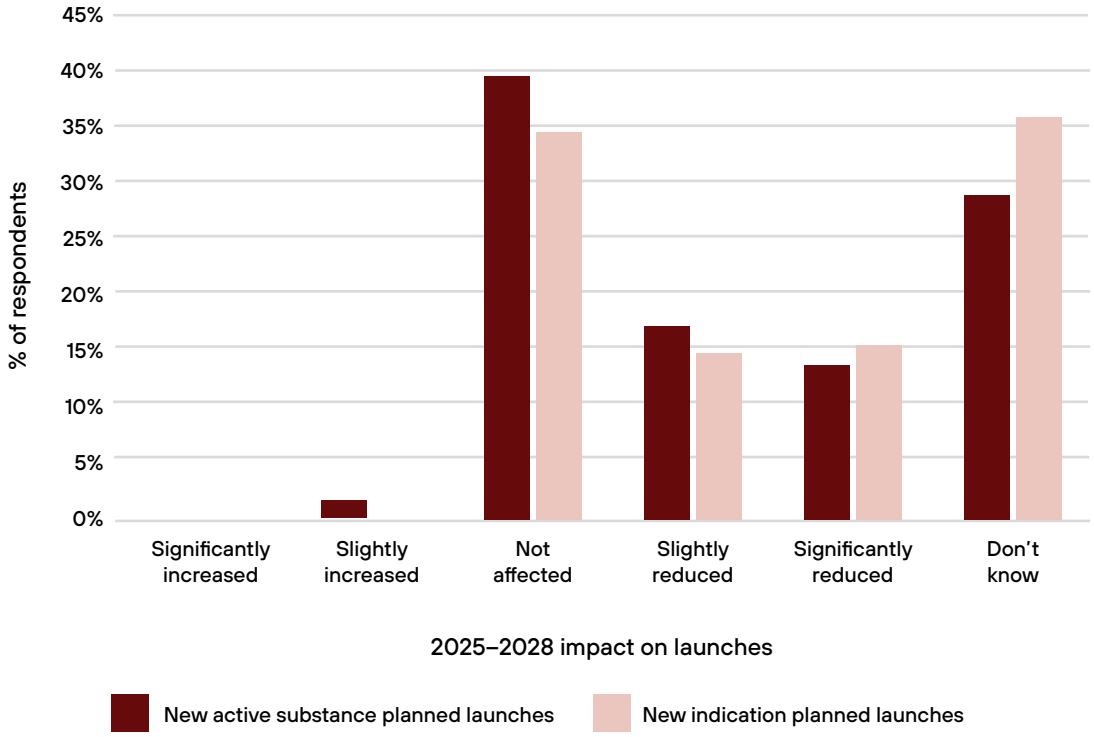
Source: ABPI survey

Across the whole sample between 2025 and 2028, companies were expecting to launch, or evaluate for launch, 167 new active substances (NAS) and 318 new indications in the UK. However, companies reported the 2025 payment rate on newer medicines of 23.5 per cent was negatively affecting these planned launches in the period 2025–2028.

The most common answer was that it is too early tell by how much higher VPAG rates will affect launches. However, between a quarter and a third of respondents stated that planned launches have been reduced – either slightly or significantly – in the period 2025-2028 (see Chart 3).

Commentary on how high VPAG rates have affected launches can be found in Box 1. A theme running through the comments is that the VPAG is not the only factor affecting decisions to launch medicines, but it is a significant consideration in company decision making.

Chart 4: The average impact of the 2025 payment rate on newer medicines on planned launches of new active substances and new indications, 2025–2028



Source: ABPI survey, N = 32

Box 3: Selected comments on the impact of the 2025 VPAG payment rate on planned launches

"Over the course of 2025 to 2028, we have a number of advanced therapy medicinal product (ATMP) therapies due to launch. High VPAG rates for ATMPs with high development costs, in addition to the challenge of NICE cost-effectiveness threshold and a higher discount rate on medicines versus other sectors means launch is unlikely to be commercially viable."

"Decisions have already been made not to launch a medicine in multiple indications that would have come to market in 2025, 2026 and 2027 due to low net price potential and unsustainably high VPAG rebate that will make the product unviable for launch."

"The final decision will be based on outcomes of health technology assessments and then the impact the VPAG has on that net price. This will determine whether there is a justifiable business case to launch. The disconnect between an incredibly tough health economic process and the highest rates of the VPAG are felt like a double hit."

"The current and potential future rates are being considered in the business case of new launches for the duration of the current scheme. Therefore, there may be some impact."

"A combination of the VPAG rate and NICE methods have compromised multiple launches in the coming years."

"[Launches are] continually under evaluation on an asset-by-asset basis with probability of success reduced with higher rates."

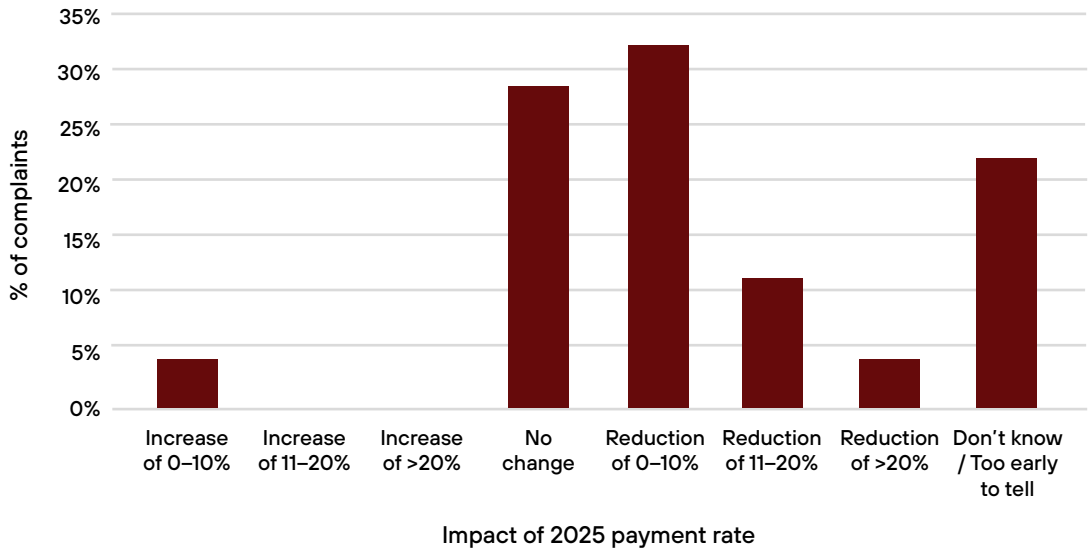
Source: ABPI survey

In addition to an overall reduction in launches, the 2025 VPAG payment rate has caused a headcount reduction in almost half of companies surveyed. Across the sample, there were a total of 31,000 UK FTEs in 2024. This follows two years of declining headcount related to increased rates under the voluntary schemes: companies responding to the survey had decreased their headcount by 490 FTEs from 2023 to 2024.

One third of respondents stated that the higher 2025 VPAG payment rate on newer medicines had reduced headcount by between 0 and 10 per cent. One in 10 stated that there had been a reduction of between 11 and 20 per cent. In total, just less than half (45 per cent) indicated that the 2025 VPAG rate had caused future headcount reduction. Other companies indicated no change, did not know the impact or thought it was too early to tell (see Chart 4).

Several other comments highlighted that high VPAG rates were contributing factors to headcount reduction, rather than being the sole reason. But also of note are the two comments that said headcount reductions reflect the cumulative impact of higher rates under the previous VPAG scheme (see Box 4).

Chart 5: The impact of the 2025 payment rate on FTE headcount



Source: ABPI survey, N = 29

Box 4: Selected comments on the 2025 VPAG payment rate on headcount

"[Our company] has recently experienced an FTE headcount reduction…While this cannot be solely attributed to the 2025 'newer' payment rate, this headcount reduction reflects the cumulative effect of the previous (2023 VPAS) and current iterations of the voluntary scheme, which have had – and continue to have - a detrimental impact on our UK operations."

"There hasn't yet been a direct impact from the newer medicines rate, but for launch products the VPAG is contributing to the decision to use existing commercial teams to support the launch rather than recruit a specific dedicated team for the new medicine."

"For the UK, it has led to less investment in personnel, and that investment being placed in Germany instead."

Source: ABPI survey

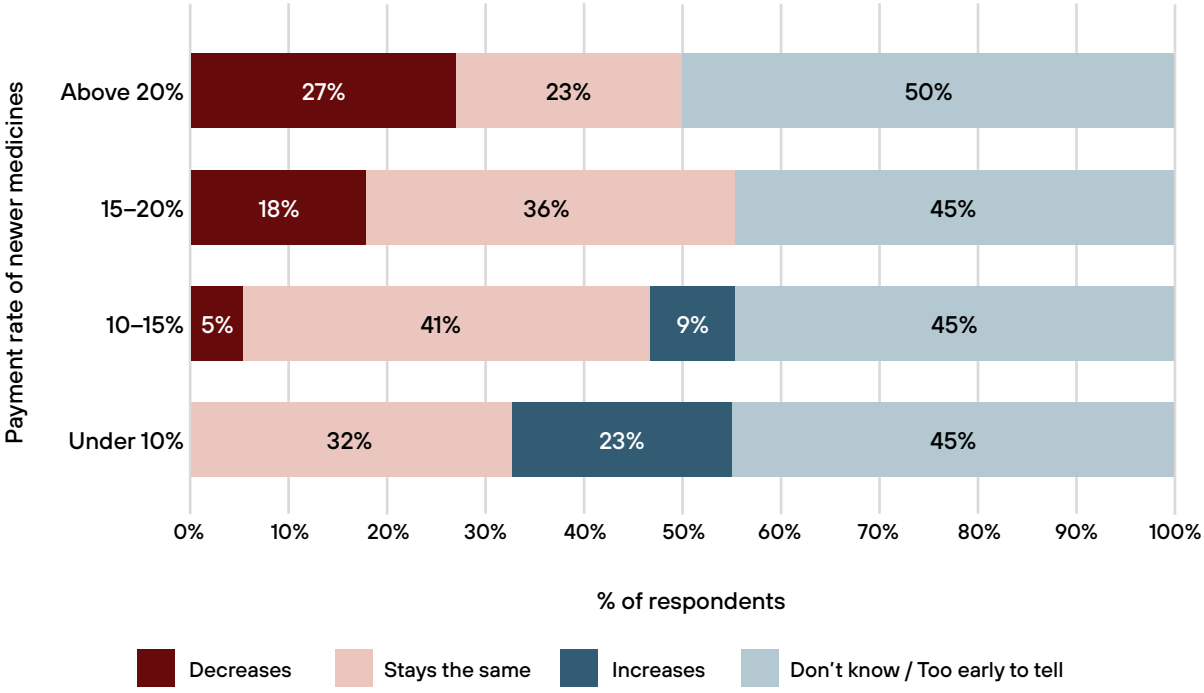
The negative impacts of the 2025 VPAG payment rate could be reversed

The survey asked how future launches, headcount and R&D investment would be affected under different VPAG payment rates from 2026. The results showed that:

- a payment rate of more than 15 per cent reduces new medicine launches, headcount and R&D
- a payment rate of 10-15 per cent keeps new medicine launches where they are today, and keeps headcount and R&D investment broadly unchanged, but does not improve the UK's current position
- a payment rate of less than 10 per cent increases new medicine launches and increases headcount and R&D from current levels

Looking specifically at R&D activity (Chart 6), almost a quarter of companies (23 per cent) indicated that a decrease in rates to less than 10 per cent would lead to an increase in R&D. In scenarios of more than a 20 per cent rate, 27 per cent of companies said that they would expect to decrease their spending on R&D.

Chart 6: Change in R&D activity across different payment rate scenarios



Source: ABPI survey, N = 23

The anticipated change in future launch activity across different payment rate scenarios follows a very similar pattern for NAS launches:

- at payment rates of less than 10 per cent, almost half (48 per cent) of companies anticipated an increase in launches
- at payment rates of 10–15 per cent, almost a quarter (23 per cent) anticipated an increase in launches
- at payment rates of 15–20 per cent only 3 per cent reported an increase in launches, with 30 per cent anticipating reductions
- at payment rates of more than 20 per cent no respondents reported increased launch patterns, with more respondents reporting decreases as payment rates increase (with 63 per cent reporting decreases at payment rates of more than 30 per cent)

A very similar pattern was seen for new indication launches.

Several comments related to launches highlighted how higher VPAG payment rates affect the attractiveness of the UK in comparison to other markets (see Box 4).

Moreover, the pattern for headcount is again very similar to that for launches and R&D investment. Higher future payment rates lead to the expectation of greater headcount reductions, as we have already noted companies have reported. This trend is reversable, however, with 17 per cent of companies and 44 per cent of companies anticipating a headcount increase in the cases of rates being set at 10–15 per cent and less than 10 per cent, respectively.

See Annex I for three charts showing the specific data for impacts on launches and headcount at different payment rates.

Box 5: Selected comments on launch activity and future VPAG payment rates

Comments on **new active substances**:

"It's difficult to know at this stage, but at the higher end of those rates, the UK would have significant commercial pressure and the company may push it to the back of the queue for launch, with discussion of whether to launch at all if we're already under pressure on price."

"NAS exemption means that the VPAG rate does not usually come into consideration for launching new products. That being said, if the payment rate will remain more than 20 per cent for the foreseeable future, then our thinking may have to change. We may also find it more difficult to get through NICE successfully if we do start having to consider future VPAG rates, so even though we launch we may not be able to secure reimbursement."

"The higher the VPAG rebate, the lower the net price of our medicines in the UK relative to other markets and the less viable it becomes to pursue launch in the UK."

Comments on **new indications**:

"There is a possibility for greater changes in the number of indication launches based on the payment rate (although worth noting it is likely to be part of a wider discussion about the UK environment as opposed to being sole factor) – a higher rate could delay/withdraw launches from the UK (e.g. if there is a rarer indication, a higher payment rate could make this commercially unviable) but, conversely, a much lower rate could see the UK move up the launch sequence."

"New indications already at risk are at risk due to low profitability of low net price combined with high VPAG rate. An internationally competitive rate of 10 per cent or less would be needed to move the needle on the complex launches such as ATMPs and combination therapies."

Source: ABPI survey

The economic opportunity of internationally competitive VPAG payment rates

The previous chapter sets out companies' responses to the changes in VPAG headline payment rates, and how this links to the commercial environment for UK life sciences and companies' ability to invest in R&D and staff.

The fact that higher payment rates result in lower R&D is a point of agreement between the life sciences sector and the DHSC. In its impact assessment for the Statutory Scheme, the DHSC accepts the principle that higher payment rates can lead to a loss of spillover economic effects given lower R&D investment. The point of disagreement is the extent to which higher payment rates influence R&D investment decisions. There are some notable omissions in the DHSC analysis of economic impacts of high payment rates (see Annex II).

R&D going elsewhere in the world is a live issue and there is some evidence of the UK's declining global R&D position. For instance, the UK's share of global R&D declined between 2022 and 2023 from 4.1 per cent to 3.7 per cent.[21]

Hence, this chapter quantifies that impact and estimates the potential consequences for future UK R&D, economic growth, tax revenues and employment from higher payment rates. The analysis:

- **estimates the aggregate impact on life sciences UK R&D investment**, calculated for four payment rate scenarios for newer medicines in the period 2025–2028, using survey results projected up to sector-wide levels
- **converts R&D impacts into economic impacts**, using parameters for the rate of return on life sciences R&D investment established in academic literature (see Box 6); it then applies discount rates according to the government's own Green Book methodology
- **assesses the resulting impact on tax revenues and employment** under different payment rate scenarios, and how these compare to potential NHS revenues from higher payment rates
- **sets out further context and analysis for the past, current and future impact of high payment rates on R&D, GDP and tax revenue** looking at different scenarios of impact
- **describes hard to monetise and unmonetisable benefits that cannot be currently quantified in the analysis**

The findings from this process are now described in turn. A methodology in Annex A of the report explains the sources and approach to calculations.

Box 6: Key literature on R&D and price controls

The broader economic benefits created by R&D. Previous work by PWC for the ABPI concludes that existing literature – citing the Office of Health Economics and an article in the BMC medical journal – suggests that £1 invested in private R&D today leads to annual benefits to the economy as a whole equivalent to £0.50 in perpetuity (the assumption used in the analysis within this report). Other literature, which looks at specific types of life sciences research, provides estimates either side of this assumption. The Wellcome Trust (2009) finds that investment in cardiovascular disease research generated £0.30 in GDP gains per £1 spent. The Science and Technology Facilities Council (2010) estimated that spending on an X-ray synchrotron radiation facility would produce £0.67 in additional economic activity for every £1 spent.

Price controls and the link to R&D. A 2020 study following the announcement of stricter price controls on patented medicines in Canada tested the assertion of policymakers that there was no evidence linking pricing, R&D and access to medicines. The study systematically reviewed academic studies published between 1995 and 2020 on medicine pricing in developed countries. It concluded that for every 10 per cent decrease in real pharmaceutical prices, R&D investment decreases by 5–6 per cent. Implementing drug price cuts or freezes lead to a 21 per cent reduction in the probability of FDI taking place. Among the publications cited in the literature review, two studies found an explicit link to stricter price controls with lower domestic investment.

Sources[22]

The R&D opportunity

The previous chapter highlighted that 27 per cent of companies would reduce R&D investment under higher future payment rates (see Chart 6). Moreover, most of the companies reporting no change do not perform significant levels of R&D in the UK. The companies reporting a reduction in R&D investment account for more than half (63 per cent) of the R&D investment undertaken by the companies in the sample.

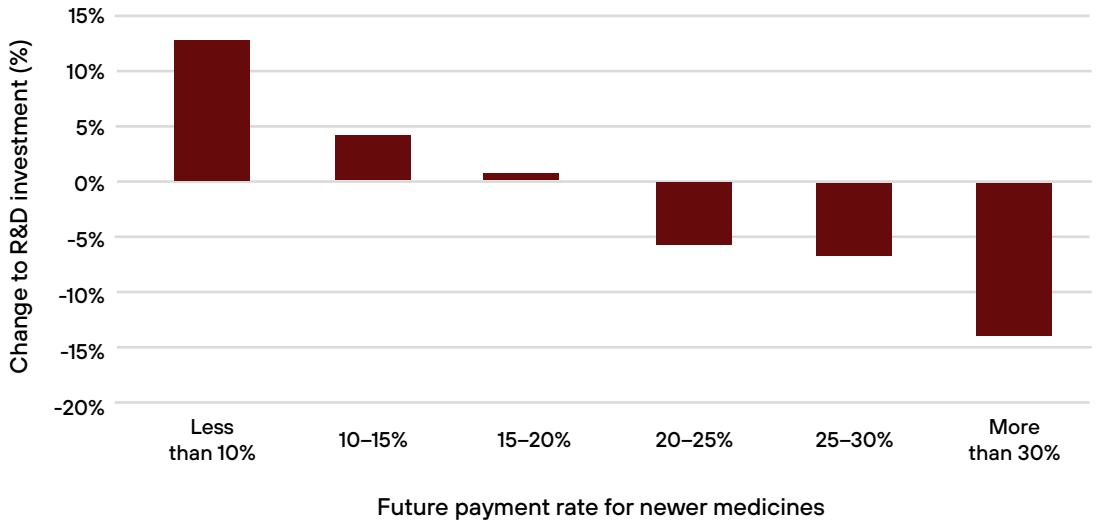
Analysis of only these companies suggests that their total R&D investment:

- would be 12.5 per cent higher in 2028 when compared to 2024 under a less than 10 per cent payment rate from 2026 for newer medicines
- would be 14 per cent lower in 2028 when compared to 2024 under a more than 30 per cent payment rate from 2026 for newer medicines

Chart 7 sets out the impact on R&D investment for these companies across different future payment rates.

Changes of this kind would be highly consequential to the UK's overall R&D figures, as the pharmaceutical sector accounts for 17.4 per cent of total R&D performed by UK businesses.[23]

Chart 7: Change in R&D investment, 2024 v 2028, for companies reporting change in investment levels



Source: ABPI survey, N = 8

What would this mean at an industry level? The latest official figures show that the pharmaceutical industry conducted around £8.7 billion of R&D investment in 2023. Using this figure as a baseline the analysis:

- projected £ industry R&D investment for 2024, based upon year-on-year change between 2022 and 2023 (a total of £8.6bn)
- applied the percentage of £ R&D in the survey sample that was expected to be affected at different payment rates (62.5%) to the projected industry figure, giving a starting point figure for £ R&D investment in 2024 that would be affected by payment rates in the future
- reached a starting point estimate of £5.4bn of R&D investment affected by different payment rates
- projected 2028 £ R&D levels by using survey results of individual companies – the results were weighted according to the level of R&D that the company undertook in 2024, e.g. if they undertook 10% of R&D within the sample, a 10% weight would be applied to their responses on how R&D investment changes according to payment rates

Using these highly conservative assumptions, this analysis suggests that a payment rate of less than 10 per cent from 2026 compared to a payment rate of 20–30 per cent would result in an additional £2.2bn in additional R&D in the period 2026–28.

There is some evidence that this is a conservative estimate, being based on company feedback on changing a single policy in the UK medicines environment, rather than any broader change. A meta-analysis of 10 studies analysing elasticity effects of R&D in relation to revenues across the US and Europe found there was a mean elasticity ratio of 1.5 (meaning that R&D decreases by 50 per cent more than revenues).[24] Some studies have viewed revenue changes through the lens of differential regional pricing for pharmaceuticals, finding that if the UK, France, Germany, Japan, and Italy raised their prices to 75 per cent of the US level, it would result in an additional 11 new medicines annually.[25]

In addition, the analysis in this report only estimates the direct impact of industry R&D reductions. There are numerous knock-on benefits from this R&D. For example, clinical trials are an essential part of R&D to develop new healthcare innovations. ABPI-commissioned analysis demonstrates how this R&D generates revenue for

the NHS, supports NHS jobs, and increases economic output by contributing to improved patient outcomes. Specific findings include:[26]

- industry clinical trials contributed £7.4 billion to GVA to the UK economy in 2022, supporting a total of 65,000 jobs
- industry clinical trials generated £1.2 billion of revenue for the NHS
- £0.9 billion of GVA generated by the contribution of industry clinical trials to improved patient outcomes, with these improvements estimated to prevent 3 million sick days

The GDP and revenue opportunity

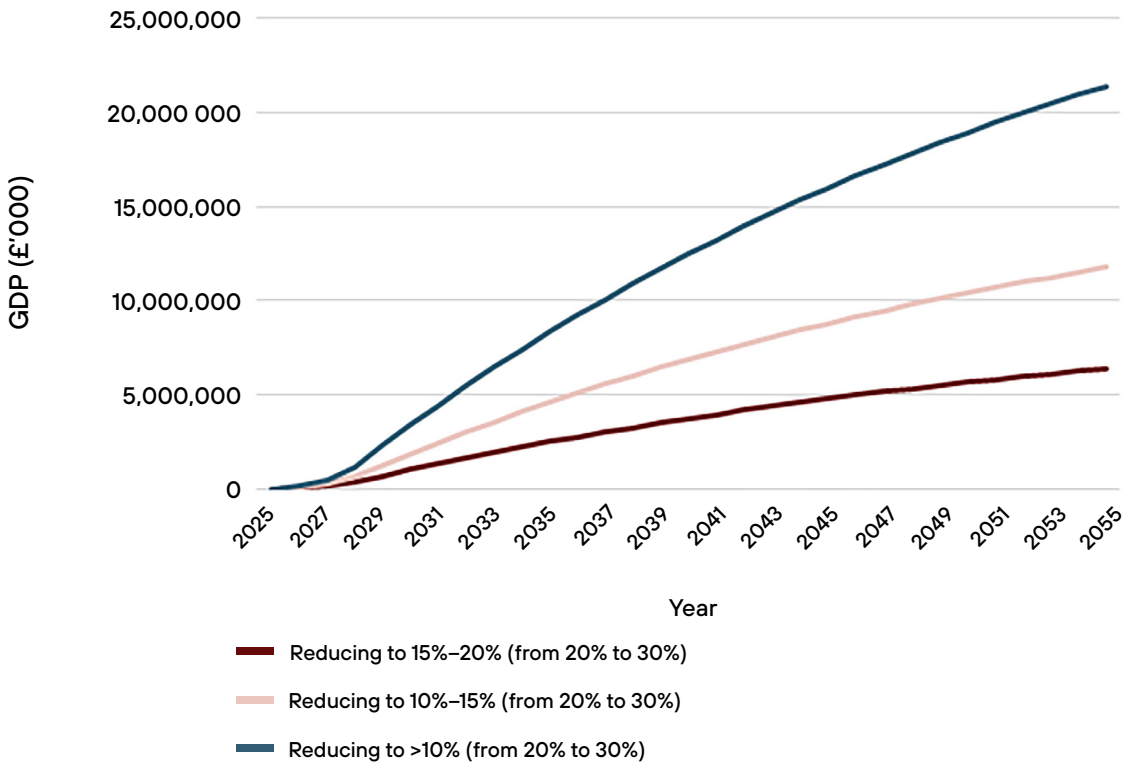
More R&D investment in the UK ultimately means more economic growth. Hence, if higher payment rates reduce R&D investment then it means lower economic growth in the future. To calculate the GDP impact the following steps were taken:

- calculate £ R&D investment across different payment-rate scenarios between 2022 and 2028
- apply an assumption of GDP impact over future years (£0.50 GDP benefits for every £1 invested)
- apply the Green Book discount rate
- to calculate implied revenue implications, use a tax-to-GDP ratio of 33.3 per cent [27]

Chart 8 shows the estimated impact on GDP across different VPAG payment rates.

Reducing the payment rate for newer medicines to less than 10 per cent compared to a payment rate of 20–30 per cent suggests a cumulative GDP gain over the next 30 years of £21.4 billion, £1.1bn of which would be by 2028.

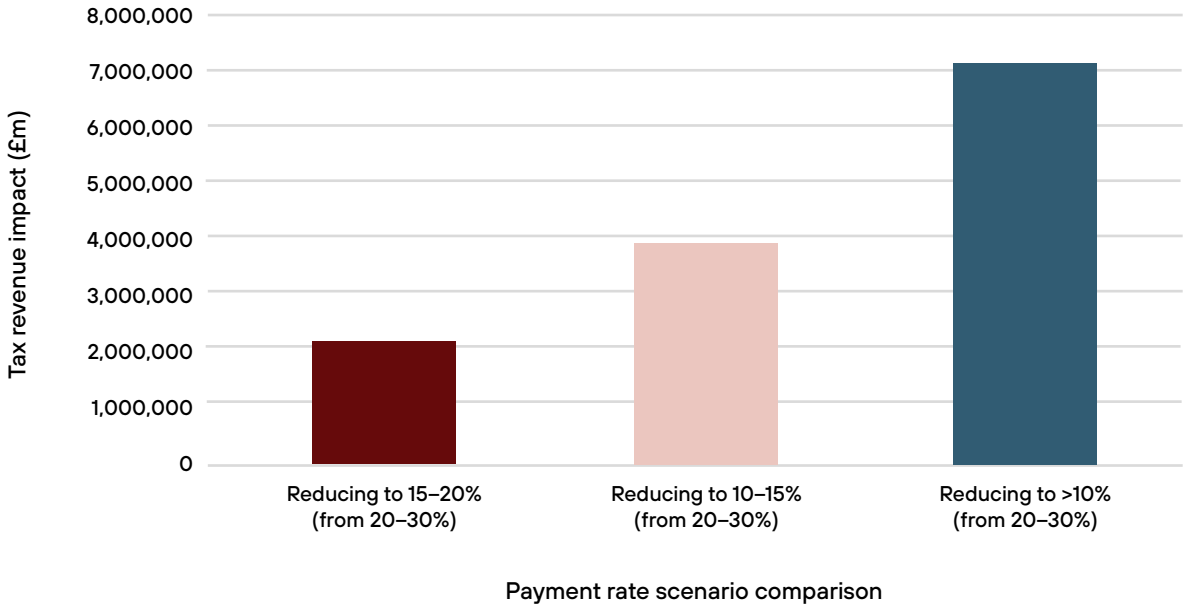
Chart 8: The cumulative GDP gain when comparing different payment rates



Source: WPI Economics analysis

A GDP gain also translates into a tax gain. A payment rate of less than 10 per cent compared to a payment rate of 20–30 per cent suggests a cumulative gain over the next 30 years of around £7 billion, £380m of which would be by 2028. See Chart 9.

Chart 9: The cumulative tax gain when comparing different payment rates



Source: WPI Economics analysis

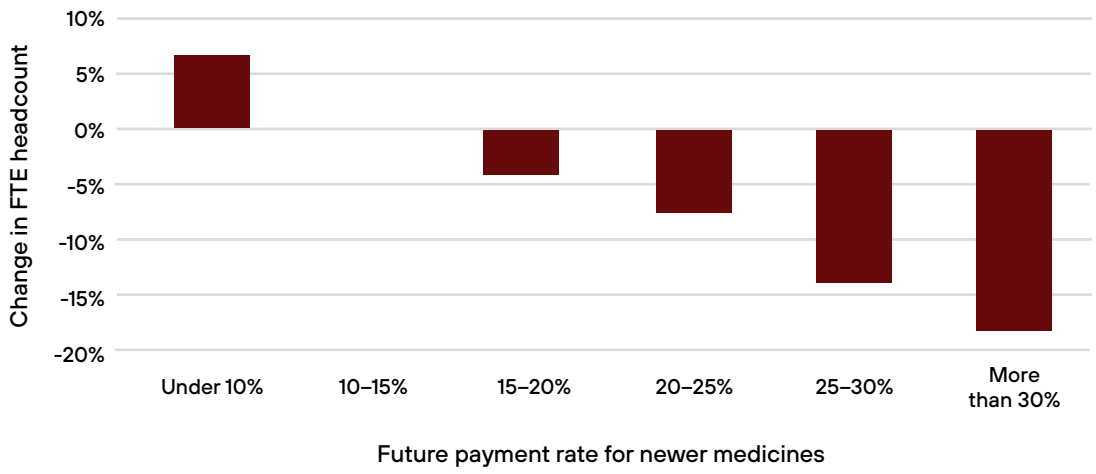
The employment opportunity

Reduced R&D activity and medicine launches ultimately means less employment to undertake the activity. Furthermore, companies are forced to cut costs to offset increasing payment rates.

Chart 10 shows the responses from companies who stated there would be a headcount reduction under higher payment rates. The continuation of payment rates as they currently stand would see an 8 per cent reduction in FTE headcount. However, a payment rate of less than 15 per cent suggests FTE headcount remaining static or increasing. Indeed, a payment rate of less than 10 per cent suggests an increase in headcount of 6 per cent by 2028.

When projecting these survey sample findings up to sector-wide levels, a payment rate of less than 10 per cent compared to a payment rate of 20–30 per cent from 2026 would mean an additional 1,300 pharmaceutical FTE in 2028.

Chart 10: Change in FTE headcount, 2024 vs. 2028, under different payment rate scenarios



Source: ABPI survey, N = 11

These employment impacts have outsized consequences on overall productivity, as jobs in the sector are well paid and high skilled. One company carried out an analysis of the 30 per cent reduction to UK commercial and medical workforce in 2025 in response to the 2025 VPAG rates:[28]

> *"[An employee] in the UK generates approximately £138,000 in GVA: over double the UK average in 2020 [£58,000]. The 30 per cent reduction equated to 75 FTE jobs, and a GVA loss of £103,500,000. Headcount reductions have also directly affected partnerships with the NHS across the UK. In total, more than 30 NHS service redesign and improvement projects were stopped, to the value of more than £1.5 million."*

Further context and analysis

The £2.2bn of R&D gained in the period 2026–2028 – set out in the above section – should be regarded as the minimum benefit of moving to <10% payment rates.

Firstly, it is based upon the following conservative assumptions:

- **Restricting the survey responses included in the analysis.** The analysis included only the survey responses that stated £ R&D would change at different payment rates. It is reasonable to assume that some of those that responded "Don't know" would also see an R&D impact; equally some of those that responded that there would be no change may see change in R&D plans over a longer time horizon, e.g. beyond 2028.
- **Using lower-range assumptions.** In the analysis, the lowest possible £ R&D impact was used for survey responses that highlighted the largest impact of payment rates, i.e. the analysis assumed a 20% R&D change for those that stated the impact would be greater than 20%.
- **The analysis only covers a subset of R&D investment as defined by BERD:**
  - This will not include Phase IV clinical studies, increasingly utilised mechanism for inward investment, sponsoring of clinical academics, grants to universities, or NHS revenue or payments to hospitals for carrying out activities related to trials.
  - It will only partially cover outsourced R&D services, for example through clinical research organisations, which could have a significant impact.

Secondly, there is evidence that indicates that higher payment rates in 2022 under the previous voluntary scheme (VPAS) has already lowered pharmaceuticals R&D in the UK. A 2023 ABPI survey found pharmaceutical companies

reporting that payment rates of 10-15% would reduce £ R&D by 1.1% a year. Official data subsequently showed that pharmaceutical R&D fell by 1% in 2023, the year after the VPAS payment rate increased from 5.1% to 15%.

This decline in pharmaceutical R&D recorded in official statistics means that there is a lower base from which R&D can fall in our analysis, making the impact within our analysis smaller. This would also mean that high payment rates from VPAS in 2022 have led to recurring annual loss in UK pharmaceutical R&D on top of the R&D loss that the evidence suggests VPAG is generating.

Thirdly, there is anecdotal evidence that it takes time for a deteriorating commercial environment to affect some R&D investment because of their long lead-in times (particularly related to large capital investments). Roughly 6% of pharmaceutical R&D in the UK is capital investment, which may only be affected by high payment rates if they persist beyond the end of VPAG in 2028.

Summarising these second and third points, there is evidence that high payment rates have been damaging UK pharmaceutical R&D before the 2025 VPAG rate and will probably inflict an increasing amount of damage the longer they continue.

Taking these factors into account, we have undertaken further analysis under three scenarios that look at different baseline R&D assumptions, change the conservative assumptions referenced above (see Table 1) and add an assessment of lost R&D due to high payment rates from 2022 and an assessment of lost R&D beyond 2028 for less mobile R&D investment.

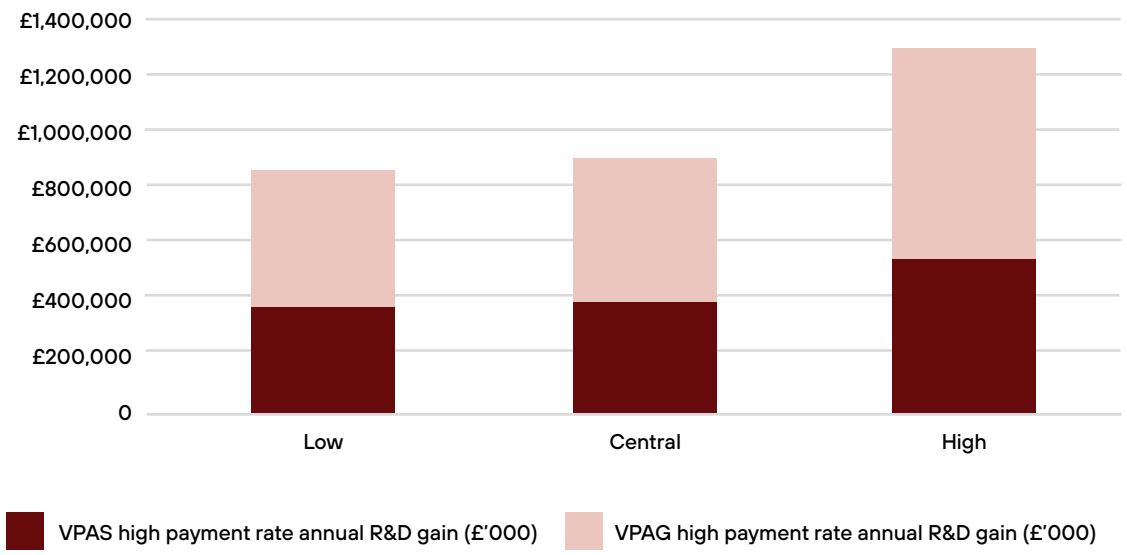
Table 1: Low, medium and high scenarios and associated key assumptions

	Baseline R&D affected (£m)	Assumed change in R&D at the highest payment rate (%)
Low Assumes 63% of R&D affected by payment rates, a falling £R&D baseline (reducing future R&D impact) and lowest possible impact of high R&D rates	5,378	20%
Medium Assumes 65% of R&D affected by payment rates, static £R&D baseline and middling possible impact of high R&D rates	5,650	25%
High Assumes all non-capital R&D affected by payment rates (94%), static R&D baseline and high impact of high R&D rates	8,168	30%

Using these assumptions an additional analysis, Chart 11 below sets out the annual R&D gain that results from moving from payment rates above 20% to payment rates below 10%.

On our medium scenario, the average annual £R&D gains is £890m, with the range between low and high being £850m–£1.3bn.

Chart 11: Annual R&D gain moving from payment rates of >20% to <10%



Source: WPI Economics analysis

Further to the above, the analysis can go further in demonstrating the impact/gain in R&D.

Table 2 shows the impact/opportunity of high VPAG payment rates 2024–2028, e.g. it is estimated that £2.6bn of R&D will be lost over the period 2024–2028 and could be regained on the medium scenario.

Table 3 shows the impact if high payment rates persist throughout the course of the next voluntary scheme and reflects the total impact /opportunity over the period 2024–2033, e.g. £7.8bn will have been lost over the period on the medium scenario.

TABLE 1 (2024–2028)	R&D opportunity (£'000)	GDP opportunity (£'000)	Revenue opportunity (£'000)
Low	£ 2,425,435	£ 21,413,925	£ 7,137,975
Medium	£ 2,577,024	£ 22,752,410	£ 7,584,137
High	£ 3,730,103	£ 32,933,072	£ 10,977,691

TABLE 2 (2024–2033)	R&D opportunity (£'000)	GDP opportunity (£'000)	Revenue opportunity (£'000)
Low	£ 7,313,987	£ 60,629,005	£ 20,209,668
Medium	£ 7,769,769	£ 64,407,679	£ 21,469,226
High	£ 11,244,341	£ 93,210,936	£ 31,070,312

This analysis suggests that if payment rates are set below 10 per cent **from 2026** then £2.2bn of R&D would be recovered by 2028 and a further £4.9bn would be recovered by 2033.

These are again conservative assumptions, and the R&D opportunity from below 10 per cent payment rates from 2026 could be as high as £3.4bn recovered by 2028 and a further £7.5bn recovered by 2033, a total of £10.9bn over the next 8 years.

One further point should be noted that there is different possible assumptions for the ongoing economic impact of £1 spent on R&D. The Office for Life Sciences, for instance, use a lower assumption than we have in this analysis and also assume a fast rate of depreciating benefits over time. However, these assumptions all come with caveats and are a question of interpretation of the literature. What is not contestable is that R&D creates effects that produce economic growth and therefore tax revenue as well.

Other benefits of lower payment rates

There are several categories of benefits from lower payment rates that cannot be quantified and monetised credibly, and that arise from lower payment rates. These include:

- **More partnership working.** While there is no systematic way of measuring the breadth of industry partnerships, previous work has highlighted several examples of companies cancelling partnership working due to rising payment rates.[29] These partnerships between industry, the NHS, and the academic community, lead to direct NHS savings and increased knowledge spillovers, spreading the benefits of R&D.
- **Increased high-skilled employment.** The average GVA per worker across the industry is £96,000, 1.5x the output of the average UK worker (this includes apprenticeships, PhDs, placements and scholarships).[30] According to companies' statements and operational plans, decreasing rates to internationally competitive levels would result in additional 1300 FTEs by 2028, which does not even capture the increased long-term investment likely to occur through increased manufacturing and FDI.
- **Driving regional equality and social mobility.** A significant proportion of pharmaceutical sector activity takes place in areas with higher levels of deprivation, with 60 percent of jobs in the sector outside of London, SE and SW.[31]
- **Export potential.** Pharmaceuticals are the UK's fifth largest goods exports, despite growing far slower than competitors in the last decade. Increasing manufacturing directly supports the UK's balance of trade and strength of the pound.[32]
- **More capital investment.** Some R&D is longer-term and will not be affected in the short-term, but the longer there is an unfavourable commercial environment, the more this type of investment will be affected.
- **Global leadership, soft power, and resilience.** The UK has previously set out its ambition to be the world leader for development, testing, access, and uptake, and continue to be at the forefront of the industry in the face of rising competition, an ambition which the government is expected to renew. Payment rates are now such a significant outlier that companies have called it a global contagion risk, which companies cannot be seen to condone. Restoring rates to internationally competitive levels will register as a hugely important signal to companies of the UK's intent, as well as its ability to deliver following BCR.

Conclusion

The UK's pharmaceutical industry has been harmed by high payment rates under the voluntary scheme for branded medicine sales to the NHS.

These high payment rates began under the mechanisms of the previous voluntary scheme, but have again become an issue in only the second year of the current voluntary scheme, something that neither the industry nor the government anticipated when they agreed the detail of the policy.

In pure monetary terms, the branded pharmaceutical industry made £2.8 billion in scheme payments 2014–2023. This more than doubled to £6.3 billion 2019–2023. Already in the first two years of the latest scheme (2024–2025), it is estimated that the industry will make almost £6 billion in payments, meaning that payments are likely to more than double again by the end of this 5 year scheme.[33]

Meanwhile, at a time where the life sciences sector is going through a golden era of innovation and the NHS is demanding more, the UK is becoming ever more uncompetitive compared with other countries, whose scientific and academic base is drawing level with the UK's, and at a time when the UK's commercial environment has become a contagion risk for some companies. All the while, the global race for investment is heating up, with companies announcing significant investments in the US, and China continuing to grow its life sciences sector at pace. The UK's voluntary scheme payment rates are more than double those in competitor nations such as France, Germany, Ireland and Italy, on top of the multiple discounts provided by companies to the NHS, including to meet the NICE cost-effective threshold.[34] In two of the last three years for which data is available (2021–2023), the UK has received fewer than 10 per cent of global inward foreign direct investment projects. In the period 2012–2020 the UK did not record any years below the 10 per cent mark.[35]

Both the government and the industry recognise that the current situation is unsustainable. This reports adds to the growing body of evidence that conclude that downward pricing policies on branded medicines have a negative impact on pharmaceuticals R&D, which in turn has a negative impact on the country's economic growth, both in the short- and medium-term.

This report demonstrates what the scale of that negative impact could be – it is billions in lost output and tax revenue, and thousands of high-skilled jobs.

The positive is that the damage that high payment rates have done – and are doing – to the nation's economic prospects could be halted and potentially reversed. Just as the UK's business environment for pharmaceuticals has become less competitive in recent years, with the right policy interventions that address the systemic underinvestment in medicines, it could restore UK competitiveness once more.

Methodology

Survey findings

The survey findings in the chapter "Life sciences investment and VPAG payment rates" were drawn from a survey of 33 pharmaceutical companies, all of which are ABPI members.

The fieldwork was conducted over a three-week period from Monday 24 March to Monday 14 April 2025.

Calculations of economic costs

The starting point for understanding the R&D impacts of higher payment rates was to:

1. Use survey responses to identify the 2024 £ R&D investment of companies that stated £ R&D investment would change at different payment rates, i.e. excluding the respondents that stated there would be no change in £ R&D investment across different payment rates.
2. Use these survey responses to understand by how much £ R&D investment would change from 2024 levels in 2028 under different payment rates, weighting the results by the value of their R&D expenditure in 2024 and projecting these weighted values out to 2028.
3. Apply these weighted changes in R&D to produce a sample change in R&D at different payment rates.
4. Projecting the weighted changes in R&D from the survey, up to the total UK wide level of R&D as reported by ONS (BERD). First by estimating R&D investment in 2024 using 2022 and 2023 data, giving a total of £8.6bn. Second, by applying the portion of R&D investment that the survey indicates is affected by different payment rate levels, producing an estimate of £5.4bn.Reducing the amount of R&D assumed to be affected by different payment rates is a conservative assumption, i.e. our baseline R&D figure could have been higher if we had assumed that some "don't know" responses in the survey would have also been affected by different payment rates.

Using the above figures as the foundation of the calculation, the process for calculating the costs to GDP and tax revenues from higher payment rates were as follows:

1. Assume that the path of R&D investment for all UK Life Sciences R&D matched those derived from the ABPI survey.
2. Convert the differences in R&D between scenarios into an impact on future economic output. This uses an assumption incorporated into previous work undertaken by ABPI in collaboration with PWC, as follows: "Existing literature suggests that every £1 invested in private R&D today leads to a stream of future benefits to the economy as a whole equivalent to £0.50 per year in perpetuity".
3. Discount future benefits using HM Treasury Green Book Methodology.
4. Calculate tax impacts, which are assumed to be one-third of the GDP impact.
5. Note that in making the above calculations all values are converted into 2024 prices.

Annex I – Selected charts from company survey

Chart 12: Change in NAS launches across different payment rate scenarios

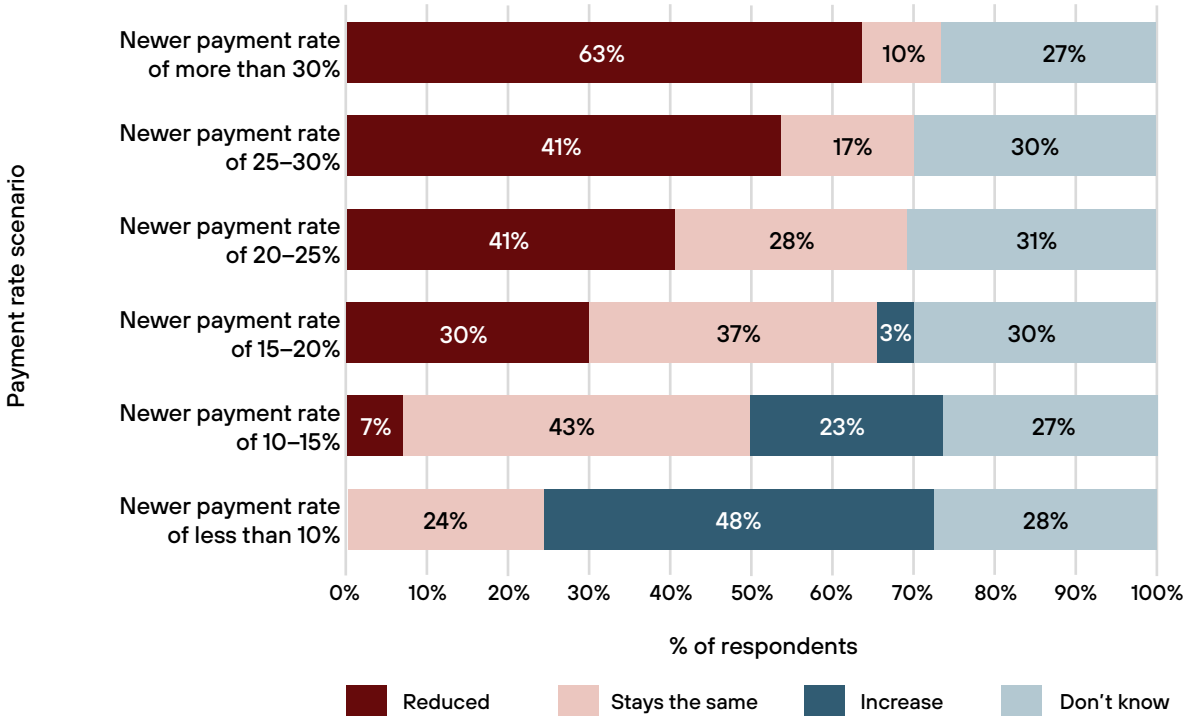


Chart 13: Change in new indication launches across different payment rate scenarios

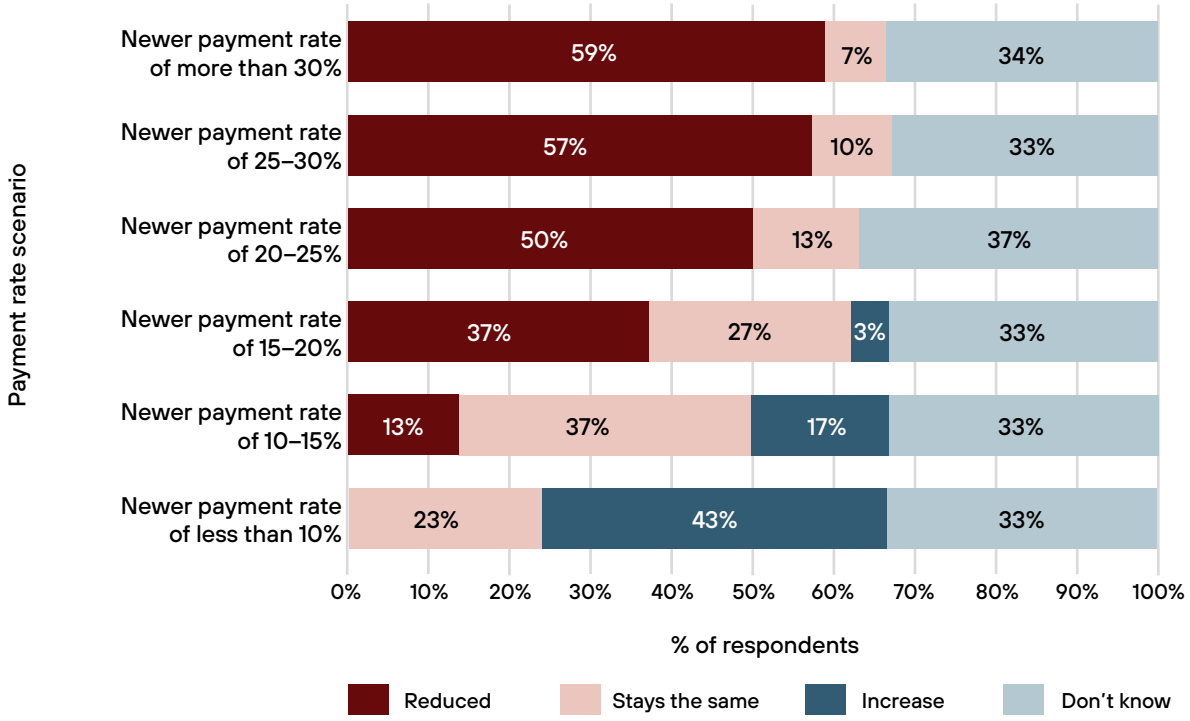
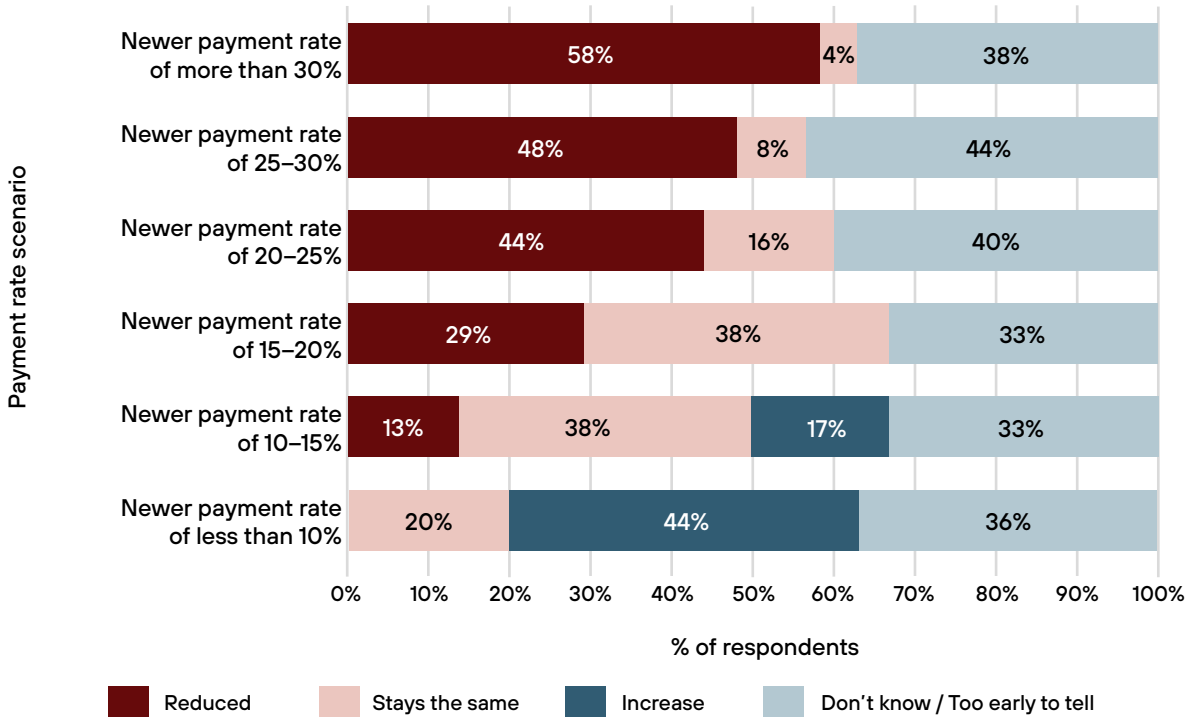


Chart 14: Change in headcount across different payment rate scenarios



Annex II – Limitations to DHSC analysis around higher payment rates

The following areas are where DHSC impact assessment (IA) on the Statutory Scheme (SS) 2025 has limitations in terms of logic and analysis:

- **Limitations in the use and interpretation of cited studies.** The IA uses several studies as supporting evidence to underpin the department's thinking around wider economic impacts of SS change. However, there are deficiencies in how these studies have been used. Examples for each cited study are as follows:
  - ***Life Sciences Competitiveness Indicators (OLS).*** The IA uses the 2022 version of the results, when the latest indicators are from 2024. Indeed, on several 2022 measures referenced in the IA, the UK's position has subsequently deteriorated according to the latest data.
  - ***Attracting life sciences investments in Europe (Europabio).*** Firstly, the cited report was published in 2021 and is not the latest version of the study (which was published in 2023). Secondly, the 2023 version of the report specifically references the impact of payment rates when discussing the competitiveness of the UK: "…a difficult commercial environment and the voluntary scheme for branded medicines pricing and access (VPAS) persists".
  - ***The 2021 EU Industrial R&D Investment Scorecard (European Commission).*** This report offers cross-country comparisons on conditions for all types of R&D investment, i.e. it is not pharmaceuticals-specific and references examples of UK investment that is not related to pharmaceuticals (such as aerospace). Moreover, it is not clear what argument the cited report is intended to support – it may be trying to highlight that the UK has a good investment environment; it may be trying to highlight that there are many factors influencing where R&D investment is located (but nothing is explicit in the text of the IA to clarify).
  - ***Global Startup Ecosystem Index (Startup Blink).*** Similar to the European Commission citation, it is not pharma-specific and is an outdated version of the report (the IA cites the 2023 report when there is a 2024 report available).

- **Limitations in interpretation around the impact of reduced funding available for investment.** The IA states that increased payment percentages may "theoretically" reduce the funding available for investment by pharmaceutical companies. Survey evidence collected by the ABPI demonstrates that this is not theoretical – companies reported (see 'False Economy?') that they would reduce their investment if higher payment rates were maintained. Moreover, the IA cites evidence (Charles Rivers Associates) that references 12 factors driving the location of biopharmaceutical investments, inferring that only two of the 12 relate to payment rates ('costs' in commercial manufacturing and 'strategic commercial considerations' in clinical trials). Yet the consequences of higher payment rates have an evidenced impact on other referenced factors as well. To give two examples:
  - The 'Existing R&D footprint' is listed as the number one driver for investment in research, when ABPI analysis (again, see 'False Economy?') has found that higher payment rates would reduce R&D expenditure, i.e. the existing R&D footprint is lower in the UK under higher payment rates.
  - Access to highly qualified staff is listed as a driver for investment location decisions for research, IMP manufacturing and commercial manufacturing. Again, ABPI analysis suggests a link between higher payment rates and pharmaceutical headcount reductions.

In short (and in general) the IA cites this type of evidence and does not highlight the interconnected nature of the factors affecting investment. For example, if costs are a factor driving commercial manufacturing investment decisions and higher payment rates raise costs, which then reduces the manufacturing footprint, a cycle of decline and reduced investment is created.

- **Questionable assessment of familiarisation costs.** The IA states that firms will face familiarisation costs when entering the Statutory Scheme, e.g. to understand the implications on payments. The costs of familiarisation are based upon the mean hourly wage of £20.90 (2023 prices) for "Office administrative, office support and other business activities" – this equates to an annual salary of roughly £43,500 a year. Yet the importance placed on payment rates by pharmaceutical companies suggests that any change to the system would require senior level time and resources to fully understand the impact of the decision making (and would take up much more than the three hours as suggested by the IA).
- **The appraisal period.** The IA calculates the assumed costs and benefits over a period of three years, e.g. the impact on pharmaceutical industry profits is calculated for the period 2025-2027. This is justified (reasonably) on the basis that the uncertainties with forecasting branded medicines sales growth increases over time, and on the basis that it is the time period over which the regulation is proposed (again, reasonably). But the impacts of other costs and benefits that the IA identifies will manifest themselves over a much longer time period. Specifically, the potential foregone R&D investment over the 2025-2027 period will have an impact many years into the future, i.e. the economic benefit of R&D spillovers takes place over a much greater time period. While calculation of these benefits may not be suited to the IA, they should at least be referenced within this context.
- **Improvements to patient outcomes.** The IA highlights that patient outcomes may suffer if the NHS gets less income from payment rates but may also suffer if the pharma industry has to pay more in payment rates. The trade-offs related to this are not dealt with in the IA, even though it is an important argument in determining the relative merits of higher and lower payment rates.
- **Assumptions on profit.** The IA assumes that pharmaceutical company profits are shared between the UK and overseas in the same proportion as total revenue. Yet there is no basis made for this assumption. While an obvious statement, if profits are weighted more heavily towards the UK than revenues then UK shareholders take a larger hit than the IA suggests (and vice versa). More generally, the line of argument is opaque and needs better explanation in the IA.
- **Volatility comment.** The IA highlights that not achieving broad commercial equivalence (BCE) with the VPAG could create, "...a volatile commercial and investment environment for pharmaceutical firms." The inference is that this is a bad thing, although not explicitly stated. No consideration is given to how frequent large changes to payment rates create a volatile commercial and investment environment.

Endnotes

1 Neil Grubert Consulting, available on request

2 WPI analysis of BERD data on pharmaceuticals R&D spend and Evaluate estimates of global R&D spend, available at www.evaluate.com/thought-leadership/world-preview-2024-report

3 Bioscience and health technology sector statistics

4 Department for Business and Trade, 'Invest 2035: the UK's modern industrial strategy, November 2024, available at www.gov.uk/government/consultations/invest-2035-the-uks-modern-industrial-strategy/invest-2035-the-uks-modern-industrial-strategy

5 HM Treasury, 'Autumn Budget 2024', October 2024, available at https://assets.publishing.service.gov.uk/media/672b9695fbd69e1861921c63/Autumn_Budget_2024_Accessible.pdf

6 HM Treasury, 'Reeves: I am going further and faster to kick start the economy, January 2025, available at www.gov.uk/government/news/reeves-i-am-going-further-and-faster-to-kick-start-the-economy

7 Reuters, 'Britain to invest up to £767 mln in new health data research', 8 April 2025, available at www.reuters.com/business/healthcare-pharmaceuticals/britain-invest-up-767-mln-new-health-data-research-2025-04-07

8 ABPI, 'Voluntary scheme on branded medicines', available at www.abpi.org.uk/value-and-access/uk-medicine-pricing/voluntary-scheme-on-branded-medicines

9 Department of Health & Social Care, '2024 Voluntary Scheme for Branded Medicines Pricing, Access, and Growth', available at https://assets.publishing.service.gov.uk/media/657b29770959870012 95e139/2024-voluntary-scheme-for-branded-medicines-pricing-access-and-growth.pdf

10 ABPI, 'Delivering a voluntary scheme for health and growth', March 2025, available at abpi-vpag-report-20-march-2025.pdf

11 Indexed 2014 PPRS and 2019 VPAS allowed growth rates (base=2014) adjusted for inflation (GDP inflator, October 2024) and ABPI analysis of outturn NHS Budget (RDEL) across the four nations adjusted for inflation (GDP inflator, October 2024).

12 ABPI, 'The road to recovery for UK industry clinical trials', December 2024, available at www.abpi.org.uk/media/eyzpflm5/abpi-the-road-to-recovery-for-uk-industry-clinical-trials-december-2024.pdf

13 ABPI, 'Act now to bring £68bn economic boost to the UK through new research investment', June 2022, available at www.abpi.org.uk/media/news/2022/june/act-now-to-bring-68bn-economic-boost-to-the-uk-through-new-research-investment

14 OLS Indicators, figure 11, table 4, available at www.gov.uk/government/publications/life-sciences-sector-data-2024/life-sciences-competitiveness-indicators-2024-summary#section-2-domestic-market

15 ABPI, 'The government and ABPI agree to accelerate a planned review of VPAG', April 2025, available at www.abpi.org.uk/media/news/2025/april/the-government-and-abpi-agree-to-accelerate-a-planned-review-of-vpag

16 10 Downing Street, 'Plan for Change', available at www.gov.uk/missions/economic-growth

17 Parliamentlive.tv, 'Business and Trade Committee,' 18 March 2025, available at https://parliamentlive.tv/event/index/54ec90d1-f289-429e-b70c-1067e169e7c2

18 This % is based on the 2023 ONS BERD figure (www.ons.gov.uk/economy/governmentpublicsectorandtaxes/researchanddevelopmentexpenditure/bulletins/businessenterpriseresearchanddevelopment/2023) for pharmaceuticals R&D and the survey responses for 2023 levels of R&D investment, as no 2024 figure for BERD is yet available

19 Bioscience and health technology sector statistics 2021 to 2022: figures behind the charts charts_2021-22.ods

20 Results from the ABPI company survey

21 WPI analysis of BERD data on pharmaceuticals R&D spend and Evaluate estimates of global R&D spend, available at www.evaluate.com/thought-leadership/world-preview-2024-report/

22 Link to PWC report and sources on rate of return. Link to Frontier Economics summary of other studies on economic returns. Link to Canadian study.

23 ONS, BERD research and development expenditure, Business enterprise research and development, UK - Office for National Statistics (Accessed April, 2025)

24 Becker Friedman Institute, 'The evidence base on the impact of price controls on medical innovation', September 2021, available at https://bfi.uchicago.edu/wp-content/uploads/2021/09/BFI_WP_2021-108.pdf

25 Information Technology & Innovation Foundation, 'The hidden toll of drug price controls', July 2023, available at https://itif.org/publications/2023/07/17/hidden-toll-of-drug-price-controls-fewer-new-treatments-higher-medical-costs-for-world

26 ABPI and Frontier Economics, 'The value of industry clinical trials to the UK', December 2024, available at file:///C:/Users/kiffs/Downloads/the-value-of-industry-clinical-trials-to-the-uk-extended-report.pdf

27 The tax-to-GDP ratio changes from year to year, but the one third is a rough rule of thumb. See IFS here for an example.

28 Open text response to ABPI survey

29 Delivering a Voluntary Scheme for Health and Growth; COOPA summary, shared with HMG for Operational Review

30 ABPI-PWC Life Sciences Superpower Report;

31 Bioscience and health technology sector statistics

32 LSCI 2024

33 WPI Economics analysis for the ABPI

34 ABPI analysis

35 OLS life sciences competitiveness indicators

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