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Working paper

Living standards of working-age disability benefits recipients in the UK

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Abstract

We examine the living standards and health of working-age disabled people and disability benefits recipients over time in the UK. The UK's disability benefits system (which is non-means-tested and in which receipt is unrelated to work status) has gone through a significant transformation since 2013 with the gradual replacement of the disability living allowance (DLA) with the personal independence payment (PIP). We establish four key facts. First, 6% of working-age individuals are now on disability benefits, up from 2% in 1992–93. This rise has been driven by claims for mental health and other psychiatric conditions, which are now the main disabling condition for 44% of claimants (27% back in 2002–03). Second, almost half of those in the most materially deprived tenth of the population are disabled, but most of that group do not receive disability benefits. Third, over the period that DLA has been replaced by PIP, a larger fraction of those with the poorest health have started to receive disability benefits, suggesting that the targeting of the benefits has improved on this margin. Fourth, simple event studies examining employment in the years around the reduction of disability benefits (following a government health reassessment) find no change before but a sharp (4 percentage point) rise immediately after loss of benefits, which grows to 10ppts four years after. This is not enough to offset the loss in income on average, and income poverty rises 10ppts in the year following the reduction. Nonetheless, we find limited evidence of claimants' own assessment of their financial situation changing, suggesting that the benefits are removed at a time when they are less needed.

JEL codes: I13, I3, I38, J22

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Key findings

1. **The share of working-age adults reporting a disability, and the fraction of working-age adults in receipt of disability benefits, have both been rising steadily over the last three decades.** In 2020–21, 2.2 million working-age people were in receipt of disability benefits, compared with 1.9 million in 2012–13 and 591,000 in 1992–93. The number of working-age people reporting a disability (a long-standing and limiting condition or illness) stood at 7.4 million in 2020–21, up from 6.0 million in 2012–13. This means that less than a third of those who report a disability are in receipt of disability benefits.
2. The government has now almost finished its reform of the disability benefits system, replacing disability living allowance (DLA) with personal independence payment (PIP). This began in 2013 with the aim of reducing government spending on disability benefits by 20% while targeting support to those with the highest medical need. However, **since the PIP roll-out started, spending on disability benefits has increased – and at a faster rate than spending on DLA was growing before PIP.** Spending on working-age disability benefits in 2021–22 was £14.7 billion, compared with £9.4 billion before the introduction of PIP (all 2022–23 prices).
3. Although disability benefits eligibility is not conditioned on an inability to work (instead aiming to support people with the extra costs of living they face due to disability), **people on disability benefits are much less likely to be employed than the overall working-age population.** In 2019–20, just 15% of disability benefits recipients were working, compared with 78% of the overall working-age population and 54% of those reporting a disability.
4. **People on disability benefits have much higher rates of relative income poverty than working-age adults in general** (29% versus 20% in 2019–20). However, this measure of poverty does not take into account the fact that those on disability benefits likely have higher costs of living due to disability. **Thus, this gap understates the true difference in the rate of low living standards.**
5. In order to compare standards of living between groups that face different living costs, material deprivation indices – which measure households’ ability to afford a number of basic items and activities – may be more suitable. **We find that disability is strongly related to material deprivation. Close to half (44%) of those in the most deprived tenth of the population are disabled, compared with 18% among the whole working-age population.**
6. **There are around a million people who are disabled and in the most materially deprived tenth of the population but not receiving disability benefits.** Out of the most deprived 10% of the working-age population, almost a third (31%) are disabled but not in receipt of a disability benefit. This could be down to ineligibility (perhaps because their condition is not severe enough to entitle them) or to eligible people not claiming the benefit (perhaps because they do not know they are eligible or find the assessment process too complex or unappealing). It may also relate to wait times: there is now on average a 20-week wait between applying for and receiving disability benefits. Average wait times peaked at 26 weeks after the start of the COVID-19 pandemic, but the delay was 20 weeks even in February 2020 before the pandemic, and had been on the rise for a couple of years before that.

7. One of the government's stated goals with the introduction of PIP was to target disability benefits more towards those with the most need. We do find evidence that **disability benefits receipt has become more concentrated among those with a substantial number of conditions, suggesting that disability benefits in 2018–19 were more targeted at those in the worst health than in 2012–13.**
8. Some people see their disability benefits reduced during their claim, due to either a periodic reassessment of their disability or a self-reported change in circumstances such as an improvement in health. We find that **a reduction in disability benefits (including losing them altogether) is associated with an increase in the likelihood of being in paid work, and this association grows over time from a 4 percentage point increase in the year following the reduction in benefits, to a 10 percentage point increase four years after the reduction.** This is consistent with some people moving off disability benefits as their health improves, and the reduction in disability benefits encouraging some into work. **But four years after a reduction in disability benefits, almost half (47%) are not in paid work.**
9. The increase in employment following reduced disability benefits does not prevent an **increase in rates of income poverty among this group.** We find that a reduction in an individual's disability benefits is associated with an increase in the likelihood of being in relative poverty of 7 percentage points, and this association persists four years after the event (when 28% of this group are in income poverty). **Nonetheless, claimants' own assessment of their financial situation changes little following a reduction in benefits.** This suggests that the benefits are removed at a time when they are less needed (e.g. as individuals' health-related costs decline).
10. **Four-fifths of the rise in the number of disability benefits recipients over the past two decades is accounted for by psychiatric conditions (such as mental health problems and learning disabilities).** Psychiatric conditions were the main health condition for 44% of disability benefits recipients (944,000 people) in 2020–21, compared with 27% of disability benefits recipients (398,000 people) in 2002–03. This mirrors a trend seen among the wider disabled population, with the prevalence of mental health and social/behavioural conditions increasing from 27% in 2012–13 to 46% in 2019–20 among those who report a disability. If the pattern continues, it will add to pressure on the disability benefits system in the future. This may also be further exacerbated by potentially long-lasting harm to the mental health of the population from the pandemic.
11. Among those who report being disabled with a mental health or social/behavioural condition but who are not in receipt of a disability benefit, the proportion in work has increased from 35% to 57% between 2012–13 and 2019–20. At the same time, the prevalence of employment among those with mental health or social/behavioural conditions who are receiving disability benefits has remained fairly stable over the period – the proportion in employment was 8% in 2012–13 and 10% in 2019–20. **This provides suggestive evidence that while we have seen a widespread increase in the reporting of mental health and social/behavioural issues in the overall population, disability benefits remain targeted to those with the most severe conditions.**

I. Introduction

The UK government supports working-age people with long-standing illness and disability through the disability benefits system, which provides two types of benefits. First, incapacity benefits¹ are aimed at people who cannot work due to disability or illness. Second, disability benefits² – the focus of this paper – aim to support people with the extra costs of living that they face due to disability, regardless of whether they are working or not. Disability benefits payments are made based on an assessment of how much help the claimant needs with daily living and moving around. The payments are made as cash transfers with set levels of possible payment amounts which are not directly tied to the goods and services the claimant uses, but rather based very broadly on need, i.e. the amount of difficulty that the claimant is deemed to have in doing everyday tasks or getting around. They are neither means-tested nor taxable and, for those with low incomes, can be claimed in addition to incapacity benefits and other means-tested support. This paper examines the living standards and health of working-age disabled people and disability benefits recipients over time in the UK. We particularly focus on trends in the last 10 years, because the disability benefits system has been substantially reformed over this period, with disability living allowance (DLA) being replaced by personal independence payment (PIP). We discuss this reform in detail below.

We restrict our attention to working-age people as a different disability benefits system exists for people over the state pension age and under the age of 16.³ Figure 1 shows the share of working-age adults reporting a disability in household survey data (green line) and the share of working-age adults in receipt of disability benefits in administrative data (red line). In survey data, disability is defined as having a long-term (expected to last at least 12 months) limiting illness or disability.⁴ Both the proportion of working-age adults in receipt of disability benefits and the proportion reporting a

¹ Specifically, incapacity benefit (IB), since 2008 employment and support allowance (ESA) and (more recently) additional elements in universal credit (UC). UC incapacity elements as well as ESA can also provide additional support to those in work on low incomes, but for the most part these are out-of-work benefits.

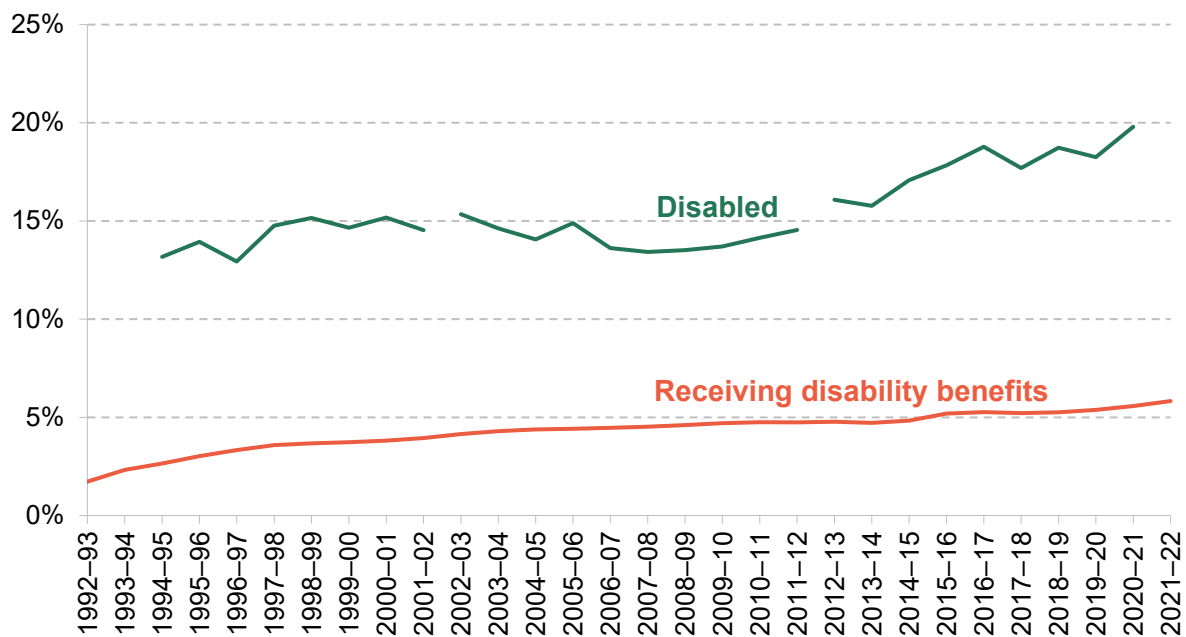
² Specifically, disability living allowance (DLA) and (more recently) personal independence payment (PIP).

³ In order to keep the age composition of this group unchanged over the period, we use the definition of pre-2010 state pension age (65 for men and 60 for women).

⁴ This definition of disability in the Family Resources Survey (FRS) is based on the Equality Act 2010, which defines a disabled person as someone who has a physical or mental impairment that has a 'substantial' and 'long-term' negative effect on their ability to do normal daily activities (<https://www.gov.uk/definition-of-disability-under-equality-act-2010>).

disability have been rising steadily over the last three decades. The share of working-age adults in receipt of disability benefits increased from 2% (591,000) in 1992–93 to 5% (1.8 million) in 2012–13 and 6% (2.3 million) in 2021–22.⁵ The prevalence of reported disability in survey data has also increased, from 16% (6.0 million) to 20% (7.4 million) between 2012–13 and 2020–21 (the latest period with a consistent definition of disability in the survey).

Figure 1. Share of working-age adults who report being disabled or who are in receipt of disability benefits, 1992–93 to 2020–21



Note: Gaps in the ‘disabled’ series are where question wording in the survey changed, causing a structural break. ‘Working-age adults’ here refers to men aged 16–64 and women aged 16–59. ‘Disabled’ series starts in 1994–95 because that is when the Family Resources Survey begins.

Source: Authors’ calculations using Family Resources Survey, 1994–95 to 2020–21, and Department for Work and Pensions, ‘Benefit expenditure and caseload tables 2022’ (<https://www.gov.uk/government/collections/benefit-expenditure-tables>).

One thing that Figure 1 makes clear is that most working-age people who report themselves to be disabled do not get disability benefits, as the share who are recipients is roughly 30% of the share who are disabled people according to survey data. Disabled people who are not in receipt of disability benefits differ from those on disability benefits in terms of their medical conditions. Those who are disabled but not on disability benefits are less likely to report mobility and dexterity problems, and

⁵ These figures refer to working-age individuals, where working age is defined as 16–64 for men and 16–59 for women.

more likely to report having mental health problems – among all conditions reported by those who are disabled but not on disability benefits, 27% are mental health issues, compared with 19% for those who are in receipt of disability benefits.⁶

Table 1. Characteristics of disability benefits recipients, 2012–13 and 2019–20

	2012–13	2019–20
Male	54%	53%
Female	46%	47%
Age 16–29	15%	14%
Age 30–49	42%	36%
Age 50+ (female 50–59; male 50–64)	44%	49%
In full-time employment	7%	10%
In part-time employment	5%	5%
Owner-occupier	38%	36%
Private renter	14%	13%
Social renter	47%	50%
Has degree	14%	22%
Single, no dependent children	53%	51%
Single, with dependent children	5%	7%
Couple, no dependent children	28%	29%
Couple, with dependent children	13%	13%
Percentage on DLA	100%	16%
Percentage on PIP	0%	84%
Caseload	1.8m	2.1m
Mean award (per week, 2020 prices)	£85	£102

Note: Housing tenure categories do not add to 100% because a small number of people are living rent-free. Average award figures are in real CPI-adjusted terms (2020 £ per week).

Source: Sex, age, percentage on PIP, caseload and mean award come from Department for Work and Pensions, Stat Xplore (<https://stat-xplore.dwp.gov.uk>). The remaining statistics are calculated from the Family Resources Survey.

⁶ Authors' calculations using FRS. See Figure A1 in the appendix for the full breakdown of conditions.

Table 1 shows selected average socio-economic characteristics among those in receipt of a disability benefit (either DLA or PIP), comparing 2012–13 (the period before the start of PIP roll-out, as explained in the next section) with the last pre-pandemic year (2019–20). This table illustrates that while the number of disability benefits claimants increased by 15% from 1.8 million to 2.1 million over the period, many of the average characteristics of this group remained largely unchanged. In both periods, just over half of the disability benefits recipients are men, and about half are social renters. Relatively few – only about 15% in the later period – are in paid work. The majority of disability benefits recipients are single (58% in 2019–20) and a clear majority have no dependent children (80% in 2019–20) – overall, about half are single without dependent children.

Disability benefits recipients are generally older, with 49% of working-age recipients in the later year over 50. Nonetheless, a significant share of recipients are under the age of 30 – one in seven in 2019–20. The growth in disability benefits claimants between 2012–13 and 2019–20 was in fact particularly fast among those aged 16–19 – the number of 16- to 19-year-olds receiving disability benefits more than doubled from around 54,000 to 119,000 in just seven years. This is consistent with the rising DLA caseload among children (Office for Budget Responsibility, 2019, p. 48).

One characteristic where we have seen a large change over this period is the percentage of claimants with a degree, which has increased from 14% to 22%. The share of people with degrees has increased at a faster rate among those on disability benefits than in the wider population (35% to 48% over the same period). This is also in contrast with documented trends among incapacity benefit recipients – Emmerson, Joyce and Sturrock (2017) find that incapacity benefit claims are increasingly concentrated among those with the least qualifications.

Not shown in this table is the significant variation in disability benefits receipt between regions. In 2019–20, the share of working-age adults receiving disability benefits was 6% in the North West and Scotland and 7% in Northern Ireland, compared with 2% in London and 3% in the South East, East Midlands and East of England.

The remainder of this paper proceeds as follows. Section II describes the data used in this paper, as well as the policy context of the DLA to PIP transition and wider government disability strategy. Section III documents trends in relative income poverty and material deprivation among those who are disabled and those on disability benefits, comparing them with trends among the overall population. Section IV discusses health and types of conditions among disability benefits recipients. Section V describes the results from event studies that examine associations between a reduction in disability benefits and a number of outcomes. Section VI concludes and outlines key policy implications of this work.

II. Data and policy context

Data

We draw on a number of UK household survey data sets as well as administrative data in the analysis for this paper.

Family Resources Survey (FRS). This is a repeated cross-sectional UK household survey, which has been running since 1994–95, of around 20,000 households per year in the latest waves (up to 2019–20; there were just over 10,000 interviews in 2020–21 due to the COVID-19 pandemic⁷). The latest year is 2020–21, though we largely examine data only up to 2019–20 to avoid any impact of the pandemic. The survey contains information on disability status, disability benefits receipt and labour market status, as well as measures of income and material deprivation for a representative sample of UK households. It forms the basis of the UK’s official income and poverty statistics. (Department for Work and Pensions, Office for National Statistics, NatCen Social Research, 2021.)

English Longitudinal Study of Ageing (ELSA). This is a representative panel of the over-50 population in England running since 2002–03, with the latest wave collected in 2018–19, and containing around 10,000 individuals each year. While with this data set we can only analyse the

⁷ <https://www.gov.uk/government/statistics/family-resources-survey-financial-year-2020-to-2021/family-resources-survey-financial-year-2020-to-2021>.

older working-age population, ELSA is particularly useful as it collects detailed data on the respondents' health and mobility. (Banks et al., 2021.)

Understanding Society: the UK Household Longitudinal Study (UKHLS). This panel, running since 2009, contains around 25,000 households per year and includes similar information to that in the FRS. (University of Essex, Institute for Social and Economic Research, 2022.)

Our administrative data come from the Department for Work and Pensions (DWP) and the Office for Budget Responsibility (OBR). The administrative data cover Great Britain.

As we rely on survey data for much of the analysis in this paper, a potential concern is whether the self-reported receipt of disability benefits leads to very different coverage rates compared with administrative data. We find that the coverage rates are somewhat lower in the FRS than in the administrative data, with 4.0% (1.5 million people) of the working-age population in receipt of disability benefits in 2019–20, compared with 5.4% (2.1 million people) in the administrative data.

Policy context

Since the early 1990s, the benefit available to disabled people with care or mobility needs was called the disability living allowance. There are two components to DLA – the daily living component (also called the care component) for those who need help with everyday tasks and the mobility component for those who need help with getting around. The daily living component has three levels (currently £24.45, £61.85 and £92.40 per week) and the mobility component two levels (£24.45 and £64.50 per week). A claimant with the highest rate of both components would receive £156.90 per week. To receive DLA, a person had to submit a claim, and then provide evidence of their disability, sometimes including a medical examination. Successful claims would be awarded a payment either for a fixed period (at which point they would be reassessed) or 'indefinitely' (though DWP could still stop or reduce the award if it had grounds for doing so; see Child Poverty Action Group (2012)).

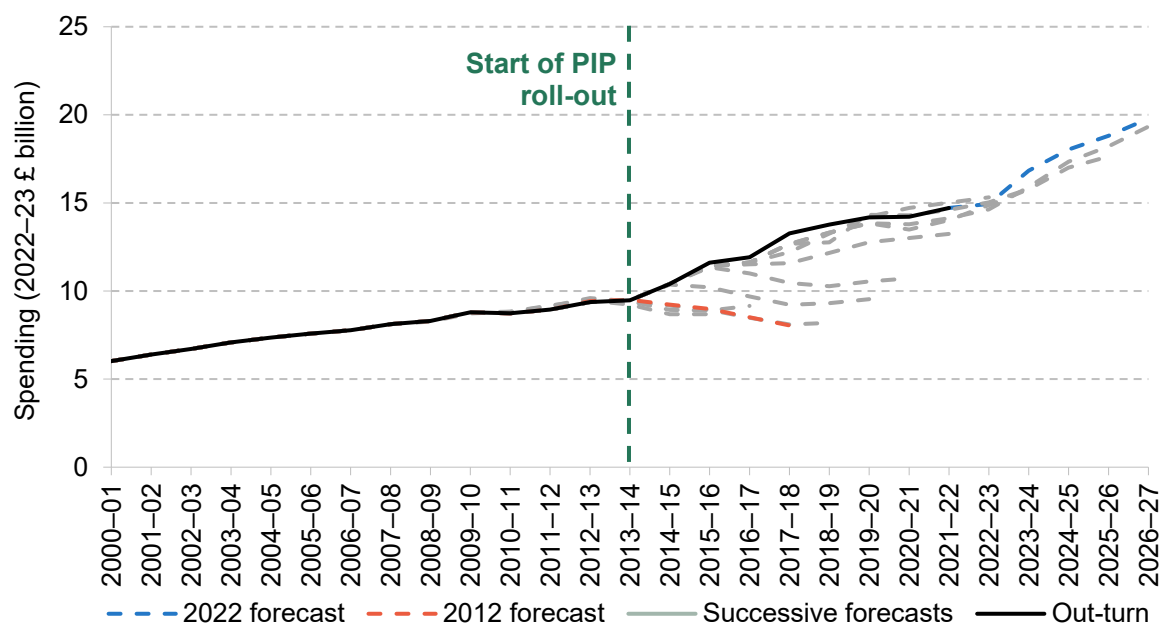
In 2010, the government announced it was going to replace DLA with personal independence payment (PIP), with the aim of reducing government spending on the disability benefits system while

targeting support to those deemed to have the highest medical need. This was mainly going to be achieved through the removal of the lowest rate in the care component, through the use of a points-based system that considers ability to perform certain daily living activities and move around (which the government argued would be a more transparent and objective assessment of disability), and through greater use of fixed-term rather than indefinite awards.⁸ The roll-out of PIP was done gradually, with existing DLA claimants being invited for reassessment over time starting in 2013. The roll-out has now largely finished, with 91% of the working-age people receiving disability benefits being in receipt of PIP in November 2021.

The UK government expected the PIP roll-out to reduce the disability benefits caseload and spending by 20% once fully rolled out (Office for Budget Responsibility, 2019, p. 8). Figure 2 compares successive OBR forecasts of disability benefits spending with the actual spending out-turn. Since the PIP roll-out started in 2013–14, until 2018–19, each out-turn exceeded the official forecasts. For example, spending in 2017–18 ended up at £13.3 billion, or 65% higher than had been forecast in the Autumn Statement of 2012. Instead of the projected reduction in spending, total spending on disability benefits has in fact increased at a higher rate than spending on DLA was increasing before the introduction of PIP – spending in the latest year (2021–22) was £14.7 billion, compared with £9.4 billion before the introduction of PIP. OBR analysis suggests that this increase in spending was driven by both higher-than-expected caseload and higher average award amount, with most of the growth explained by an increase in the average award (Office for Budget Responsibility, 2019, p. 12). The OBR’s counterfactual scenario analysis suggests that instead of the planned saving of around £1.5 billion in 2015–16, PIP appeared to have increased spending on disability benefits by ‘perhaps £1 billion to £2 billion a year’ (Office for Budget Responsibility, 2019, pp. 8 and 113).

Figure 2. Vintages of OBR forecasts for spending on disability benefits (2022–23 prices)

⁸ In August 2010, 71% of working-age DLA recipients had an indefinite award (Department for Work and Pensions, 2011).



Note: Spending is deflated to 2022–23 prices using the Consumer Prices Index (and the latest (March 2022) OBR forecast for 2022–23 onwards). Figure shows each OBR autumn forecast from Autumn 2010 to Autumn 2021 (there was no forecast in Autumn 2019) and the OBR spring forecast for 2022. Forecasts shown are based on the real-terms forecast – that is, we calculate what the OBR expected to happen to real spending, and then combine that with out-turn CPI (or the latest forecast for 2022–23 onwards) to derive a nominal forecast. This is then put into 2022–23 prices. This means that errors in the OBR’s inflation forecast do not meaningfully affect the figure.

Source: Authors’ calculations using OBR’s economic and fiscal outlook (<https://obr.uk/report/economic-and-fiscal-outlook/>) and DWP’s benefit expenditure and caseload tables (<https://www.gov.uk/government/collections/benefit-expenditure-tables>), various vintages.

It is worth noting that some of the increase in spending on working-age disability benefits is due to the increase in state pension age over this period.⁹ Because of this increase, more people are defined as working age in the OBR forecast, which will mechanically push up disability benefits spending among this group as older working-age individuals are more likely to be disability benefits recipients. However, the changes to state pension age were legislated in 2011, meaning that these would have already been reflected in the OBR forecasts.

The transition from DLA to PIP over the last decade is one motivation for this paper. The end of the roll-out provides a natural point for us to look at whether the circumstances of people receiving disability benefits have changed over this period of a gradual roll-out of a major policy reform.

⁹ The female state pension age increased from 60 in April 2010 and 61.5 in March 2013 to 65 in November 2018, and state pension age for both men and women increased to 66 between December 2018 and October 2020 (Department for Work and Pensions, 2014).

The other relevant piece of policy context is the recent commitments by the government to reducing the ‘disability employment gap’, i.e. the gap in employment rates between non-disabled and disabled people (Department for Work and Pensions and Department of Health, 2016). The stated goal in the Conservative Party 2015 manifesto was to halve the disability employment gap.¹⁰ This was changed to getting ‘1 million more people with disabilities into employment’ in the 2017 manifesto.¹¹ The government announced earlier this year that the goal of seeing a million more disabled people in work had been reached.¹² Our analysis using the FRS shows that the disability employment gap has reduced over time, from 36 percentage points in 2012–13 to 29 percentage points in 2019–20, and the number of disabled people in work has increased from 2.6 million in 2012–13 to 3.7 million in 2019–20. It is particularly important to consider whether there has been a change to the living standards of the disabled population in the context of this significant increase in the number of disabled people in work.

III. Living standards among disabled people

In this section, we examine trends in income poverty and material deprivation between 2012–13 (the last year before the government started to replace DLA with PIP) and 2019–20 (the last pre-pandemic year).

Income poverty

Figure 3 shows the relative income poverty rates for all working-age individuals, for those who report being disabled and for those in receipt of a disability benefit. The solid lines show the proportion of people in each group living in relative poverty, which is defined as having equivalised household income (after housing costs) below 60% of contemporaneous median income. The dashed lines show the same, but with income measured excluding disability benefits (we discuss the significance of this measure shortly).

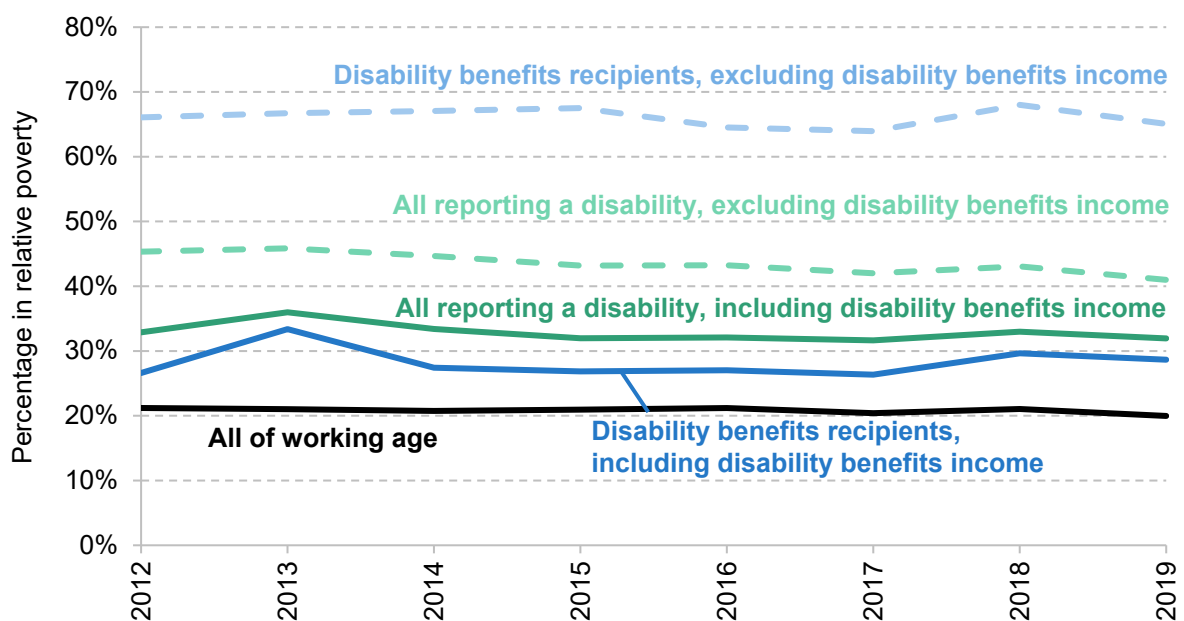
¹⁰ <https://www.theresavilliers.co.uk/sites/www.theresavilliers.co.uk/files/conservativemanifesto2015.pdf>, p. 19.

¹¹ <https://ucrel.lancs.ac.uk/wmatrix/ukmanifestos2017/localpdf/Conservatives.pdf>, p. 57.

¹² <https://www.gov.uk/government/news/government-hits-goal-to-see-a-million-more-disabled-people-in-work>.

Figure 3 shows that rates of relative income poverty have remained relatively stable over the seven years from 2012–13 to 2019–20 during which DLA was gradually replaced by PIP. This is true for all working-age individuals, as well as for those who are disabled and for those in receipt of disability benefits. Comparing levels of relative poverty between groups, the graph illustrates that poverty rates are significantly higher among disabled people than among all working-age individuals; in 2019–20, 32% of those reporting a disability were living in relative income poverty compared with 20% among all working-age individuals. The gap between poverty rates of all working-age individuals and those who are in receipt of disability benefits is slightly smaller – in 2019–20, 29% of disability benefits recipients had incomes below the relative poverty line.

Figure 3. Rates of relative income poverty, financial years 2012–13 to 2019–20



Note: Income poverty is defined as having equivalised household income (after housing costs) below 60% of contemporaneous median income. For the ‘excluding disability benefits income’ series, the income poverty line used is based on median income after deducting disability benefits income.

Source: Authors’ calculations using FRS 2012–13 to 2019–20.

However, comparing total incomes between disabled and non-disabled people is a somewhat distorted comparison, as those who are in receipt of disability benefits are by definition deemed to have higher living costs due to their disability, and will therefore be likely to achieve a lower level of living standards with a given level of income. To make up for this, we can measure poverty rates among

those with a disability after deducting disability benefits from their income. In effect, this measure of relative poverty assumes that the disability benefit exactly offsets the increased cost of living that arises due to disability. Once we exclude disability benefits from the incomes of the disability benefits recipients, the income poverty rates are vastly higher – 41% for all disabled people and 65% for disability benefits recipients in 2019–20.

Some of the large differences in income poverty rates between those who are disabled and the rest of the working-age population are driven by differences in employment rates, especially full-time employment rates. 10% of working-age disability benefits recipients were in full-time paid work and 5% in part-time paid work in 2019–20, compared with 63% and 15% among the whole working-age population. And poverty is strongly related to employment for disability benefits recipients: among those in work, 23% are in poverty (after deducting disability benefits) compared with 73% among those not in paid work. Including income from disability benefits, the figures are 12% and 32% respectively.

Material deprivation

While household income is an important measure of material living standards, the higher costs of living that disabled individuals face limit its usefulness. An alternative is material deprivation. This measures a family's reported inability to afford various important goods and services, and thus provides an alternative measure of living standards which can be used to compare standards of living between households that face different costs of living.

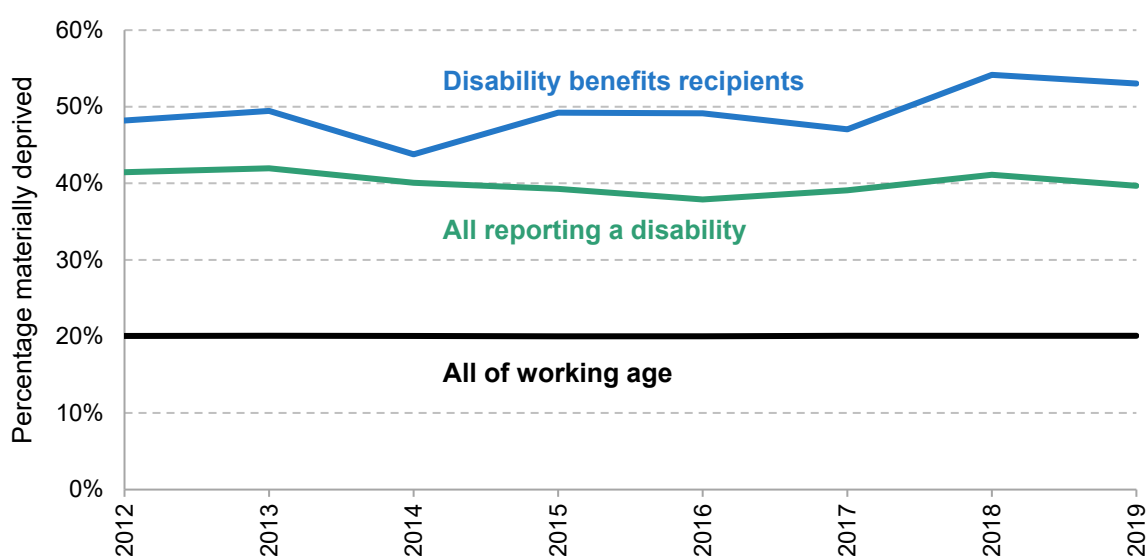
The measure of material deprivation we use is based on whether a household can afford a range of items and activities (e.g. being able to keep accommodation warm, being able to replace worn-out furniture, and being able to go on holiday for at least one week a year).¹³ Each item that the household cannot afford is given a score proportional to the fraction of families who *can* afford the item (i.e. a family is more deprived if it cannot afford an item that almost everyone else can afford, whereas

¹³ We use a measure of material deprivation that only uses the 'adult questions', so that the same score can be used for households with and without children.

being unable to purchase something that only very few can afford does not add as much to the deprivation score). Cribb, Joyce and Phillips (2012) provide a comprehensive description of material deprivation measures.

Figure 4 shows that disability is strongly associated with material deprivation, even more so than differences in income poverty rates would suggest. In 2019–20, 53% of those receiving a disability benefit were in the most materially deprived fifth of the population, as were 40% of those with a disability whether or not in receipt of disability benefits.

Figure 4. Rates of material deprivation, financial years 2012–13 to 2019–20



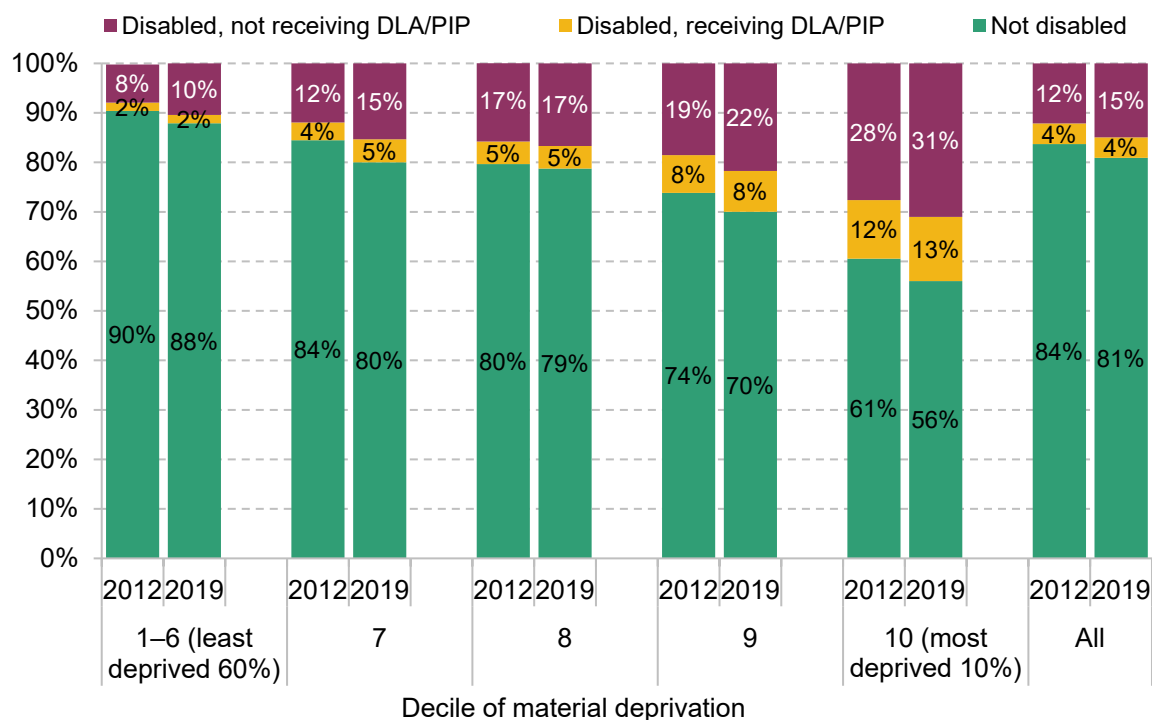
Note: Material deprivation is defined as being in the most 20% materially deprived people in the survey year.

Source: Authors' calculations using FRS 2012–13 to 2019–20.

Figure 5 shows the percentage of people in different parts of the material deprivation distribution with no disability, with a disability but not receiving disability benefits, and with a disability who are receiving disability benefits. Among the least materially deprived 60% of our sample, 12% reported a disability in 2019–20, whereas in the most materially deprived tenth, 44% are disabled. There are more disability benefits recipients as well as disabled people in the later period across the material deprivation distribution, as the size of the yellow and purple bars has increased across all material

deprivation deciles. However, the way in which these benefits are targeted based on material deprivation seems to have stayed relatively stable since before the introduction of PIP in 2013–14 – for example, among those who are disabled and in the most materially deprived decile, the proportion in receipt of disability benefits was 30% in 2012–13 and 29% in 2019–20.

Figure 5. Disability status, by material deprivation score, financial years 2012–13 and 2019–20



Source: Authors’ calculations using FRS 2012–13 and 2019–20.

A critical point to draw from Figure 5 is that there are a large number of deprived people who report being disabled but do not receive a disability benefit – nearly a third of the most deprived tenth of the working-age population are in this category, equivalent to around a million people. Compared with the overall disabled population, in 2019–20 this group were less likely to be in work (41% versus 54%), more likely to be in poverty (68% versus 32%, or 41% for the measure excluding disability benefits for the overall disabled population), less likely to have a degree (23% versus 36%), more likely to be female (58% versus 53%), more likely to be single (58% versus 45%), and on average younger (33% are over the age of 50 compared with 40% among all disabled people). The disabled people not on disability benefits who are in the most materially deprived decile report on average a

very similar number of conditions compared with all disabled people (2.0 and 1.9 conditions respectively), but they are more likely to report mental health issues and less likely to report mobility issues.

A key question is why those who are very materially deprived and report having a disability are not in receipt of disability benefits. It could be simply because their disability does not affect their life to the extent that it would qualify them for disability benefits, but other explanations are also possible. These people may have disabilities that are less likely to qualify for disability benefits, while nonetheless affecting the ability to work.¹⁴ It is also possible that some people in this group are eligible for benefits but do not apply, which could point to more help being needed for individuals in applying for the benefits they are entitled to. Finally, some of these people may be waiting for a decision on their disability benefits – in April 2022, the average clearance time for new disability benefits claims was 20 weeks.¹⁵ The bulk of this wait comes from the time it takes for an assessment provider (a company the government contracts with to do a medical assessment) to perform an assessment and return a decision to DWP. While waiting times peaked at 26 weeks after the pandemic started, even in February 2020 the median waiting time was 20 weeks and had been getting longer over the previous couple of years; in 2018 the average wait time was around three months.

In this section, we have documented trends in the living standards of disabled people and those on disability benefits. Disabled people, and particularly those in receipt of disability benefits, have higher relative income poverty rates than the overall working-age population. We have also found that disability is strongly related to material deprivation, as those with disabilities are substantially over-represented in the most materially deprived groups among the working-age population.

¹⁴ This finding is also consistent with justification bias. Survey questions around personal health may also suffer from bias where the respondent reports having poor health or a disability to justify not being in paid work.

¹⁵ <https://www.gov.uk/government/statistics/personal-independence-payment-statistics-to-april-2022/personal-independence-payment-official-statistics-to-april-2022>.

IV. Health among disability benefits recipients

As discussed in Section I, both the rate of reported disability and the rate of disability benefits receipt have increased within the working-age population in recent years. In this section, we document the severity and kinds of conditions that disabled people have, and how these things have changed over time. Understanding how the health of disability benefits recipients has evolved over the last decade is also important because a key motivation for the government's introduction of PIP was to target government support towards those with the highest medical need. If the targeting of support had shifted as planned, this would have led to disability benefits increasingly being concentrated on those with the poorest health or severest disability.

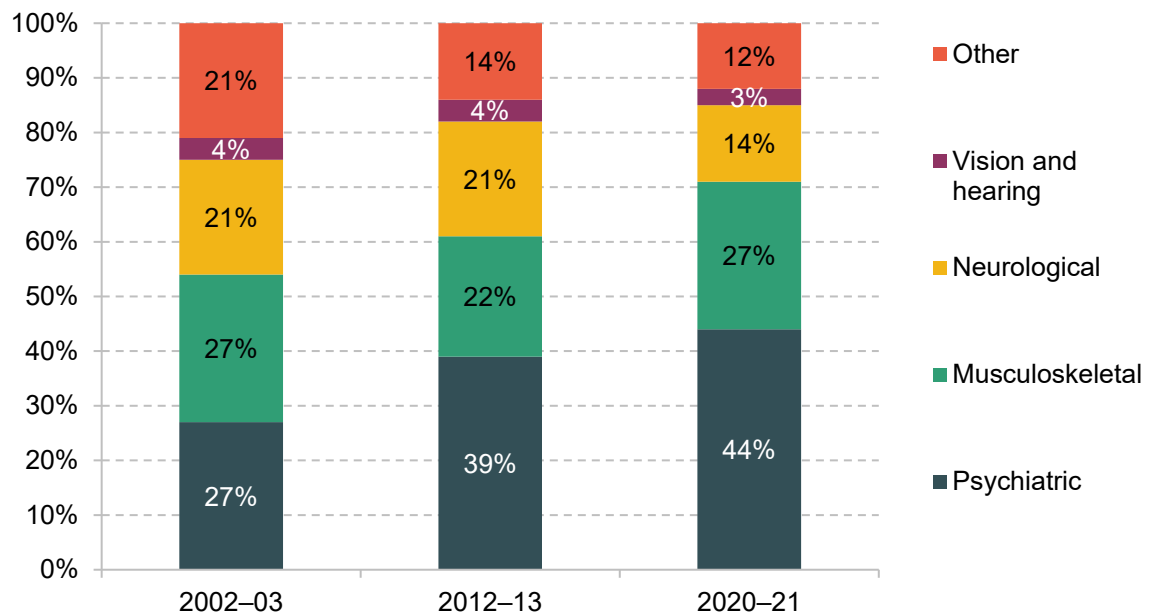
We will first document what kinds of conditions those on disability benefits have. We will then discuss the increase in mental health and social/behavioural conditions both across the whole working-age population and among those who are disabled, and discuss how the disability benefits system has reacted. Finally, we will discuss evidence on how well disability benefits are targeted at the most disabled and whether this has changed over time.

Conditions of disability benefits recipients

Figure 6 shows the percentages of different conditions among disability benefits recipients over time. The information comes from the DWP administrative data on disability benefits recipients, and is based on the main disabling condition that is recorded during a recipient's assessment. The naming of the categories is based on DWP's disability categories.¹⁶ Musculoskeletal conditions include, for example, arthritis and (importantly) back pain. Neurological conditions include conditions that affect the brain, spine or nerves, such as epilepsy, cerebral palsy and multiple sclerosis. Psychiatric conditions include mental health conditions such as anxiety and depressive disorders, as well as learning disabilities.

¹⁶ More detail on DWP's categories can be found at https://stat-explore.dwp.gov.uk/webapi/metadata/PIP_Monthly/Disability.html.

Figure 6. Main disabling condition among disability benefits recipients, by year



Note: The condition is the main disabling condition that the benefit is awarded for.

Source: DWP Stat Xplore (<https://stat-xplore.dwp.gov.uk>).

The figure shows that the proportion of disability benefits recipients with psychiatric conditions as their main disabling condition is increasing steadily over time, from 27% (398,000) of working-age adults in 2002–03 to 39% (720,000) in 2012–13 and 44% (944,000) in 2020–21.

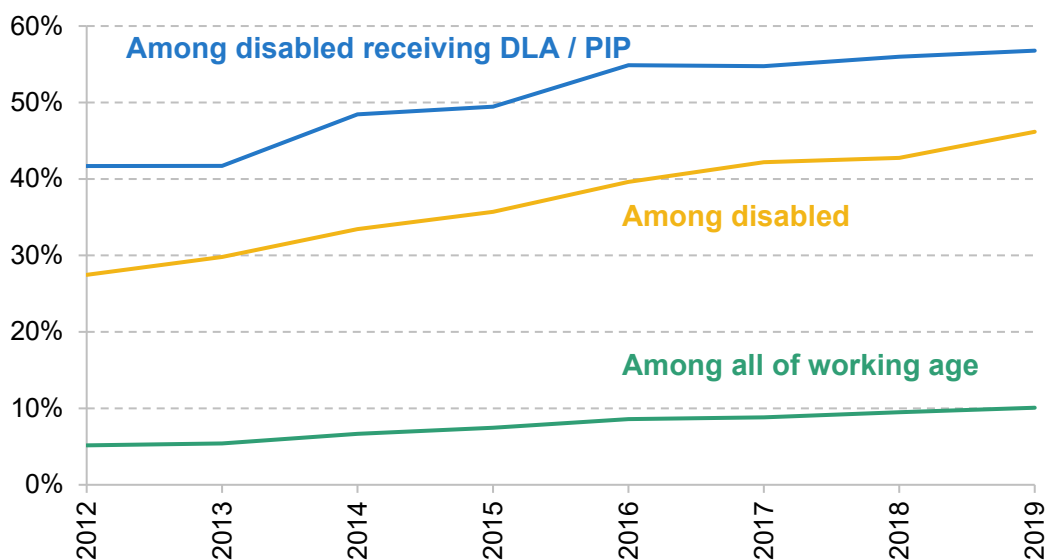
This increase is in line with the previously documented rise of incapacity benefits claims (means-tested benefits targeted largely at those unable to work) due to mental and behavioural disorders.¹⁷ Banks, Blundell and Emmerson (2015) find that the proportion of disability benefits claims due to mental and behavioural disorders among men aged 25–59 increased from 26% in 1999 to 46% in 2014. Since then, this figure has increased further, and in 2020 half of incapacity benefit (employment and support allowance) claims were due to mental health issues (Department for Work and Pensions, 2021).

¹⁷ ‘Incapacity benefits’ refers to incapacity benefit (IB), since 2008 employment and support allowance (ESA) and (more recently) supplements to universal credit.

Mental health and social/behavioural conditions

We now turn to investigate whether the rise in in psychiatric conditions among disability benefits claimants is mirrored in the wider population. For this, we need to return to FRS survey data. There is an important difference between the administrative and survey data: FRS respondents can report multiple conditions, whereas in administrative benefits data claimants are categorised by their ‘main’ condition. As a result, the share of disability benefits claimants with a mental health or social/behavioural conditions in the FRS is higher than the share with a psychiatric condition in administrative data.

Figure 7. Share of people reporting a mental health issue or social/behavioural impairment, financial years 2012–13 to 2019–20



Source: Authors’ calculations using FRS 2012–13 to 2019–20.

Figure 7 shows the rate of mental health conditions or social/behavioural impairment among different groups between 2012–13 and 2019–20. As well as the rise among disability benefits recipients already documented in the administrative data, we also see similar increases among all disabled people (from 27% to 46%) and in the overall population (from 5% to 10%). While household survey data rely on self-reporting of conditions, which can be subjective, data from the Adult Psychiatric Morbidity Survey – which uses a more objective measure (Clinical Interview Schedule, CIS-R) to represent

neurotic symptoms – show the prevalence of common mental disorder symptoms in working-age adults rising from 14.1% in 1993 to 16.3% in 2000 and further to 17.5% in 2014, with rates of severe common mental disorder symptoms increasing from 6.9% in 1993 to 7.9% in 2000 and to 9.3% in 2014 (McManus et al., 2016).

While mental health and social/behavioural conditions have been rising among each of these groups, the rate of increase has been slowest among disability benefits recipients and fastest among the whole working-age population, albeit from a much lower base. This means that a smaller proportion out of those reporting a mental health issue are on disability benefits than previously, even while psychiatric issues make up a larger share of disability benefits claims.

Is the rise in mental health and social/behavioural conditions resulting in people with milder conditions being awarded disability benefits? We provide suggestive evidence on this question by comparing the characteristics of two groups of disabled people reporting a mental health or a social/behavioural condition: those who are in receipt of disability benefits and those who are not. Among those not receiving disability benefits, the proportion who are in employment has increased dramatically, from 35% in 2012–13 to 57% in 2019–20. At the same time, for those with mental health or social/behavioural conditions who are on disability benefits, there has been no clear change in the rate of paid work.¹⁸ This suggests that the screening process for disability benefits continues to select people who, judged only by their employment rate, have as serious conditions as in the past.

The rise in the employment rate among disabled people with mental health or social/behavioural conditions who are not on disability benefits is likely to be driven by a number of factors. First, people with milder conditions may be more willing to report mental health conditions than in the past, as mental health issues are more readily diagnosed and stigma around reporting them is reducing. Second, the rise in mental health conditions may also be disproportionately driven by conditions that tend to be concentrated among people in employment (e.g. work-related stress conditions). Both of these factors could push up the measured employment rate among those with mental health conditions

¹⁸ See Figure A2 in the appendix.

without any given person with a condition being more likely to be in work. Of course, it is also possible that it is genuinely becoming easier for a person with a particular mental health or social/behavioural condition to be employed, if, for example, workplaces are becoming more accommodating to such conditions.

As described in Section II, one of the government's stated objectives relating to employment and disability has been to increase the number of disabled people in work, and we find that the number of disabled people in work has risen from 2.6 million in 2012–13 to 3.7 million in 2019–20. However, as suggested in this section, some of this increase is likely driven by reported mental health and social/behavioural conditions rising among those who are already more likely to be in employment, tending to reduce the employment gap, but in a somewhat artificial way.

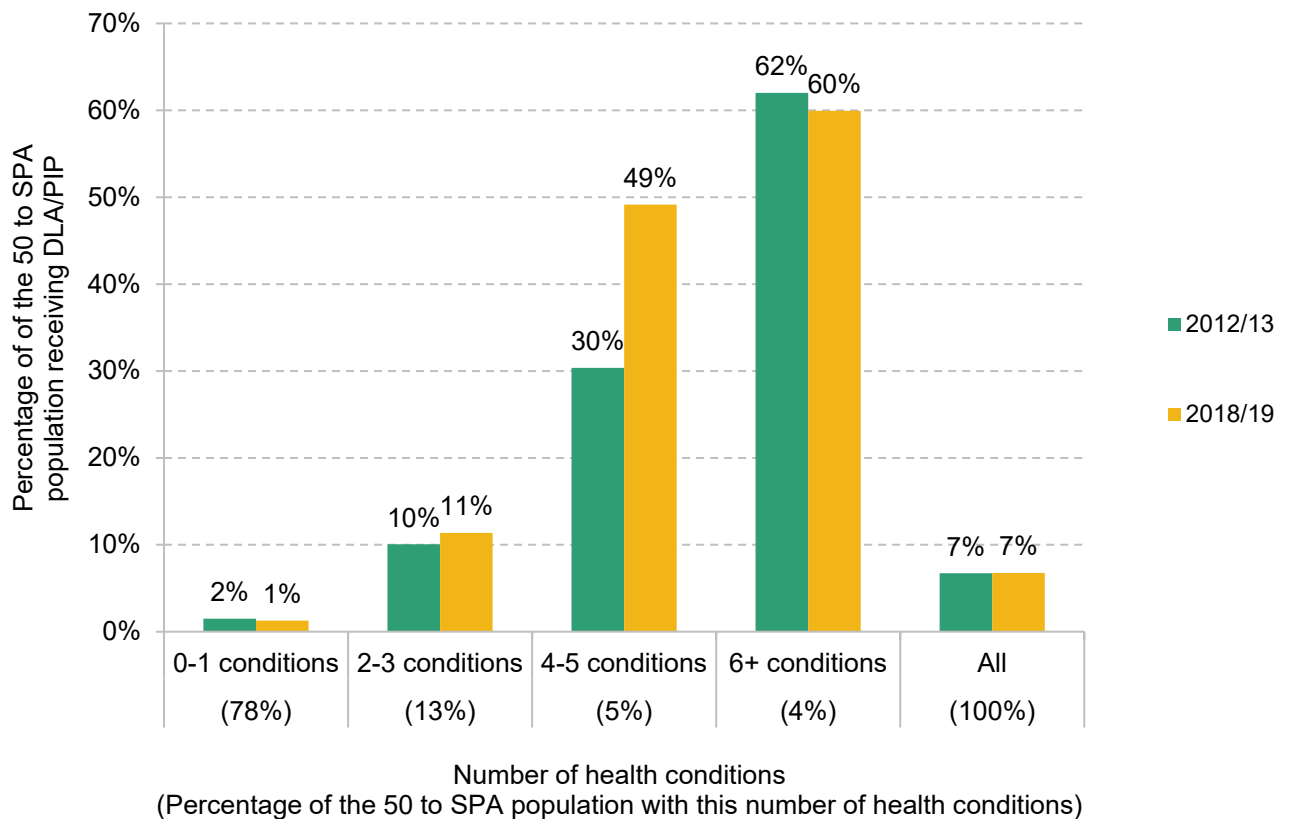
How well are disability benefits targeted at the most disabled?

In order to assess whether receipt of disability benefits is concentrated among particular groups based on health, we can look at older working-age individuals (50- to 64-year-old men and 50- to 59-year-old women) using data from the English Longitudinal Study of Ageing. We use ELSA because there are a large number of health-related questions in the survey that are similar to the kind of things that are assessed in the PIP assessment, which we can use to construct a simple health and mobility index, following Emmerson, Heald and Hood (2014) and Banks, Blundell and Emmerson (2015). The 13 questions we use ask whether the respondent has issues related to mobility (e.g. ability to walk 100 yards, ability to climb a flight of stairs), poor hearing or vision, urinary incontinence, depression, or stress.¹⁹ The questions are not a perfect match to the PIP assessment, and do not capture the intensity of conditions, but this simple count measure gives us an indication of the health of disability benefits recipients over time. In our ELSA sample,²⁰ more than three-quarters (78%) of the people aged between 50 and the pre-2010 state pension ages (60 for women and 65 for men) report zero or one condition, while 4% report six or more.

¹⁹ There is a detailed list of questions in the note to Figure 8.

²⁰ Waves 6 (2012–13) and 9 (2018–19) of ELSA.

Figure 8. Share of those aged 50 to state pension age (SPA) receiving disability benefits, by number of health conditions measured in ELSA, 2012–13 and 2018–19



Note: The health conditions that are counted are: difficulty with walking 100 yards, sitting for two hours, getting up from a chair, climbing one flight of stairs, reaching above shoulder level, lifting more than 10lbs, picking up a 5p coin from a table, recognising a friend across the street, reading newspaper print; fair or poor hearing; incontinence; having a score of at least 4 in a clinical depression scale questionnaire; and having left previous job due to stress. The percentages with each health condition refer to percentages across the pooled data set of ELSA waves 6 and 9.

Source: Authors’ calculations using ELSA waves 6 and 9.

Figure 8 shows the proportions of people in this ELSA sample who receive disability benefits by health and mobility index scores, comparing 2012–13 and 2018–19. It shows that, unsurprisingly, those in poor health are much more likely to receive disability benefits – 60% of the people with the worst health (the least healthy 4%) are in receipt in 2018–19, compared with just 1% among the healthiest 78% of the sample, who have at most one reported health condition.

More interestingly, these results also provide evidence that disability benefits have become more targeted at those in worse health, as the proportion of people receiving disability benefits has

increased most among those with four or five conditions – 49% of those with four or five conditions received disability benefits in 2018–19, compared with 30% in 2012–13.²¹ At the same time, the total share of older working-age people who are on disability benefits has remained the same (7% in both periods). This means that these benefits have become more concentrated on those in poorer health.

In this section, we have documented trends in health and health conditions of disabled people and those on disability benefits. When focusing on older working-age individuals, we see that the likelihood of receiving disability benefits has increased for those with more mobility and health issues, suggesting improved targeting. Across all disability benefits claimants, we find that the rise in claims has been concentrated among those with psychiatric conditions, and we have provided suggestive evidence that this is due to an increase in mental health or social/behavioural conditions among the general working-age population, rather than to disability benefits assessments becoming more lenient towards mental health issues.

V. What happens following a loss or reduction in disability benefits?

People may move off their disability benefits over time, due to a reassessment of their eligibility as they are moved from DLA to PIP, periodic reassessment of fixed-length awards or a self-reported change in circumstances (e.g. if the claimant's condition changes). In particular, some of the motivation for replacing DLA with PIP was to remove disability benefits from people with lower levels of need who were only receiving the lowest level of the care component of DLA. With the removal of most indefinite awards, people receiving PIP are also reassessed more frequently (with nearly four-fifths of new awards to April 2022 being short-term awards of two years or less²²) and, if their health is deemed to have improved, they may either lose or see a reduction in their disability benefits. In this section, we examine what happens to income, income poverty rates, employment and measures of financial well-being when people lose or see a significant reduction in their disability benefits.

²¹ Put another way, in 2012–13, 44% of the bottom 9% of the over-50 working-age population in terms of health and mobility were receiving disability benefits, whereas by 2018–19 this figure had increased to 54%.

²² <https://www.gov.uk/government/statistics/personal-independence-payment-statistics-to-april-2022/personal-independence-payment-official-statistics-to-april-2022>.

We pool together the UK Household Longitudinal Study (UKHLS, 2009 to 2019) and ELSA (2002–03 to 2018–19) for this analysis. These are panel data sets, meaning that we can follow the same individuals over time. With these data, we can implement an ‘event study’ analysis to examine how outcomes change as people see a large reduction in their disability benefits.

Our sample is those who see a reduction or no change in disability benefits during the survey panel. Implicitly, those who never see a change in disability benefits (‘never treated’), and observations from those who have not *yet* seen a change but will in the future, form our control group.²³ Those who see a significant increase are excluded from the sample. We also exclude those who move off disability benefits but report receiving the benefits again in a later period, in case this is driven by measurement error making it incorrectly look as if people (temporarily) lose benefit entitlement. In addition, we exclude any period prior to being on disability benefits, and any observation more than five years before or four years after an event. In total, we observe 1,285 people in the treatment group (those who see a reduction in their benefits at some point over the observation period) and 2,074 in the ‘never treated’ group who are on disability benefits the whole time.

We define an ‘event’ or ‘treatment’ as a 10% or more decline in real benefits from one observation to the next (analogously, we exclude from the sample anyone who has a 10% or more real increase). The majority (62%) of those experiencing such an event during the sample period have their disability benefits reduced to zero. Consequently, the average reduction in benefits for individuals experiencing such events in our study sample is 75%, or around £60 per week.²⁴

As we do not know the exact date of the change, we assume that the loss in benefits occurred at the half-way point between the date of interview at which the respondent reported the decrease in the disability benefit and the previous time they were interviewed (typically, interviews are one year apart in UKHLS and two years apart in ELSA). We define the event of interest as the *first* decline in real

²³ We include the ‘never treated’ control group as it improves precision of estimates and allows us to check robustness of our results using alternative estimation methods.

²⁴ This roughly corresponds to the lower weekly rate of the daily living part (£58.70 in 2019–20) or higher weekly rate of the mobility part (£61.20 in 2019–20) of PIP. More detail on average characteristics of the treatment and control groups before and after the event can be found in Table A1 in the appendix. Note that claimants of out-of-work benefits (typically ESA) sometimes receive a ‘premium’ in that benefit if they also receive a disability benefit. This means that the average total fall in income upon seeing a reduction in disability benefits may be slightly larger than the £60 per week reported here.

benefits, because some individuals losing some but not all of their benefits may still see further declines in their disability benefits in later years.

We estimate a two-way fixed-effects model, where we include individual fixed effects in order to compare changes among individuals, controlling for the impact of any unobserved differences between people that are constant over time. We also control for year of observation using fixed effects. We cluster standard errors at the individual level. The equation we estimate is

$$y_{it} = \alpha_i + \gamma_t + \sum_{-5}^4 1[t + k = e] \beta_k + \epsilon_{it} \quad (1)$$

where y_{it} is the outcome of interest for individual i in calendar time t , α_i are the individual fixed effects which control for all time-invariant characteristics of households, and γ_t are the calendar year fixed effects. e is the date of treatment, so that the dummies given by the indicator function indicate being k periods before or after treatment. These variables are always zero for the ‘never treated’ control group. ϵ_{it} is the idiosyncratic error term. The coefficients of interest, which are presented in the figures, are β_k .

It has become widely understood that in the presence of heterogeneous treatment effects and staggered treatment (especially in the absence of a ‘never treated’ group), the two-way fixed-effects estimation approach can provide misleading estimates of the true treatment effect (e.g. see Athey and Imbens (2022)). This should be less of a problem in our setting, where we have a ‘never treated’ group and no reason to think that treatment effects should substantially vary with treatment timing. Nonetheless, we have confirmed that our results change little if we use the estimator proposed by Callaway and Sant’Anna (2021), which is robust to heterogeneous treatment effects and staggered treatment.²⁵

It is worth keeping in mind that these results should not be interpreted as causal estimates purely as the result of reductions in disability benefits; rather, we are looking to document how outcomes evolve after a reduction in benefits. In particular, people are more likely to see a reduction in their

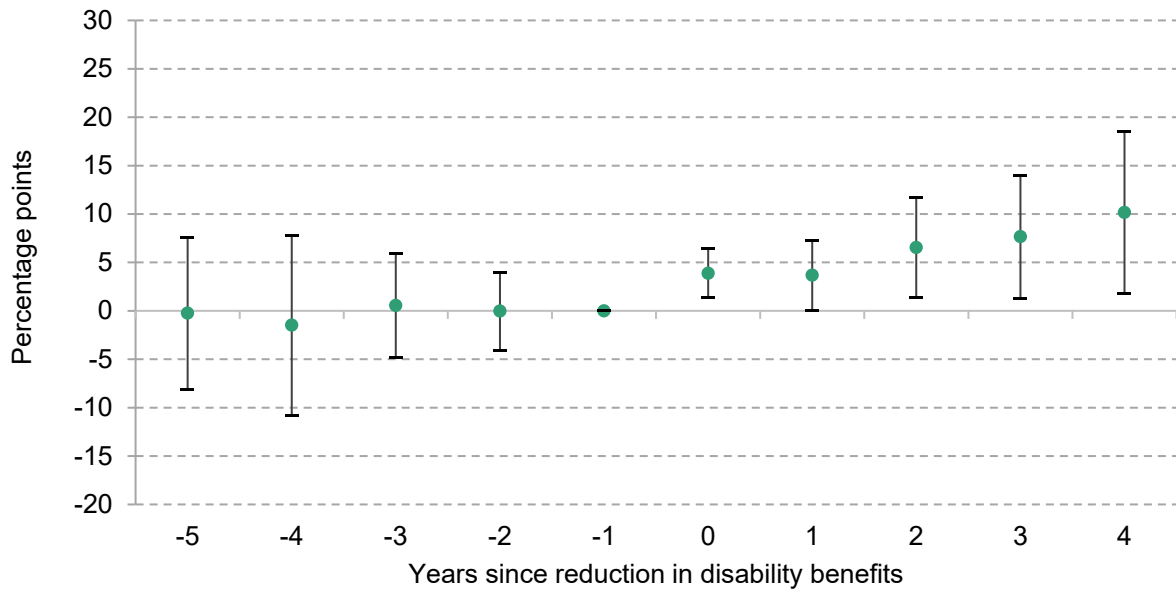
²⁵ Results available upon request to the authors.

disability benefit as their health improves, so outcomes around the loss of benefits are likely to be at least partially driven by changes in health rather than just the loss of disability benefits income. This is true in particular as we only observe respondents every one or two years, meaning that we cannot identify changes in outcomes around the exact dates when the respondents see changes to benefits. However, when using (admittedly imprecise) self-reported measures of health, we do not see evidence of health improving before or after the event, suggesting a causal interpretation of the other results may be more valid than one may have expected.

Figures 9 and 10 show the results of the event studies where the outcome variable is being in employment and being in relative poverty, respectively. The coefficient estimates from this analysis show how average rates of employment and relative poverty changed (relative to the year immediately before the loss of the benefit) for those who saw a reduction in their disability benefits, compared with the change that occurred within the group that did not see a reduction at that point. In other words, the figures show the association between a reduction in benefits and employment or relative poverty, relative to the period before the reduction in benefits, where the horizontal axis shows years since (or until) the reduction in disability benefits.

First, these figures show that there is no evidence of trends prior to the reduction in benefits. This is perhaps surprising as we may expect health to be gradually improving in the periods before the loss of benefits, which could lead to changes in employment status in particular (potentially suggesting that the patterns we see are primarily driven by changes in disability benefits).

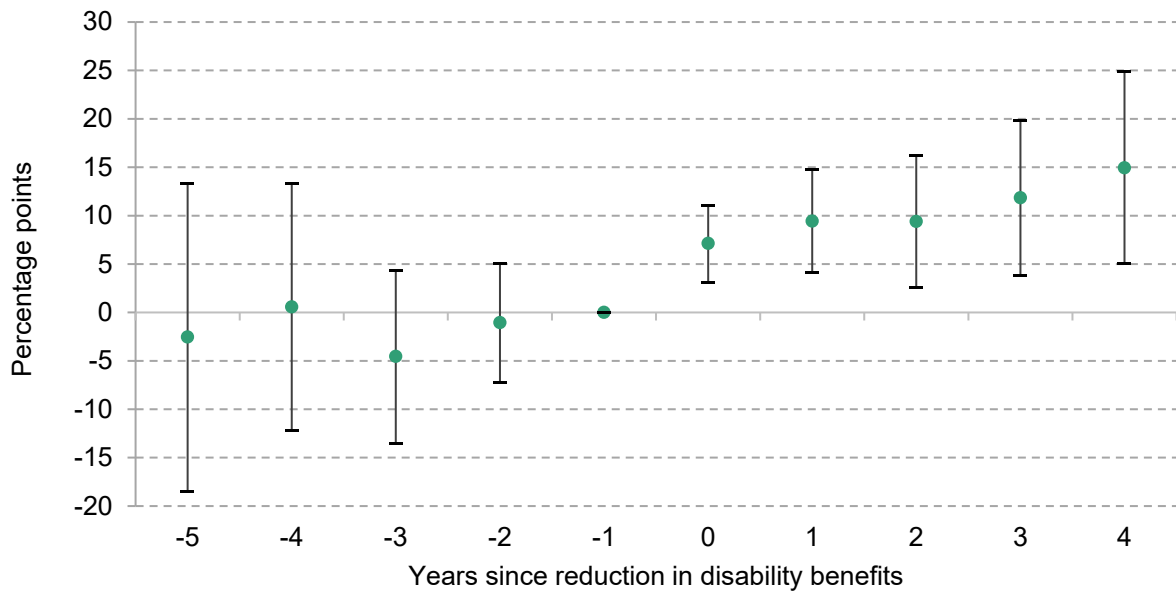
Figure 9. Event study: association between reduction in disability benefits and probability of being in employment, by years since the reduction in disability benefits



Note: Estimated coefficients from an event study detailed in the text. Outcome variable is a dummy for being in employment. Estimation includes individual fixed effects and controls for year of observation. The bars indicate 95% confidence intervals.

Source: Authors' calculations using UKHLS and ELSA.

Figure 10. Event study: association between reduction in disability benefits and probability of being in relative poverty, by years since the reduction in disability benefits



Note: Estimated coefficients from an event study detailed in the text. Outcome variable is a dummy for being in relative income poverty. Estimation includes individual fixed effects and controls for year of observation. The bars indicate the 95% confidence intervals.

Source: Authors' calculations using UKHLS and ELSA.

Second, following the reduction in disability benefits, we see immediate increases in both employment and poverty. A reduction in disability benefits is associated with a 4 percentage point increase in the likelihood of being in employment and with a 7 percentage point increase in likelihood of being in relative poverty in the year immediately following the event. Both of these associations are statistically significantly different from zero at the 5% level.

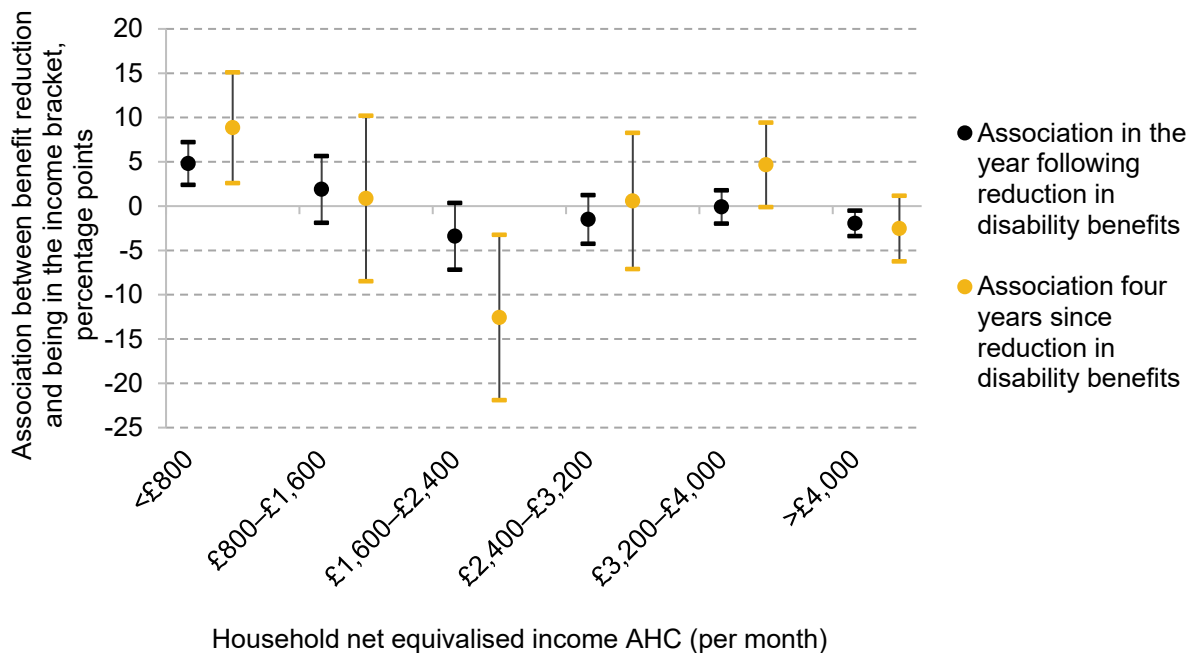
Finally, both of these associations persist and, in fact, increase over time. Four years after the event, the likelihood of being in paid work is 10 percentage points higher and the likelihood of being in relative poverty is 15 percentage points higher for those who saw a reduction in their benefits. These associations are also statistically significant, although less precisely estimated. There are a number of potential reasons for why the poverty rates remain high in the later periods even when employment rates (which we may have expected to push down poverty rates) are 10 percentage points higher.

First, increased employment following a reduction in disability benefits is mostly driven by an increase in part-time work, rather than full-time work, as shown in Figure A3 in the appendix, limiting the increase in income. Second, those disability benefits recipients who were out of work and in poverty may have been receiving means-tested benefits such as universal credit (and its predecessors), so they likely would have faced high participation tax rates when moving into work. This means that moving into work may deliver only a small increase in net income. Finally, we find disability benefits are on average reduced further after the event (by an additional £52 per month), and this further reduction may push up poverty rates.

In addition to looking at the relative income poverty line cut-off, we can also examine other parts of the income distribution. This is a very similar exercise to before, except that rather than the outcome variable being a dummy for being in poverty, it is a dummy for having a household income (equivalised net income after housing costs (AHC)) in a given range, e.g. £800–1,600 per month. These cash amounts are expressed in real terms (i.e. in 2020 prices). We can interpret the coefficients from these regressions as the association between reduction in benefits and the probability of being in these different income brackets. Below we show the coefficients from the regressions in the year immediately following the event and four years after the event.

Figure 11 shows that in the year following a reduction in benefits, there is a 5 percentage point increase in the likelihood of having income of less than £800 per month, and a smaller (positive) change in the likelihood of having an income of £800–1,600 per month. The relative income poverty line is approximately £1,150, so roughly in the middle of the second category. This means that the increase in relative income poverty that we saw in Figure 10 is, to a significant extent, coming from fairly ‘deep’ levels of income poverty.

Figure 11. Event study: association between reduction in disability benefits and being in different income brackets, in the year following and four years after the reduction in disability benefits



Note: Estimated coefficients from an event study detailed in the text. Outcome variables are dummies that take the value 1 if the monthly net equivalised household income (after housing costs) is in the range depicted on the x-axis, and 0 otherwise. Estimation includes individual fixed effects and controls for year of observation. The bars indicate 95% confidence intervals. Cash amounts are expressed in 2020 prices.

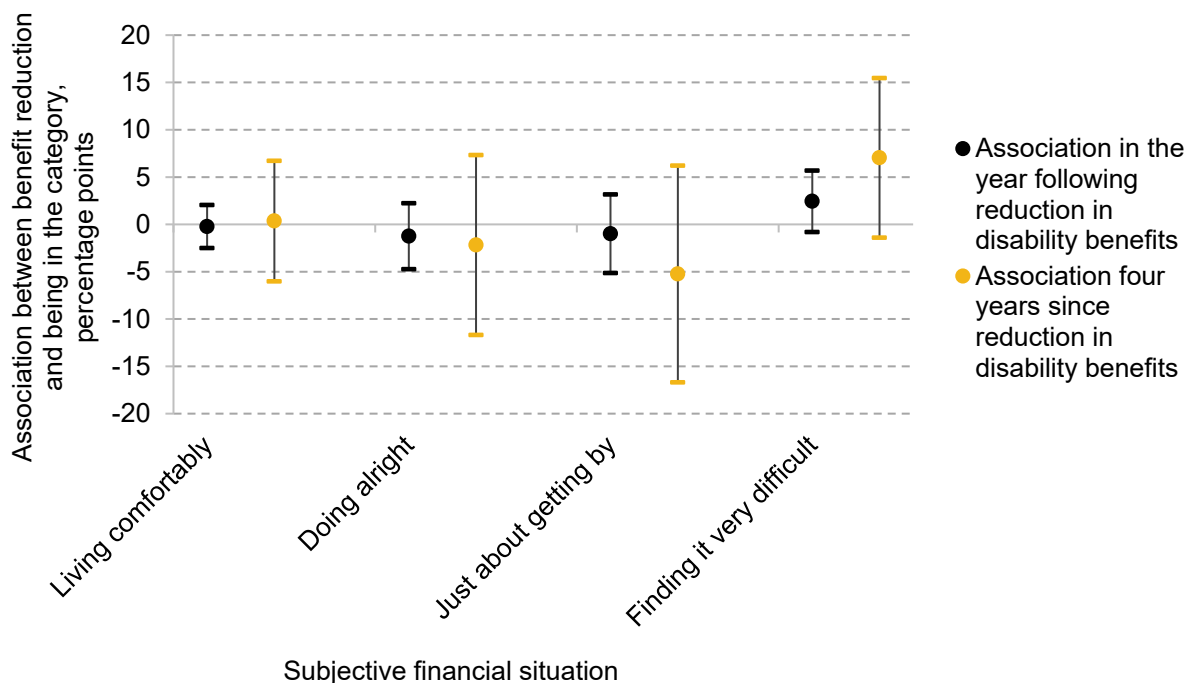
Source: Authors’ calculations using UKHLS and ELSA.

Comparing the results immediately after treatment and four years after treatment, we again find that the relationship between a reduction in benefits and income level is persistent, with the increase in poverty even more clearly being driven by the ‘deep’ poverty category. The likelihood of having an income between £3,200 and £4,000 a month is also slightly higher (significant at the 10% but not 5%

level) – this may be related to the fact that the likelihood of being in work increases over time after the loss of benefits, with the largest association seen four years after the event.

As discussed in Section III, there are some downsides to using household income as a measure of living standards for many disabled people. A similar problem is in play when comparing outcomes over time during a window when the health of some disabled people may be improving (i.e. those who end up seeing a reduction in their disability benefits). UKHLS and ELSA contain (very similar) questions on the respondent’s subjective financial situation. This helps capture aspects of their living standards beyond just total income, as reductions in health-related costs would (all else equal) tend to improve a person’s financial situation even if their income stayed the same. We repeat the same exercise as before, but where the outcome variable is a dummy indicating whether the respondent assesses their own financial situation as ‘living comfortably’, ‘doing alright’, ‘just about getting by’ or ‘finding it very difficult’. We report the event study coefficients of these four regressions.

Figure 12. Event study: association between reduction in disability benefits and self-reported financial situation, in the year following and four years after the reduction in disability benefits



Note: Estimated associations from an event study detailed in the text. Outcome variables are dummies that take the value 1 if the respondent gives the answer indicated on the x-axis to a question on their subjective financial situation, and 0 otherwise. Estimation includes individual fixed effects and controls for year of observation. The bars indicate 95% confidence intervals.

Source: Authors’ calculations using UKHLS and ELSA.

As Figure 12 shows, we find little evidence of a sizeable association between a reduction in disability benefits and changes in the likelihood of reporting financial difficulties, either immediately after or four years after the event.²⁶ This might be somewhat surprising given the large changes in rates of poverty and reductions in income that we do find. However, these results are consistent with the idea that the health-related costs of living decline around the time that benefits are reduced, meaning that recipients' standards of living have not changed as much as the changes in poverty rates would suggest. This provides some evidence that the reassessment process is successful in reducing support when it is no longer needed.²⁷

VI. Conclusion

In this paper, we have examined the living standards of working-age disability benefits recipients in the UK over a period when the disability benefits system went through significant changes, with the phasing out of DLA and introduction of PIP. This reform was designed to reduce eligibility for those with less severe disabilities and cut disability benefits spending, though in fact spending markedly increased over the period. We briefly conclude with some implications of our results for policymakers.

Assessing the relationship between living standards and disability is challenging, because those who are disabled are likely to have higher living costs in a way that is difficult to observe. Even ignoring this, income poverty rates are meaningfully higher for the disabled population and disability benefits recipients than they are for the wider working-age population. But when we look at indicators of material deprivation, the relationship becomes starker. Among the most deprived tenth of the population, nearly half are disabled, and nearly a third are disabled and not in receipt of disability benefits. There are important questions for government here – are these materially deprived disabled

²⁶ Although the 'finding it very difficult' coefficient is somewhat larger – though still not statistically significant – four years after the reduction in disability benefits, we suspect this is primarily noise: we see no similarly sized association zero, one, two or three years after the event.

²⁷ We also experimented with event studies assessing the association with food spending, as cutting back on food could be another indicator of deprivation. Unfortunately, the results were difficult to interpret – the point estimates suggested that food spending declined in the years leading up to a reduction in disability benefits, and continued to do so afterwards in a fairly linear manner, though generally coefficients were not statistically significant. We do not see these sorts of 'pre-trends' in any of our other outcomes. We have not included these results as their interpretation is not clear.

people who do not receive benefits for their disability ineligible, or are they eligible but for some reason do not apply? If the former, there is a question about whether the scope of disability benefits should be widened; if the latter, then there is a question about how to best reach those that the system is intended to help. A third possibility is that some of those people may also be waiting for the outcome of a new claim, with the average clearance time from starting a claim now approximately five months. Speeding up the administration of the claims process is likely to come with trade-offs (perhaps requiring more expenditure, or coming at the cost of worse targeting), but if the delay is causing a period of fairly intense material deprivation for claimants, it would be worth policymakers considering whether they have struck the right balance.

The health conditions of disability benefits recipients have changed over time, with a marked increase in psychiatric conditions over the last two decades, a rise that is mirrored across the population as a whole. We have provided some suggestive evidence that the screening of applicants with mental health and social/behavioural problems has not become any more or less lenient over time, suggesting that the disability benefits system continues to restrict support to those with the most severe mental health and social/behavioural problems. However, if the long-term rise in mental health problems continues – and, indeed, is even hastened by the pandemic (e.g. see Banks and Xu (2020)) – then (absent policy change) it will add further pressure to disability benefits spending.

A key goal for the government with the replacement of DLA with PIP was to target support more towards those with higher levels of medical need. When looking at older (50+) working-age individuals specifically, the distribution of support has shifted towards those in relatively poor health, providing some evidence that this goal from the DLA to PIP transition has been achieved (though we cannot say how much would have happened anyway if there had been no reform). It would be worth continuing to monitor this as more recent data after the end of the PIP roll-out become available.

Another important aspect of the DLA to PIP transition was to have more frequent reassessments. Making the right decisions in those reassessments is not likely to be an easy task. We find that a reduction in disability benefits is associated with an increase in the likelihood of being in paid work,

and this association grows over time. This is consistent with people losing their disability benefits as their health improves and they are more able to move into paid work, or with people being pushed into employment as their disability benefit income falls. Using (natural) experiments – potentially possible with the government’s administrative benefits data – to assess the contribution of these two effects would be very valuable for policymakers. Despite the increase in employment (largely part-time employment), we find that a reduction in disability benefits is also associated with an increase in the likelihood of being in relative poverty, which persists even four years after the event. Nonetheless, it does not seem that reductions in disability benefits are associated with significant numbers of claimants perceiving their financial situation as deteriorating, perhaps because their disability-related costs are declining around the same time as they lose their disability benefits. This provides some evidence that the reassessment process is successful in reducing support when it is no longer needed, and policymakers would do well to ensure that this pattern continues.

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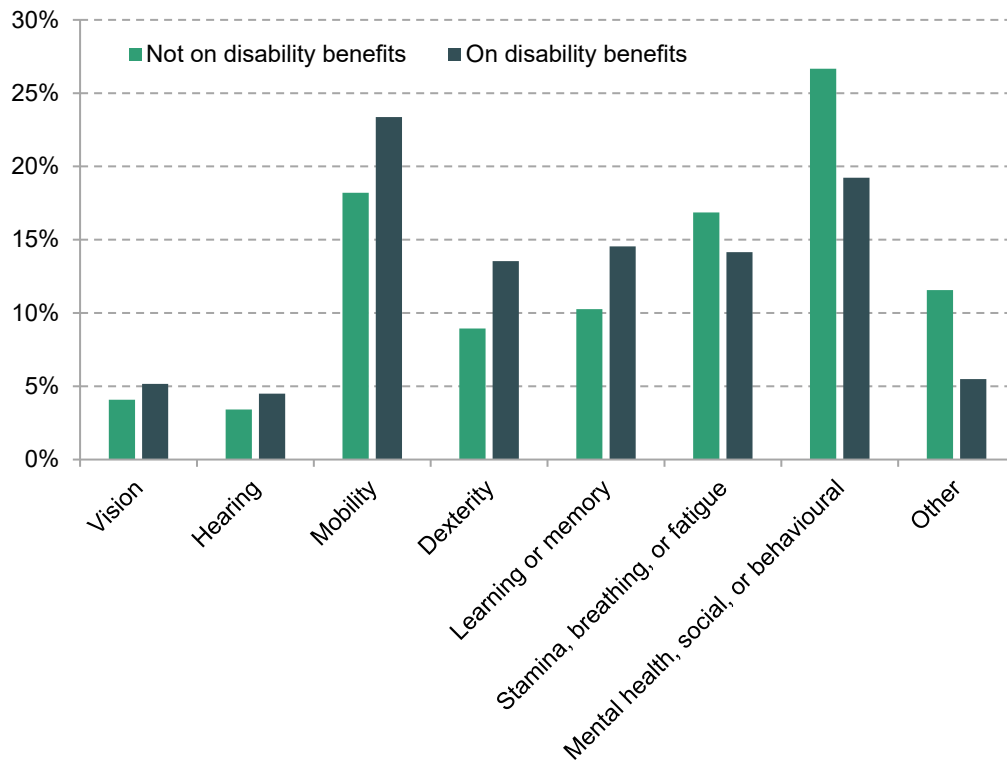
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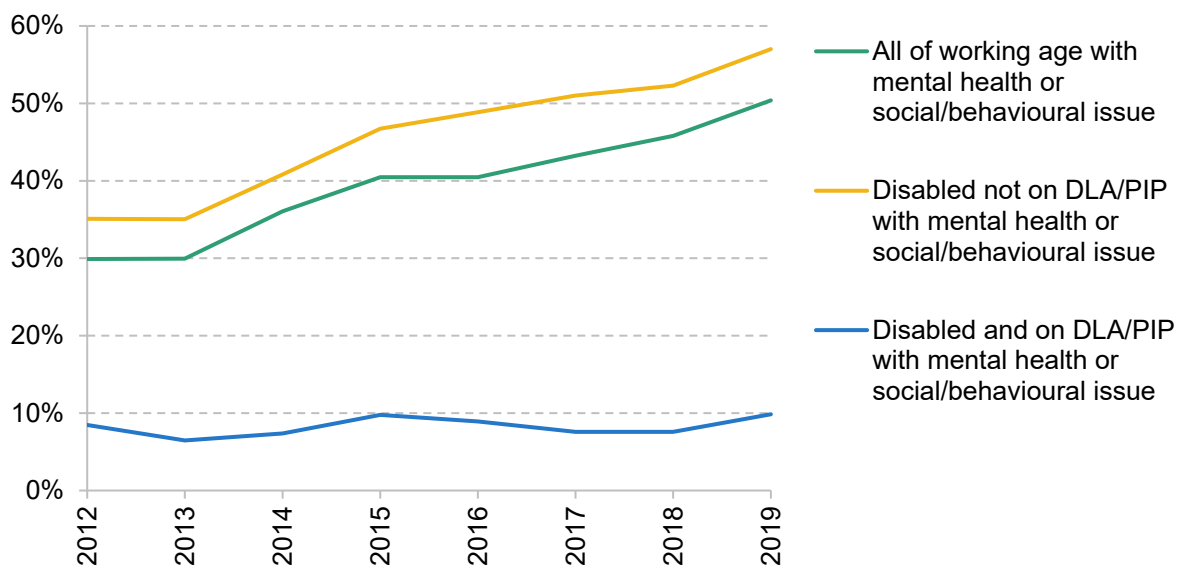
Appendix. Additional figures and table

Figure A1. Share of conditions out of all conditions reported



Source: Authors' calculations using FRS 2019–20.

Figure A2. Share of particular groups in paid work, financial years 2012–13 to 2019–20



Source: Authors' calculations using FRS 2012–13 to 2019–20.

Table A1. Average characteristics of the event study treatment and control groups by time from treatment

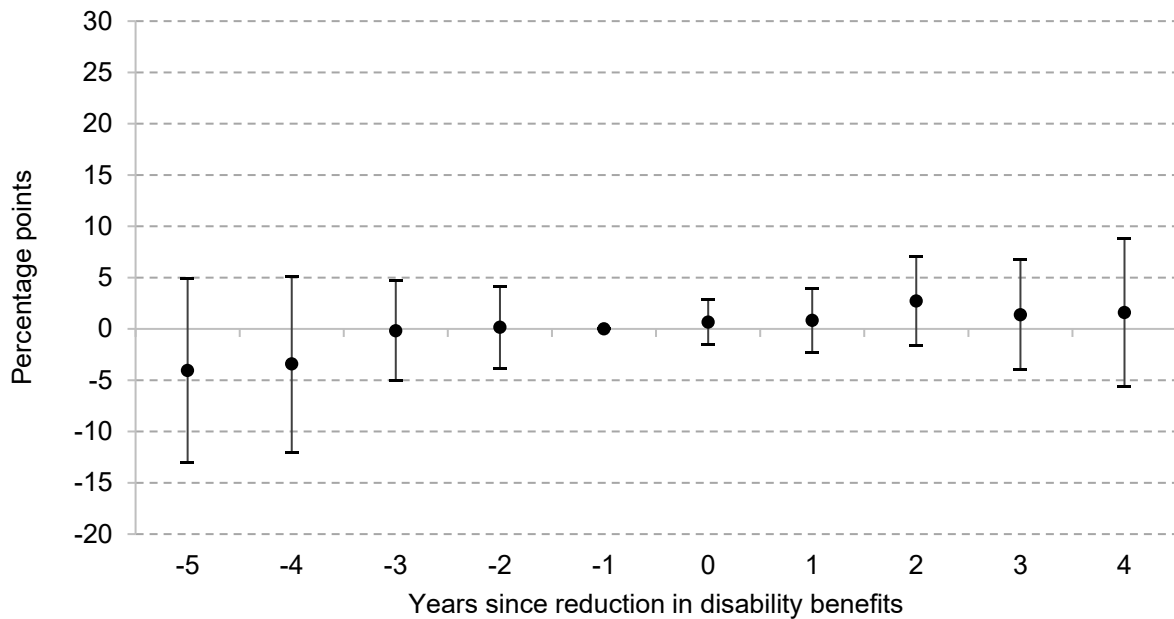
	Treatment group									Control group
	-4	-3	-2	-1	0	1	2	3	4	
Years since reduction in DLA or PIP										
In paid work	30%	31%	30%	30%	34%	38%	46%	48%	53%	19%
In relative poverty	23%	16%	20%	19%	24%	26%	25%	28%	28%	21%
Household income (£ per month)	1,709	1,964	1,881	1,993	1,833	1,812	1,878	1,823	1,907	1,879
<i>Subjective financial status</i>										
Doing well	9%	8%	11%	12%	12%	13%	15%	13%	14%	13%
Doing alright	25%	33%	30%	28%	28%	29%	29%	33%	29%	28%
Just about getting by	43%	43%	39%	36%	36%	37%	36%	37%	32%	39%
Finding it very difficult	23%	15%	20%	23%	24%	21%	20%	18%	24%	20%
Receiving DLA or PIP for 4+yrs	22%	19%	13%	6%	5%	9%	18%	11%	7%	13%
Average % change in benefits	1%	0%	0%	0%	-75%	-57%	-38%	-39%	-23%	0%
% with no disability benefits	0%	0%	0%	0%	62%	72%	82%	89%	93%	0%

Note: Treatment group is those who experience a reduction in their disability benefits over the observation period. Control group is those who are on DLA or PIP throughout the period.

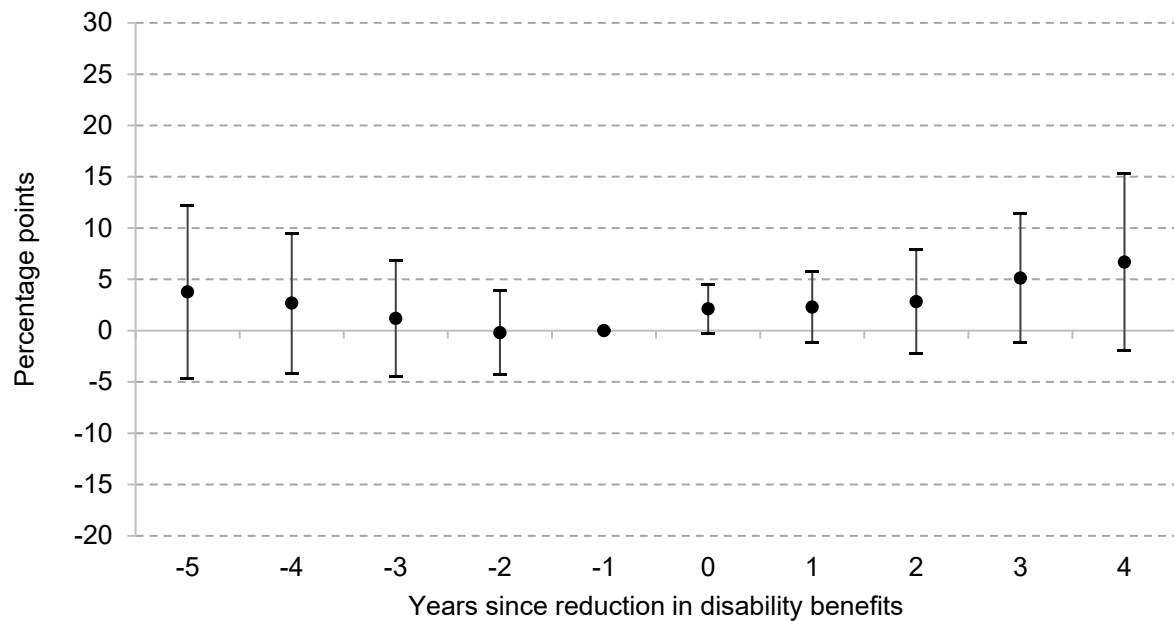
Source: Authors' calculations using UKHLS and ELSA.

Figure A3. Event study: association between reduction in disability benefits and probability of being in full-time and part-time employment, by years since the reduction in disability benefits

Full-time employment



Part-time employment



Note: Estimated associations from an event study detailed in Section V. Outcome variables are dummy variables taking the value 1 if in full-time (respectively part-time) work, and 0 otherwise. Part-time work is defined as working less than 30 hours per week. The estimation includes individual fixed effects and controls for year of observation. The bars indicate the 95% confidence intervals.

Source: Authors' calculations using UKHLS and ELSA.