Independent Age

The cost of pensioner poverty and non-take-up of Pension Credit

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1. Introduction

1.1 Background

The cost of poverty to the public purse can stem from a number of different sources, with higher poverty levels leading to increased spending in various domains. This encompasses both additional spending due to the adverse consequences of poverty and the costs of public service interventions that aim to avoid or ameliorate these adverse consequences. This could include costs of social housing, increased spending on policing and criminal justice, and increased costs of schooling and child services for children from disadvantaged backgrounds. However, for pensioners, who are the focus of this report, these increased costs are most likely to come from adverse consequences for health and the need for social care that are associated with poverty in later life.

This report examines evidence of associations between higher spending on health and social care and low income in later life. It produces an overall estimate of how much public spending can be associated with the difference between the current income of those who do not claim Pension Credit but are eligible, and their incomes were they to claim. Like other estimates of this type (notably Bramley et al., 2016), it does not identify a direct causal link between low income and high spending, but rather observes the extent to which the two go together. This shows where there is potential for reducing service costs by improving incomes. The evidence for this potential comes from a wealth of other research evidence demonstrating causal links between low income and poor health (summarised in Bramley et al., page 12). However, while our calculation thus illustrates the scale of savings that could potentially be made, it does not demonstrate how much of these savings would directly follow from the increase in incomes.

To provide some context for our proposed analysis, below we summarise what is already known about patterns and explanations of health inequalities in later life, particularly as they relate to income. We then go on to consider previous research that has attempted to estimate the wider costs of poverty and inequality.

1.2 Health inequalities in later life

There is an extensive literature discussing social determinants of health in later life. In this analysis, we have focused on the consequences of having a low income in older age, specifically the implications for public spending on health and social care spending, and the role of Pension Credit (PC) in this relationship.

A common approach to evaluating health inequalities is to consider differences in life expectancy and healthy life expectancy. Evidence reported in the recent Marmot review (2020) shows the strong gradient in life expectancy and healthy life expectancy associated with area deprivation. People living in areas with more disadvantage on average live shorter lives, and spend more of that short life in poor health (Marmot, 2020). Further evidence on such area-level differences suggest that local indicators of deprivation show the strongest association with health outcomes for individuals who are socioeconomically disadvantaged but are less important for those who are relatively advantaged (Howse et al., 2011; Luben et al., 2019).

There is much evidence that income and deprivation relate strongly to more specific health outcomes in later life. A useful assessment of the literature on inequality in later life was published in 2017 by the Centre for Ageing Better (Scharf et al., 2017). The report includes an extensive review of the evidence on inequalities in later life, including inequalities in physical and mental health and life expectancy, and financial insecurity. The authors note that income and wealth, but also age, sex and ethnicity are important determinants of morbidity and mortality (Scharf et al., 2017). However, there is also evidence that health inequalities in later life may be narrower than in working-age populations, particularly in the oldest-old, due in part to selective survival – i.e. the fact that those on low incomes who live to be old are likely to have better than average underlying attributes affecting health (e.g. Banks et al., 2010).

Other domains of health inequality may also interact with income and deprivation, in particular sex and ethnicity. While women notably have higher life expectancy than men, their health expectancy (years of healthy life) is similar (Office for National Statistics, 2019), which means that women are living more years in poor health than men. This is sometimes called the health/survival paradox and is thought to relate to: the fact that women have more non-fatal acute and chronic conditions; the higher prevalence of risk-taking behaviour in men; and fundamental biological factors such as genetics, hormones and the immune system. In turn, Scharf et al. (2017) report that previous research on inequalities in financial insecurity in later life has focussed strongly on sex differences, highlighting the structural features of the labour market that mean older women are generally more vulnerable to financial difficulties than older men, especially previously partnered women who go on to live alone.

Among men, migrants and those from minority ethnic communities are identified as being less likely to achieve adequate pension savings. There is also evidence that ethnic inequalities in health in the UK increase substantially with age (Evandrou et al., 2016). This could reflect the accumulation of risks over the life course and the long-term consequences of exposure to hazards (such as socioeconomic disadvantage, poor healthcare experience and racial discrimination) in early life.

1.3 Measuring the wider costs of poverty and inequality: Previous research and the present study's main approach

This project builds upon work by Bramley, Hirsch and colleagues that aimed to quantify the relationship between poverty and higher public spending (Bramley et al., 2016). Controlling for a range of characteristics of people by area, the study considered how much more, on average, was spent per head on each service for each additional person with low income living in that area. The research estimated that the cost of poverty to society attributable to health and social care was around £32 billion.

To our knowledge, there is little other research that focuses specifically on the societal costs of pensioner poverty in financial terms in the UK. However, some interesting findings have been produced by at the Centre for Health Economics (University of York) that relate specifically to healthcare. Asaria and colleagues (2016) combined hospital episodes statistics for 2011/2012 with data from the Index of Multiple Deprivation (IMD) at the most local level (lower super output area) to estimate cumulative lifetime healthcare costs for different population sub-groups. Based on modelled survival curves, the authors observed a steep social gradient in overall inpatient hospital admissions and in lifetime costs. Importantly, lower life expectancy outweighed the higher average costs in the more deprived populations in determining the cost of healthcare over the lifetime.

In a more recent analysis, Jayatunga and colleagues (2019) used a linked electronic health record data set for Kent to estimate patient-level costs from activity data for the financial year 2016/17. Mean costs were calculated for each area deprivation quintile based on the index of multiple deprivation of the neighbourhood in which the patient lived. The authors concluded that health inequalities in the population older than 55 years in Kent are associated with health and social care costs of £109m. However, this study was limited to the Kent area, and estimated the effect of the overall variation by area deprivation level, rather than the amount attributable to some people being on very low incomes below the Pension Credit threshold.

The present study uses two types of evidence, from national survey data and from local administrative data, to identify links between low income and greater public service use and hence costs. The administrative data analysis follows the same principles as Bramley et al. (2016), making inferences from the greater number of people on Pension Credit in areas with higher spending. The survey data provides a corroborating source, looking at the relationship through national household-level surveys in which individual incomes of members of the survey sample can be compared with their self-reports of service use and health condition.

The most important difference from the earlier work is that the present analysis seeks to make a more focused income comparison. Bramley et al. (2016) looked at the difference between people being in poverty and not in poverty. The present analysis considers the difference it would make if eligible non-claimants of Pension Credit started to claim. This means that the relevant comparison is between the present incomes of that group, which is substantially below the poverty line, and their prospective incomes were they to claim, which is typically quite close to the poverty line. The data do not allow us to make this comparison directly. Instead, we make those comparisons based on incomes that are possible, and use this to deduce the difference over the income range that we are interested in, based on general evidence referred to above that there is a continuous 'social gradient' whereby health outcomes improve steadily with every increase in income. Specifically, we compare outcomes for people on Pension Credit to those not on Pension Credit; note the average income difference between those two groups; use this to calculate how much outcomes and costs vary for a given change in income; and apply this difference to the average income change associated with an eligible non-claimant starting to claim Pension Credit. In order to be able to make these comparisons and to think about how our calculations relate to the pensioner income distribution, we start by analysing the income of pensioners claiming and not claiming Pension Credit, using the Family Resources Survey.

2 Estimating the cost of non-take-up

We have estimated the cost of non-take-up of Pension Credit through the following steps:

1. We estimate the impact of full Pension Credit take-up on household incomes, compared to the existing income distribution, using income survey data.
2. We observe differences in the use of health and social care services by people on different incomes, using survey data. Looking at additional usage by people on lower incomes, in combination with the increase in incomes associated with greater Pension Credit take-up, we estimate how much could be saved in service spending as a consequence of those income increases.
3. As a second means of making this estimate, we observe differences in health and social care expenditure in small geographical areas with relatively higher and lower numbers of pensioners on low incomes. From this we estimate the service cost associated with a given income difference, and again combine this with the increase in income associated with greater Pension Credit take-up, to produce another estimate of potential savings in expenditure that could result.
4. We note that while each of these estimates has its limitations, they each produce useful information, and suggest how they should be interpreted in combination.

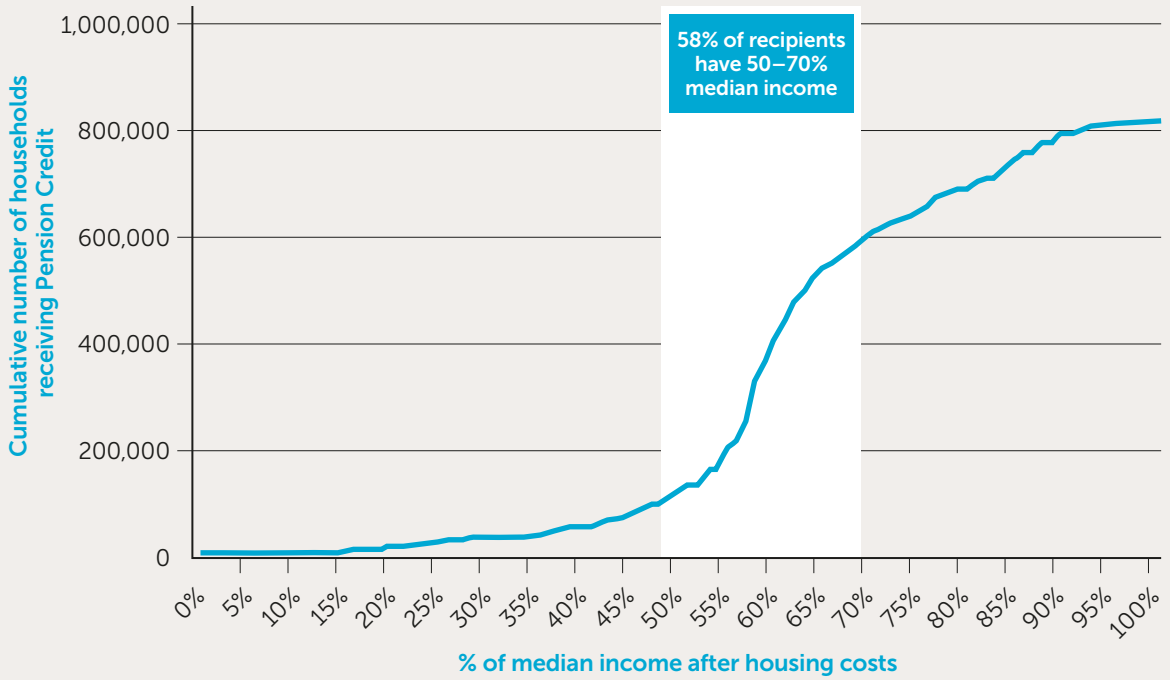
2.1 Estimating the impact of Pension Credit take-up on incomes

In the first stage of the analysis, we estimate the effect on pensioners' incomes of everyone who is eligible claiming Pension Credit. We make this estimate using survey data to observe the incomes of those who are not claiming and are below the average income of claimants, and calculating what top-up they should be entitled to.

We use data from the 2017-18 Family Resources Survey (FRS). Although this is not the most recent version of the survey, it corresponds to the most recent estimates on take-up of Pension Credit from the DWP, to which it can be matched.

The FRS data shows that the average income of people on Pension Credit, 'equivalised' for household size, is very close to the conventional poverty line of 60% of median income, after housing costs. In fact, most pensioners on Pension Credit (58%) have between 50% and 70% of median income. Figure 2.1 shows the distribution of Pension Credit recipients' incomes. Note that while it shows that some have incomes significantly above 60% of median, the means-tested nature of Pension Credit suggests that this reflects those sources of income that the means test disregards. Most notably, the means-test disregards disability-related benefits that reflect additional costs associated with disability. Such recipients may therefore be no better off than people on lower incomes without those costs.

Figure 2.1: Cumulative distribution of households (benefit units) receiving Pension Credit, by household % of median income



Turning to non-recipients of Pension Credit, the income survey cannot show definitively who is eligible, but we make the initial assumption that anyone not claiming who has below 60% median income is an eligible non-claimant. This not only corresponds with evidence, shown below, that when pensioners do claim their income is topped up to around this level, but also to the fact that there are 1.01 million eligible non-claimants estimated on this basis, a figure very close to the 1.06 million estimated by DWP not to claim[1].

On this basis, Figure 2.2 shows the distribution of incomes among non-claimants, comparing this to the distribution of recipients of Pension Credit. This graph shows that many of the latter have very low incomes, in contrast to the concentration of claimants around 60% median. (However, a very small number still have very low income even with Pension Credit. One way this can happen is that they have substantial housing costs not compensated for by Housing Benefit – such as a mortgage or a rent higher than the maximum payable. These costs reduce the disposable incomes shown in the 'after housing costs' measure in the graphs.)

1 DWP 2020, Income-Related Benefits: Estimates of Take-up, 2017/18, Table PC1.

Figure 2.2: Cumulative distribution of households (benefit units), who are recipients or assumed to be eligible non-recipients of Pension Credit, by household % of median income

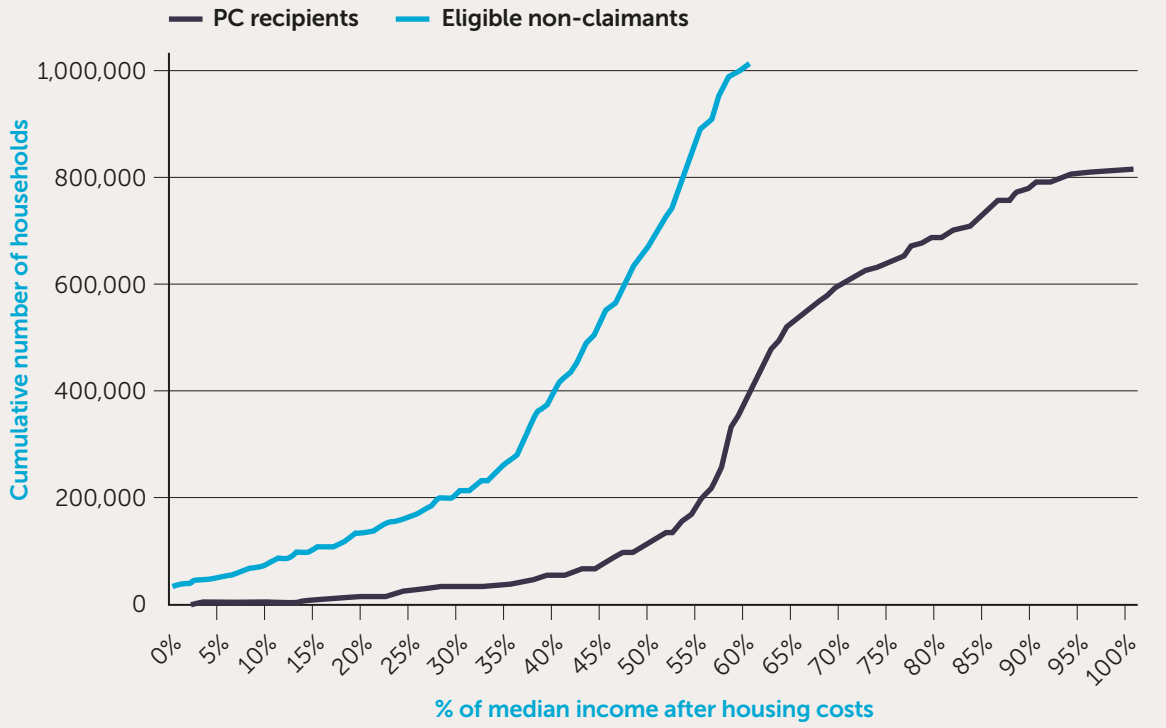


Figure 2.3 further breaks down the profile of non-claimants, showing that the largest group, particularly among those on very low incomes, are single women. Single female pensioners are also most likely to be below the 60% median income threshold, with a poverty rate of 19%, compared with 15% for single male pensioners and 9% for couple pensioner households. Single women comprise 58% of non-claimants on less than 35% median income, and half of all non-claimants. The proportion of those below 35% median who are single men (22%) is also slightly higher than the proportion of all non-claimants who are single men (19%), but couples comprise a much smaller sharer of the poorest group (20%) than of all non-claimants (30%).

Next, it is possible to simulate what would happen to the incomes of non-claimants should they claim. As the FRS data include detailed information about different sources of income, we can approximate the 'eligible income' that each household reports, i.e. the amount that would be counted as income for the purposes of a Pension Credit assessment. This involves subtracting any income that would be disregarded during the process, mainly other benefit sources such as housing benefit and disability benefits. This allows us, in turn, to calculate their approximate entitlement for Pension Credit, and to recalculate their expected income if they were to successfully make a claim for such an amount. On average, receiving

Pension Credit would increase the percentage of median income for those eligible but not claiming by 22 percentage points among single women, 24 percentage points among men and by 16 percentage points among couple households, with a mean increase of 20 percentage points for all household types. This would take them up to or just above the 60% median income poverty line, on average.

Figure 2.3: Cumulative distribution of households (benefit units) not claiming Pension Credit, with household income below 60% median after housing costs, broken down by pensioner type

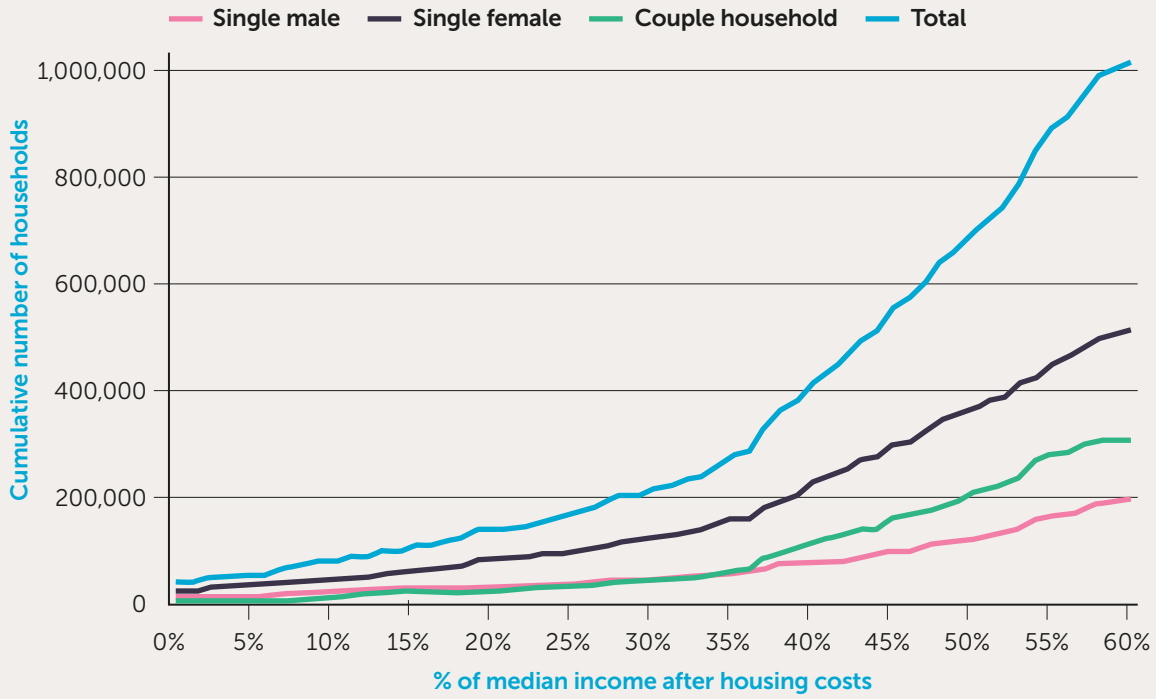


Figure 2.4 shows, for all non-claimants and pensioners and for each sub-group, what the cumulative distribution of their income would look like before and after they claimed. It would bring most of their incomes to between 55% and 65% of median income. However, it is noteworthy that whereas few couples would end up with much above 60%, for many singles, it would be up to 65-70%. This can be explained by the fact that a couple only gets 53% more than a single person on Pension Credit (£265.20 compared to £173.75), whereas the equivalence scales used to compare incomes after housing costs assume that a couple has costs 72% higher than singles (1.00/58). On the other hand, according to the Minimum Income Standard based on actual differences in costs, the true figure is currently 57%, so the equivalence scales could be said largely to misrepresent this difference if considered in terms of living standards.

Taking the pensioner population as a whole, adjusting household income in this way would result in a notable fall in the percentage of pensioners who have an overall household income below 60% median income after housing costs. We estimate that the proportion in poverty using this measure would fall by 4.6 percentage points, from 16.4% to 11.8% (around 440,000 fewer pensioners in poverty). The proportion below 50% median would fall to very low levels: from 9.0% to 4.3% of pensioners. This would leave around 400,000 pensioners below the 50% median threshold.

Figures 2.4a–2.4d: Cumulative distribution of households (benefit units) currently not claiming Pension Credit, adjusted to simulate the effect of receiving their full entitlement

Figure 2.4a: All household types

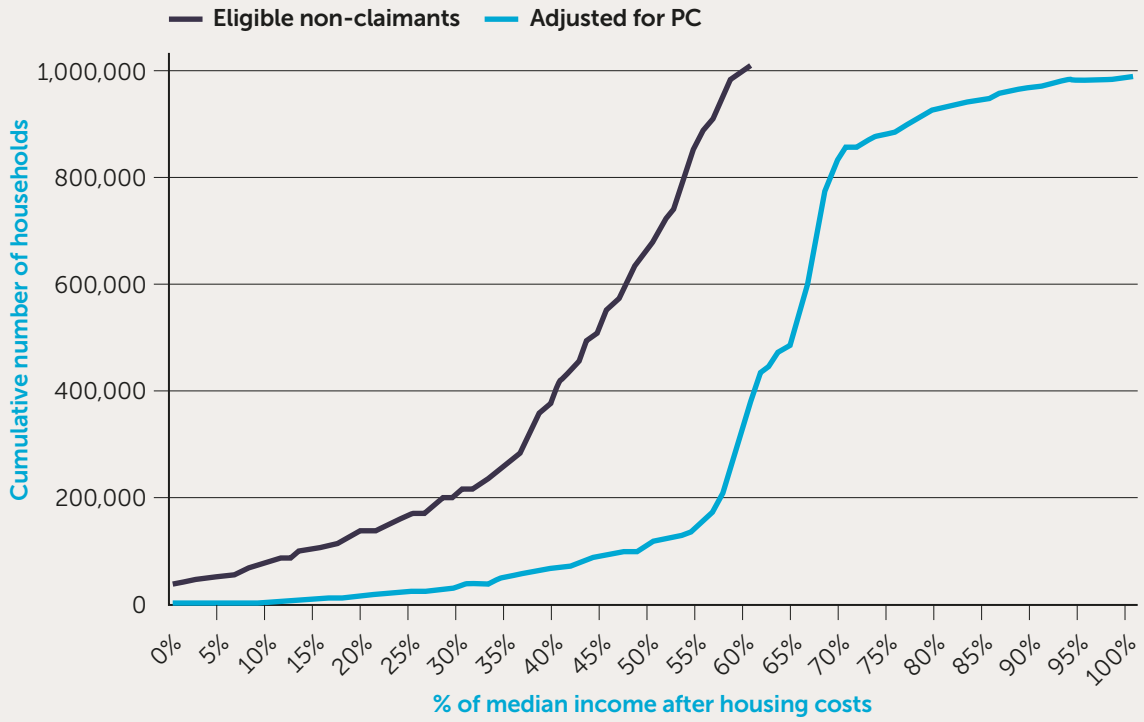


Figure 2.4b: Single men

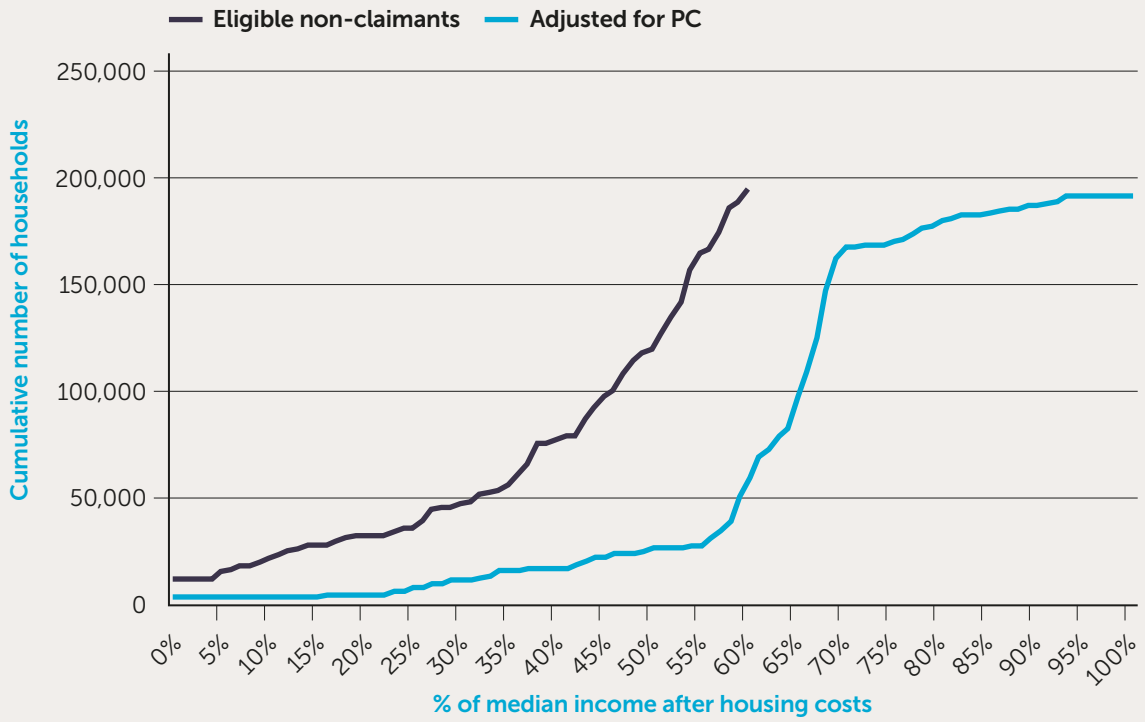


Figure 2.4c: Single women

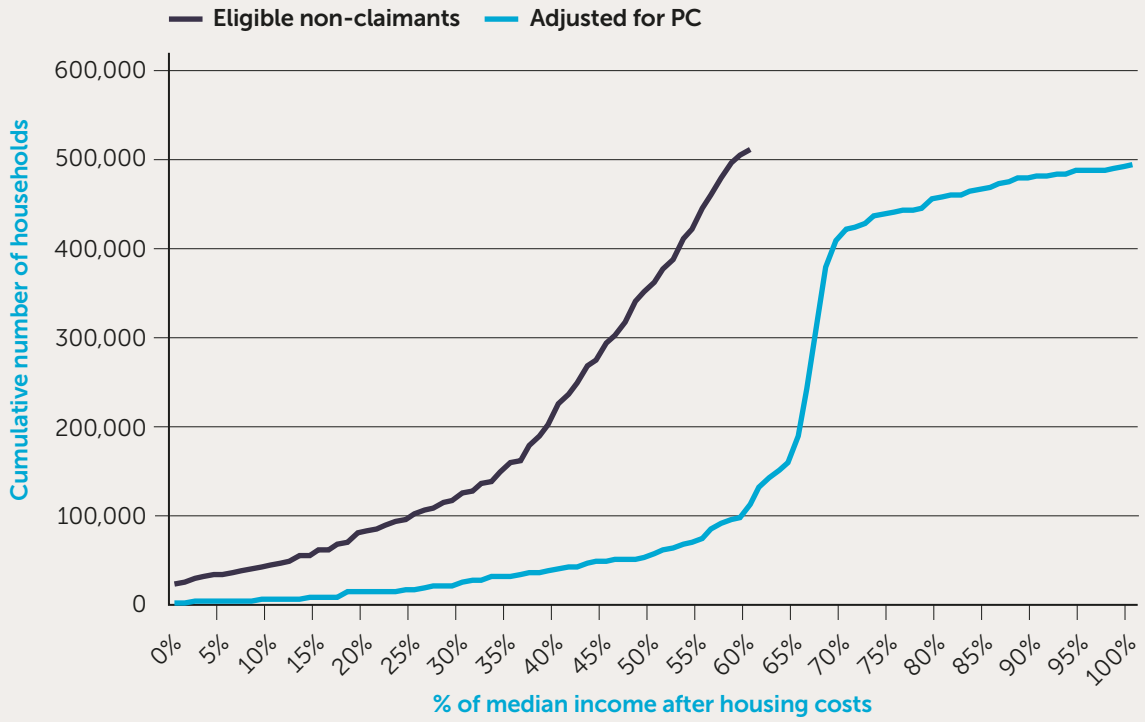
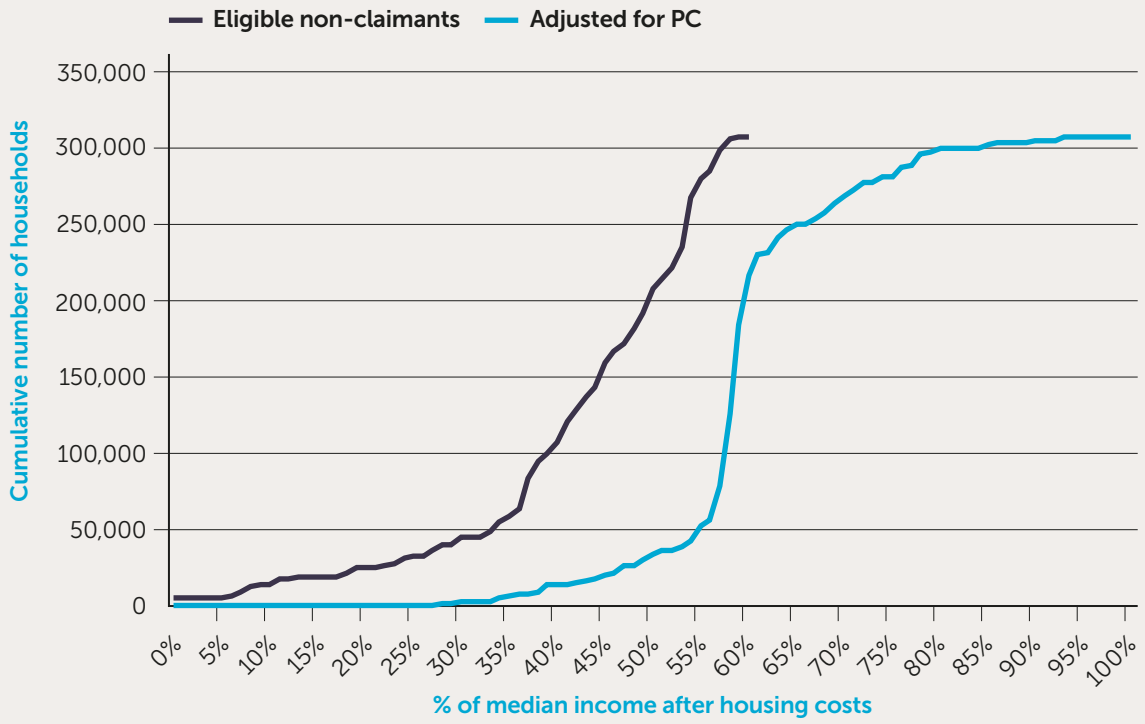


Figure 2.4d: Couple households



2.2 Using survey data to identify the relationship between low income and high health and social care spending

We analyse two household surveys, the UK Household Longitudinal Study (UKHLS, also known as Understanding Society), and the English Longitudinal Study of Ageing (ELSA) to estimate what difference individual income makes to health and social care spending. These surveys collect information on both household income and various household characteristics indicating a high use of health and social care services. This allows us to estimate how much additional spending is associated with the income difference that would be caused by full take-up of Pension Credit.

We use the survey data to compare two groups of pensioners on different incomes in terms of their use of health and care services, to estimate an 'income gradient' in terms of service costs compared to income. A direct comparison for our purposes would look at eligible non-claimants of Pension Credit compared to Pension Credit recipients, but this would involve small sample sizes, with effects that could be very heavily influenced by particular characteristics of eligible non-claimants not related to income (including for example physical or mental health conditions that influence the probability of claiming). In order to get a more reliable estimate of the 'income gradient' therefore, we instead compare recipients of Pension Credit (i.e. on relatively low incomes) and those not on Pension Credit (the rest of the population, whose average income is higher). Based on this comparison, we estimate the difference

in likely public spending per pensioner for a given difference in income, and apply this to the difference between the income of eligible non-claimants and recipients of Pension Credit. Box 1 clarifies the groups we are comparing, the terminology used and what we assume about the social gradients.

Box 1: Three groups of pensioners in our calculations, and the importance of the social gradient

In the calculations below, we distinguish three groups of pensioners, two of which overlap:

1. **Pension Credit recipients**. This is anyone who is in receipt of Pension Credit.
2. **Eligible non-claimants of Pension Credit**. This is anyone over 65 with household income below 60% of median who is not claiming, but who is assumed to be eligible. On average, this group's income is well below that of recipients.
3. **Pension Credit non-recipients**. This is anyone over 65 not receiving Pension Credit. While this includes eligible claimants, most people in this group have income too high to qualify, and the average income of this group is therefore well above that of people on Pension Credit.

The analysis starts by comparing incomes of recipients and non-recipients, and the spending outcomes associated with each of these groups, in order to establish the slope of the 'gradient' that describes the relationship between income and outcomes. The next phase uses the gradient to estimate the differences in spending outcomes between eligible non-claimants and recipients. We explain in the text above why it is not possible to compare recipients and non-recipients directly.

Note that this process uses the assumption that there is a roughly 'linear' gradient between income and health or social care outcomes, at least along the range of incomes that we are considering (which does not include the highest incomes). What this means is that a given difference in income produces a roughly equal difference in social outcomes, and hence in required public spending, at different points of the distribution. Evidence from the sources cited in Section 1 above varies about the precise shape of the gradient. For example, Jayatunga et al. (2019, Figure 1) identified very similar differences in overall public spending costs between each of the bottom four deprivation quintiles, and a somewhat smaller difference between the top two quintiles. Bramley et al. (2016, Table 3) showed that for excess in-patient costs compared to a no-deprivation scenario for people over 60, the 10% of most deprived areas differed from the next most deprived 10% to a greater degree than differences

among the remaining decile groups, but these latter differences were still very substantial and quite similar all the way to the top of the distribution.

Our own analyses included assessing the value of adding additional terms to our statsistical models, to test for non-linear relationships. However, this did not provide any additional insights over and above a simple linear approach. Local area data also suggest (see section 2.3) that the relationship between pensioner income and the outcomes of interest does follow a broadly linear pattern in most cases. For example, for acute hospital care, the increase in the average number of bed-days per percentage point increase in deprivation rate is very similar across the distribution, at between 0.03 and 0.04 days.

Overall, therefore, while there are some instances in other research of a diminishing gradient moving up the income distribution, we are confident that substantial effects continue to occur throughout the distribution. For the present calculations, our assumption is roughly that the difference between outcomes at the 20th percentile (PC recipients) and just above the median (non-recipients) change similarly in proportion to income to the rate of change between the 20th percentile (recipients) and the average for the bottom 10% (eligible non-claimants). Insofar as the latter gradient may in some cases be steeper than the former, we may in fact be underestimating the effect.

These estimates do not take into account some characteristics of each group that might be associated with income and could influence service use independently of income as a cause. For example, older pensioners are more likely to be on relatively low incomes[2], so that for low-income pensioners, age rather than only incomes may be influencing a greater use of health and social care services. As part of our preliminary analysis, we therefore explored the use of multiple regression models to control for demographic factors. However, we have not included this approach in our final calculations. This is in part because in the survey data, it was difficult to identify a well-fitting model of the relationship between income and the characteristics under examination. An additional problem is that it is often difficult to discern the direction of causality when looking at the relationship between income, health, and demographic factors and multivariate analysis risks 'controlling out' important associations. A possible exception is age, as noted above. However, further analysis of the potential effect of age, reported below in Section 2.4, suggests that it is not unduly affecting the results. We also note that we are not seeking to *explain* the association between income and health but primarily to describe it.

2 DWP (2020), Households Below Average Income, 1994/95-2018/19, table 6.5db.

The figures used in this section to calculate per-person costs use expenditure figures and population numbers for England only. However, these are then used to calculate overall costs by multiplying by the population of eligible non-claimants in the whole of Great Britain. Thus, while they incorporate the assumption that costs per non-claimant are similar in Scotland and Wales to those in England, the estimates of total costs are designed to account for the whole population of Great Britain. The estimates set out below were made for different spending areas.

Acute and community health care

The following results draw on data from:

- The UKHLS, observing income and the frequency and duration of hospital visits;
- NHS spending statistics from 2018.[3]

Overall, 42% of NHS spending is estimated to be for patients over 65[4], and 20% of this spending on older patients is on primary care and prescriptions.[5] The remaining 80%, £38.8 billion in 2018, is dominated by staff costs in hospital and community care. We use survey results showing differences in bed use as an indicator of the additional proportion of spending across this sector associated with low income. The following steps are used to estimate this cost[6]:

- Non-recipients of Pension Credit spend an average of 1.69 fewer days a year in hospital than recipients: 1.43 days compared to 3.12.
- The average spending on all acute and community healthcare per hospital bed-day is £4,028. Therefore, the additional 1.69 days spent in hospital by each PC recipient compared to non-recipients is associated with spending of 1.69 multiplied by £4,028, or £6,824.
- On average, the household income of PC recipients in this survey is 91% of median, compared to 146% for non-recipients[7], a 55 percentage point gap. So, we can attribute the previously calculated spending difference of £6,824 between these two groups to an income gap of 55% of median income. Dividing the spending by the income gap gives £124 for each percentage point of income difference.

3 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/759560/Country_and_Regional_Analysis_November_2018_rvsd.pdf

4 Office for Budget Responsibility. (2018), Office for Budget Responsibility Fiscal Sustainability Report, available at: https://doi.org/10.1142/S021812749900095X

5 Department of Health and Social Care (2018), Annual Report and Accounts 2017-2018, Vol. 18.

6 Note that some of the figures are rounded versions of those used in the analysis, so not all the reported calculations produce precisely the results described.

7 This is higher than in the FRS data described in Section 2, because it is based on a longitudinal survey in which poorer pensioners have been more likely to drop out of the sample, including due to mortality.

- Our calculation however is comparing a different income gap: that between the actual income of eligible non-claimants of Pension Credit and their incomes were they to claim. This gap is estimated at 23 percent of median income – representing a move from 42% to 65% of the median[8]. As a consequence, the estimated additional spending on acute care associated with not claiming PC is 23 times the £124 estimated for each percentage point income difference, which is £2,829 per PC non-claimant.
- On this basis, we estimate additional spending on the 1.014 million eligible non-claimants to be £2,867 million, or about 6% of NHS spending on over-65s excluding primary care.

Primary health care

We estimated the cost of primary health care in a similar way, in this case using evidence from the English Longitudinal Study of Ageing about health usage to identify indicators of spending across this sector. In this case, we considered two indicators: the number of prescriptions and the number of GP visits reported by pensioners on different incomes. We found the number of GP visits a problematic metric, largely because the numbers in the survey were reported in wide bands, and a clear relationship with income was hard to establish. We therefore used the number of prescriptions as a more meaningful indicator of people's use of primary healthcare.

The same steps were taken as set out in the previous subsection for acute and community care (see appendix for details of results). These showed that Pension Credit recipients report having over 40% more prescriptions per year than non-recipients. The additional primary care cost associated with each eligible person not claiming Pension Credit is £152 a year, so for all the 1.014m eligible non-claimants the cost is estimated at **£154 million**. This is a lot lower than the previous calculation for non-primary NHS spending, for two reasons. First, the non-primary care spending overall is four times that of the primary care sector. And second, whereas in the primary care case service use by those on Pension Credit is about 40% higher than others, in hospital bed use it is almost 120% higher, so around three times the difference.

Social care

For comparisons of spending on social care, we looked at data from the ELSA survey, alongside social care spending statistics[9]. It was not easy to identify useful survey questions for this purpose. Although ELSA has many questions on use of and payment for social care, the difficulty is that most public spending on care is concentrated on people with higher-end needs, who are poorly represented in the survey. A more useful indicator was whether people reported limitations affecting activities of daily living. While not a direct measure of care use, we can surmise that groups with a relatively large risk of having such limitations are also likely to have relatively larger numbers using social care.

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8 A similar but not identical figure to the FRS-based difference identified in Section 2.1, due to a different survey being used for the present analysis.

9 https://digital.nhs.uk/data-and-information/publications/statistical/adult-social-care-activity-and-finance-report/2018-19

Using this indicator, we made the following observations and calculations.

- The survey shows that 51.6% of those Pension Credit recipients have a condition limiting daily living, compared to 31.1% of non-recipients.
- This means that the incidence is 66% higher for those on Pension Credit compared to the rest of pensioners.
- If this were to be reflected into a proportionate difference in spending, it would mean that £952 a year more would be spent on social care for people on Pension Credit than on others.
- Based on the average incomes of recipients and non-recipients of Pension Credit, this means that £359 a year more would be spent on eligible non-claimants than if they were on Pension Credit (see Appendix for calculation).
- For the 1.014 million estimated eligible non-claimants, the overall additional cost would be **£364 million** a year.

We must treat this as giving an incomplete account of the possible additional costs because of limitations with these data, likely to create an underestimate of the amount of social care spending associated with non-claiming. In particular, it is based on care *needs* rather than on public expenditure on care. Yet the state spends more when it arranges for care needs to be met for people on lower than on higher incomes, through the means-testing of care provision. Moreover, it is based on a household survey which does not consider costs in care homes, where a large amount of care costs are incurred, and where differences between state-supported and self-funded care users are particularly great because of the large costs involved.

Total cost identified by survey data

Overall, the amount of estimated cost of people not claiming Pension Credit identified from surveys in this section is:

Acute and community care:	£2,867 million
Primary care:	£154 million
Social care:	£189 million
Total: £3,210 million = £3.2 billion	

This figure is significantly higher than the amount, £2.16 billion, that the government estimates was unclaimed in Pension Credit by those eligible in 2017/18[10].

We can interpret this result as showing that survey data suggests that reduced spending on health and social care would save the Treasury significantly more money than it would spend on extra benefits as a result of full take-up of Pension Credit, as well as improving the living standards and well-being for those affected.

10 From DWP Pension Credit Statistics 2017/18

This survey-based estimate gives only part of the picture of these costs and savings. While providing valuable self-reported information linking people on lower incomes to additional service use, they do not directly observe expenditure levels, and they exclude people living in care homes, whose health and care needs are high. We therefore consider it reasonable to regard this estimate of the cost as a conservative assessment of the minimum amount of savings in public expenditure that would be likely from full take-up of Pension Credit.

2.3 Analysis of spending in local areas

As another way of observing differences in the amounts spent on different groups, we consider administrative data showing health and social care activity and expenditure. Administrative data includes information collected by local and central government in the course of delivering programmes, such as the amount spent on a service or the number of people claiming a benefit. Unlike survey data, they describe what is happening to the whole population rather than just a sample. They do not include information on individuals such as their incomes. However, by looking at how many people are on certain benefits in a local area, alongside local area spending, we can draw connections between low income and higher expenditures on services.

Our analysis, like the survey analysis in section 2.2 above, divides the pension age population into two groups: those on low incomes, indicated by receiving Pension Credit, and the rest. We look in each local area at:

(i) what percentage of over-65s are on Pension Credit, and

(ii) indicators of service activity or costs per person aged over 65. The indicators we looked at are:

- Bed-days in hospital
- Expenditure on prescriptions
- Expenditure on social care

In each case, our method estimates costs per eligible non-claimant of Pension Credit using the following steps:

- Establishing a correlation between service costs/activity in a local area and the number of people on Pension Credit.
- Using this correlation to estimate the additional level of cost/activity associated with each additional recipient on Pension Credit, compared to a non-recipient.

- Adjusting these estimates to take account of the fact that additional costs in more deprived areas may be influenced not only by the lower incomes of those on Pension Credit but also by a lower average income of those who are not, so not all the difference may be attributable to the former. This adjustment was made by controlling for the estimated income per head of non-recipients in each area.
- Using the same method as described in section 2.2 to move from the estimate of service costs associated with someone being on Pension Credit, to an estimate of the costs associated with an eligible non-claimant of Pension Credit, and therefore to the total cost of non-claiming.

The data used to make these calculations are shown in the Appendix (Table A2). In summary, the following observations and calculations were made:

- As with the survey data, by far the biggest effect was for acute and community health care, again using bed days as an indicator. Using local expenditure data, the difference in bed days between Pension Credit recipients and the rest of the population is 2.76 per year even greater than the difference of 1.43 days per year based on self-reports in the surveys as reported above.
- This produces a proportionately larger estimated cost of **£4,497 million** attributable to additional NHS care for eligible non-claimants compared to if they claimed Pension Credit. This is equivalent to 10% of spending on pensioners in this ector.
- Local expenditure data also shows greater differences by income in local prescription spending, identifying about twice as much difference as the in the survey self-reporting. On this basis, we estimate that **£313 million** of primary care spending is associated with non-claiming of Pension Credit. This means that the total identified NHS cost is around £4.8 billion, representing 4% of all NHS spending on the over-65s.
- This method identifies only a relatively small amount of additional spending on social care based on income differences: **£66 million** associated with non-claiming of Pension Credit. This may largely be because the highest expenditures are in care homes, which will most commonly not be in exactly the same local area as the original residence of the person receiving care, and therefore the expenditures cannot be closely associated with areas of deprivation.

In summary, then, our estimate based on local area data shows the following costs:

Acute and community care:	£4,497 million
Primary care:	£313 million
Social care:	£66 million
Total:	**£4,876 million = £4.9 billion**

2.4 Overall results and their interpretation

The two estimates produced in this report, using different methods, suggest health and social care costs associated with non-claiming of Pension Credit of £3.2 billion and £4.9 billion, respectively. Each of these estimates has its own limitations, but the fact that they are of the same order of magnitude helps give us confidence that there is potential for public savings of much more than the £2.2 billion it would cost the Treasury in benefits expenditure if everyone eligible claimed Pension Credit. Because we have not demonstrated causality, we cannot say with confidence that raising incomes in this way would directly cause a reduction in spending, or over what period any such spending reductions would be achieved. What we can say, however, is that if the state spent more on raising the incomes of the poorest pensioners to improve their lives, there is the potential for it to save much more than that, by not having to spend as much on the health and social care of people damaged by poverty.

Accepting that our estimates are imprecise, we can sum them up by saying we estimate that services spending of between £3 billion and £5 billion is associated with people being on lower incomes because they do not claim Pension Credit. Overall, we think that the higher figure, using area data, has greater reliability, largely because it is based on full population counts with records of service activity, rather than samples with self-reports.

However, in reporting on the confidence we can have in the estimate, we can also consider an issue raised earlier in this report – whether much of our observation of greater health and care spending being allocated to pensioners on relatively low incomes could be attributed to the fact that low income is more likely for the oldest pensioners, whom we would expect to use health and care services more than average, regardless of their income. We were unable to find adequate tools to test this hypothesis with the samples in the survey data, but found a simple way of doing so for the area-based analysis of administrative data[11]. This started with the observation that even though the risk of having low income rises steeply after age 80, for 65-80 year olds it is broadly stable: the risk of having below 60% median income after housing costs is virtually identical for 65-69 year olds (15%), for 70-74 year olds (14%) and for 75-79 year olds (15%). We therefore tested our area-based estimate of differences in hospital bed use by Pension Credit status (the result giving the greatest cost difference) considering just 65-79 year olds, to check if the effect observed was mainly being driven by poorer pensioners being older, in which case we would expect it to be much lower for the under-80s among whom there is no relationship between poverty rates and age. In fact, about four fifths (79%) of the effect observed remained: specifically, we observed that additional bed use associated with being on Pension Credit was 2.17 bed days per year for 65-79 year olds, compared to 2.76 for all over-65s. This suggests that, at most, an adequate control for age might reduce our higher estimate by about 20%, to around £4 billion.

11 DWP (2020), Households Below Average Income, 1994/95-2018/19, table 6.5db

On this basis, we sum up our results by saying that we estimate the service cost of non-claiming of Pension Credit to be in the range £3-5 billion, with a central estimate of £4 billion reflecting on the one hand our greater confidence in our higher than our lower estimate, but on the other, some caution about whether factors other than income may be playing some role in the higher spending on eligible non-claimants.

3. Conclusion and discussion

This report has estimated that about £4 billion could be saved in public spending as a result of everybody who is entitled to Pension Credit taking it up. This is not a precise calculation of what the savings would be, but it is important to note that our estimated range of £3 billion to £5 billion in public spending associated with the low income of non-claimants is well above the government's £2.2 billion estimate of the unclaimed amount, and also does not overlap with its estimate of the range of unclaimed benefit – £1.8 to £2.5 billion. This means that there is potential for full take-up to carry no net cost to the state over the long term. Even if there were roughly zero net cost, this would be a big gain to society, as a result of the improved living standards and well-being of the pensioners who would benefit.

As previous research for Independent Age (2019) has pointed out, Pension Credit can transform the lives of the poorest older people in Great Britain. This research identified several particular ways in which take-up can be of benefit:

- Pension Credit brings greater security to people's lives, in the form of a reliable income allowing people to live with dignity and independence. As well as the direct testimonies given by pensioners interviewed for the 2019 study, this is borne out in the calculation of the Minimum Income Standard, based on what ordinary people think is required in order to meet material needs and participate in society (Davis et al., 2020). This shows that Pension Credit brings almost enough income to meet this standard (for example a single person gets to a level just £11 a week below the £206 they need, after rent). But someone with income £49 a week lower – the average amount by which non-claimants have been missing out – will have to sacrifice over a quarter of essential expenditure.
- Particular expenditures that are made easier through Pension Credit include paying for food, heating one's home adequately in the winter, travelling around (particularly in areas where public transport is unreliable) and taking part in social activities. In discussions among groups setting the Minimum Income Standard, covering the cost of social participation has been particularly prioritised, linked to the risk of isolation and loneliness. A pensioner who is unable to keep their home in a state that allows them to feel comfortable inviting someone round for a cup of tea, or to make occasional trips out to a café or the cinema, is at particular risk of loneliness.
- Pension Credit can unlock access to a wide range of other benefits, including in particular Housing Benefit and Council Tax Support, and also others such as the Warm Home Discount Scheme, NHS dental treatment, vouchers towards glasses, a free television license for over-75s and the Cold Weather Payment. For this reason, some pensioners would gain far more than just the Pension Credit payment, were they to claim.

For all these reasons, full take-up of Pension Credit would represent a substantial improvement in the lives of over a million of Britain's poorest older people. The additional fact that such improvements in their lives could help to save large amounts of public money because of reduced demands on health and care services helps justify making it a top priority to improve Pension Credit take-up.

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5. Appendices

5.1 Main results

Table A1: Survey based estimates (see section 2.2.1 for explanation)

a)	**Spending area**	**Acute and community health care**	**Primary health care**	**Social care**
b)	**Source**	UKHLS	ELSA	ELSA
c)	**Indicator**	Bed days	Number of prescriptions	% of people limited in activities of daily living
d)	**Difference between pc recipients and non recipients**	1.69 days per year (3.12 compared to 1.43)	10.3 per year (33.8 compared to 23.5)	Two-thirds more likely to have ADL: 52% compared to 31%
e)	**Difference in spending per head***	£6,824	£403	£495
f)	**Income gap between pc recipients and non-recipients, as % of median income (differs by survey)**	55% (91% compared to 146%)	53% (94% compared to 147%)	53% (94% compared to 147%)
g)	**Difference in spending per head per percentage point of median income (e/(f*100))**	£124	£7.60	£9.31
h)	**Gap between actual incomes of eligible non-claimants of pc and their income if they claimed, as % of median income**	23% (42% compared to 65%)	20% (43% compared to 63%)	20% (43% compared to 63%)

i)	**Difference in spending per head as a result of not claiming (g*h*100)**	£2,829	£152	£187
j)	**Total spending difference for all eligible non-claimants (1.014m*i), £million**	£2,867	£154	£189

*Total spend in service area not just indicator – eg spending on all primary care, scaled up from spending on prescriptions.

Table A2: Area based estimates (see section 2.3)

a)	**Spending area**	**Acute and community health care**	**Primary health care**	**Social care**
b)	**Indicator**	Bed days	Local prescription spending	Local care spending
c)	**Difference between pc recipients and non-recipients**	2.76 days	£389	£52
d)	**Difference in spending per head across sector**	£11,116	£773	£164
e)	**Income gap between pc recipients and non-recipients, as % of median income (based on FRS)**	50% (65% compared to 115%)	50% (65% compared to 115%)	50% (65% compared to 115%)

f)	**Difference in spending per head per percentage point of median income (d/(e*100))**	£221.84	£15.43	£3.28
g)	**Gap between actual incomes of eligible non-claimants of pc and their income if they claimed, as % of median income (based on FRS)**	20% (39% compared to 59%)	20% (39% compared to 59%)	20% (39% compared to 59%)
h)	**Difference in spending per head as a result of not claiming (f*g*100)**	£4437.25	£308.59	£65.67
i)	**Total spending difference for all eligible non-claimants (1.014m*h), £million**	£4497	£313	£66

Table A3: Average of two estimation methods

Spending area	Acute and community health care	Primary health care	Social care	Total
Survey based estimates	£2,867m	£154m	£189m	£3,210m
Area based estimates	£4,497m	£313m	£66m	£4,876m
Average	£3,682m	£248.5m	£127.5m	£4,043m

5.2 Data sources

Household income and benefit receipt

- Department for Work and Pensions, Family Resources Survey, 2017-18 https://www.gov.uk/government/collections/family-resources-survey--2

Acute hospital care

- NHS hospital episodes statistics at clinical commissioning group level, broken down by age band. Available at: https://digital.nhs.uk/data-and-information/data-tools-and-services/data-services/hospital-episode-statistics
- Data on hospital admissions at small area level, provided by Public Health England. Available at: https://www.localhealth.org.uk/
- UKHLS: Questions on frequency and duration of hospital visits https://www.understandingsociety.ac.uk/

Primary care

- Prescription costs by Clinical Commissioning Group, produced by the NHS Business Services Authority. Available here: https://iview.hscic.gov.uk/
- NHS Digital: Prescription Cost Analysis - England, 2018. Data on prescription costs by exemption category. Available here: https://digital.nhs.uk/data-and-information/publications/statistical/prescription-cost-analysis/2018
- Data on morbidity at small area level, provided by Public Health England. Available at: https://www.localhealth.org.uk/
- Information on number of prescriptions per person from ELSA nurse visit data. https://www.elsa-project.ac.uk

Social care

- NHS Digital, Adult Social Care Activity and Finance Report, England - 2017-18. Includes social care expenditure data for people aged 65 and over. Available at: https://digital.nhs.uk/data-and-information/publications/statistical/adult-social-care-activity-and-finance-report/2017-18
- Information on limitations to activities of daily living ELSA main survey data. https://www.elsa-project.ac.uk

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