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Early quantitative evidence on the impact of the Pathways to Work pilots

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Summary

Since October 2003 the Department for Work and Pensions (DWP) has been piloting reforms in England, Scotland and Wales which provide greater support (financial and non-financial) alongside greater obligations to encourage many new claimants of incapacity benefits to move into paid work. This report presents early quantitative evidence on the impact of the Incapacity Benefit 'Pathways to Work' pilots on various outcomes of interest.

The Pathways to Work package of reforms includes three broad strands of additional help for new claimants of incapacity benefits: First, there is a series of Work Focused Interviews (WFIs) that for many claimants are compulsory, with the threat of financial penalties for those who do not comply. Second, the reforms include a number of programmes designed to boost claimants' prospects of being able to work. Third, there are increased financial incentives for individuals to enter paid employment.

The impact of the Pathways to Work pilots is being investigated by the DWP using administrative information to compare the benefit outcomes for those in the pilot areas with those in the rest of the country. In addition, a consortium of research organisations is using both quantitative and qualitative techniques to look at various aspects of the effectiveness of the reforms. The major part of the quantitative work focuses on differences in outcomes between those in the pilot areas and those in carefully chosen comparison areas. This report forms part of the evaluation.

Survey data were collected via telephone interviews with individuals who had made an enquiry to their local Jobcentre Plus about claiming incapacity benefits. These were conducted with individuals in pilot areas both before and after the Pathways to Work pilots were implemented. In addition, interviews were conducted at the same time, with equivalent individuals, who resided in areas that were similar (and contiguous) to the areas where the Pathways to Work pilots were in operation. Two empirical techniques are used to investigate the early impact of the pilots on employment, earnings, receipt of incapacity benefits, and a potential indicator of the extent to which individuals' health affects their everyday activities.

All these findings are preliminary: more comprehensive analysis will be conducted in later stages of the evaluation. This report looks at the impact of the policy on a set of individuals, who made enquiries shortly after the policy was launched – known as the 'early policy' cohort as they show the early impact of the policy. Future analysis will be based on a 'preferred' cohort of individuals, who made their enquiry about claiming incapacity benefits longer after the pilots had been implemented, when any initial difficulties in their operation might have been eliminated. This future analysis will also be based on larger sample sizes, and will use information from a series of outcome interviews, allowing longer-term outcomes of interest to be considered. The methodologies will also be further refined by incorporating administrative data into the analysis.

Initial key findings from the early cohort include:

- Among those making an enquiry to their local Jobcentre Plus about claiming incapacity benefits, the policy increased the percentage working in a particular week around 10½ months later by an estimated 9.4 percentage points (Table 4.1) from a base of just 22.5%.
- The percentage of these individuals working at any point over the period since their enquiry about claiming incapacity benefits increased by an estimated 9.3 percentage points (Table 4.4) from a base of 32.9%.
- The evaluation also finds evidence of a positive impact on earned income. Average net monthly earnings across all individuals (regardless of whether or not they were in paid employment) is found to be increased by £72 (Table 4.7) from a base of £172.
- The percentage who reported still being in receipt of an incapacity benefit around 10½ months after making an enquiry about claiming incapacity benefits is found to be reduced by 8.2 percentage points (Table 4.10) from a base of 57.6%. This is of a very similar magnitude to the 8 percentage point increase in the six month off-flow rate from incapacity benefits observed in the administrative data from the pilot areas. But note that it takes around 10½ months, not six months, to achieve this off-flow.
- There is some evidence that the pilots led to a small (2.9 percentage points) reduction in the percentage of individuals reporting that their health (in some dimension) limits their everyday activities (Table 4.13). However, as this is from a very high base of 91.4%, the vast majority still reported that their health limited their everyday activities.
- There is some evidence that the impact of the Pathways to Work pilots on the outcomes of interest was bigger in the three areas where the pilots started in October 2003 than in the four areas where the pilots started in April 2004. One possibility is that, as the interviews were done in the same months, this is simply due to the pilots having been operational for longer in the October 2003 areas, so that the individuals interviewed in those areas experienced the policy after it had had longer to 'bed down'. This can be explored in more detail in the ongoing evaluation using data from the preferred cohort.

- Analysis of the impact of the Pathways to Work pilots by age and sex suggests that, if anything, the policy had a larger impact on moving both men and women aged over 45 off incapacity benefits than it did for men or women who were aged 45 or under (Table 5.1). There is also some evidence that the impact of the policy on whether or not the individual was in paid work in the last week was greater for men aged over 45 and women aged 45 or under, than it was for younger men or older women.
- The policy had a larger impact on receipt of incapacity benefits and whether or not an individual was in paid work in the last week for those who reported having two or more specific health problems, than it did on individuals who reported a single, or no, specific health problem (Table 5.2).
- There is also some evidence that the estimated impact of the policy varied by the nature of the specific health condition reported by the individual. In particular the estimates suggest that amongst those reporting just one health problem, the policy had a larger impact in moving those whose reported health problem was not a mental illness into paid work, than it did for those whose reported health problem was mental illness (Table 5.2). This is an important policy issue that warrants further investigation in later stages of the evaluation.
- While the evidence suggests that there is both a large impact on moving individuals off benefit and a large impact on moving individuals into paid work (at a little over 8 and 9 percentage points respectively), there is also some evidence that these are **not** the same individuals. Specifically, we find evidence that the policy is effective at getting those aged 45 and under into work but not at getting them off incapacity benefits, and conversely there is some evidence that the policy is effective at getting women aged over 45 off incapacity benefits but not at getting them into paid work. Again, this warrants further investigation in later stages of the evaluation.

These findings are preliminary, and while they suggest positive and statistically significant impacts of the policy, especially on employment outcomes, they do not give a complete picture of the effectiveness of the policy for a number of reasons:

- Our findings currently examine the impact of Pathways to Work on a cohort of individuals who were exposed to the policy relatively soon after the pilots had been implemented. Our later work will use information on individuals who made their enquiry about claiming incapacity benefits longer after the pilots had been implemented, by when any initial difficulties in their operation might have been eliminated.
- Our findings so far are not informative about the longer-term outcomes of the policy, since they cover only the first year after an enquiry about claiming incapacity benefits has been made. For example, given that the Return to Work Credit (RTWC) is payable only for the first year of employment, it will be interesting to see how far the estimated impact on employment persists once this £40 a week employment subsidy is no longer available.

- This research only considers the impact of the Pathways to Work package as a whole: it does not shed light on whether any particular component or components of the package are primarily responsible for the overall impact. Later work will attempt to unpick the relative importance of different components of the policy on the outcomes of interest.
- The launch of the pilots, if anticipated, could have affected the timing of individuals' initial enquiry about claiming incapacity benefit. In particular, individuals could have made their enquiry earlier in order to avoid being mandated onto the Pathways to Work pilots. Conversely some might have delayed their claim in order to qualify for the pilots, if they did not realise that those not mandated onto the pilots were allowed to participate voluntarily. Any such 'contamination' could bias the results if these individuals react to the policy differently. This problem will be reduced in later analysis as the preferred cohort should not be affected by this, although the pre-policy sample could remain 'contaminated'.
- Our findings so far cover just the first seven Pathways to Work areas, and cannot tell us how generalisable these effects are to other parts of the country. The later stages of the evaluation will assess this directly, by estimating the impact of the policy in the next waves of pilot areas (i.e. those where the policy will be rolled out starting in October 2005, April 2006, or October 2006), and indirectly, by simulating (under assumptions) what the effect of the policy would be in areas where Pathways to Work has not yet been implemented.
- Our findings so far also assess the impact of Pathways to Work just on new claimants of incapacity benefits (the 'flow'). However, Pathways is now being rolled out to a large number of existing claimants (the 'stock'). Further evaluation work will assess how the policy affects the outcomes of individuals from the 'stock', who will have been on incapacity benefits for up to eight years at the time when they are mandated onto the Pathways to Work programme.
- Our findings only tell us about the effect of the policy on the claimants themselves, but there might potentially be 'spillover' effects on other people. Later quantitative evaluation reports will consider whether the policy entails significant substitution effects (e.g. if new jobs obtained by claimants of incapacity benefits as a result of the policy are achieved at the expense of other individuals who now cannot find paid work), or if there are significant general equilibrium effects of the policy (e.g. if the increased supply of workers, perhaps in particular sectors, results in a lowering of the equilibrium wage in those sectors).
- To evaluate the merits of Pathways to Work it is necessary not only to estimate its effects but also to weigh any benefits against the substantial costs of the programme. Subsequent stages of the evaluation will progress further towards this by presenting a cost-benefit analysis that compares the quantifiable benefits of the policy to the identifiable financial costs.

1 Introduction and policy background

Since October 2003 the Department for Work and Pensions (DWP) has been piloting reforms in England, Scotland and Wales which both provide greater support (financial and non-financial) and impose greater obligations to encourage claimants of incapacity benefits[1] to move into paid work. The numbers claiming incapacity benefits have more than trebled over the last quarter of a century (see, for example, Figure 2.1 of Department for Work and Pensions, 2006). In addition, as stated in the recent DWP five year strategy, on average those claiming the benefit for more than twelve months end up claiming for eight years (DWP, 2005). The reforms being piloted are motivated by concerns that the current arrangements do not do enough to encourage claimants back into paid work (a detailed discussion can be found in the Green Paper which proposed the pilots: DWP, 2002).

The Pathways to Work package of reforms includes three broad strands of additional help for new claimants of incapacity benefits:

- **Mandatory Work Focused Interviews** (WFIs). New claimants aged between 18 and 60 must attend an initial WFI with a specialist adviser eight weeks after making their claim and agree on a Work Focused Action Plan with the adviser. Those deemed to have particularly serious medical conditions (measured by exemption from the Personal Capability Assessment) and those deemed relatively likely to return to work of their own accord (measured by score on the 'Screening Tool', a specially-designed questionnaire administered at the initial WFI) have no further compulsory involvement, though they can volunteer; all others have to attend five further WFIs at monthly intervals (if they remain on incapacity benefits). Those failing to take part in WFIs can be sanctioned by a reduction in benefit

[1] The policy applies to those claiming Incapacity Benefit (IB) itself and also those claiming Income Support (IS) on grounds of incapacity. For brevity we refer to these collectively as 'incapacity benefits'. For brief descriptions of these benefits, see Shaw, J. and Sibieta, L. (2005) and for full details see Child Poverty Action Group (2005).

(unlike the other components of the Pathways to Work pilots where individuals cannot be sanctioned for non-participation). Claimants also receive greater access to advice from other trained advisers.

- **The 'Choices' package**. This draws together a number of labour market programmes available to claimants: new Condition Management Programmes (CMPs) operated in collaboration with the NHS as well as the New Deal for Disabled People (NDDP) and a number of smaller existing schemes.[2]
- **Increased financial support and incentives**. A new Return to Work Credit worth £40 a week is payable for the first year of paid employment after leaving incapacity benefits if gross annual earnings are below £15,000. In addition, greater discretionary payments are available to help claimants find work.

The reforms were implemented in three Jobcentre Plus districts in October 2003 (Renfrewshire, Inverclyde, Argyll and Bute; Bridgend, Rhondda, Cynon and Taff; and Derbyshire) and a further four Jobcentre Plus districts in April 2004 (Essex; Gateshead and South Tyneside; Lancashire East; and Somerset); we refer to these as the 'October 2003 areas' and the 'April 2004 areas' respectively. The pilots have since been extended to several new areas[3] and to some people in the original seven areas whose incapacity benefits claim started before the pilot was introduced (initially up to two years before the Pathways to Work pilots began, but from April 2006, up to six years before), but in this report we look only at new claimants in the original seven pilot areas.

An evaluation of the impact of the pilots, funded by the DWP, is being conducted by a consortium of research institutions.[4] This report presents early quantitative evidence on the average impact of the whole package of reforms on new claimants of incapacity benefits across the seven areas of England, Scotland and Wales where the policy was originally piloted. It does not cover either the subsequent extension of the policy to the stock of claimants of incapacity benefits in these seven areas, or the extension to those flowing onto incapacity benefits in other parts of the UK in 2005/06.

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[2] These are: Work-Based Learning for Adults (WBLA) (England), Training for Work (TFW) (Scotland), Programme Centres, Work Trials, Work Preparation, Workstep, Access to Work and some local schemes.

[3] Four areas in October 2005 (Cumbria; Glasgow; Lancashire West; and Tees Valley); seven areas in April 2006 (Barnsley, Rotherham and Doncaster; City of Sunderland; County Durham; Lanarkshire and Dunbartonshire; Liverpool and Wirral; Greater Manchester Central; and Swansea Bay and West Wales); three areas in October 2006 (Eastern Valleys; Greater Mersey; and Staffordshire).

[4] The consortium is made up of researchers from the Institute for Fiscal Studies, Mathematica, the National Centre for Social Research, the Policy Studies Institute, the Social Policy Research Unit, and David Greenberg of the University of Maryland, Baltimore County.

The findings are preliminary: more comprehensive analysis will be conducted in later stages of the evaluation. The current analysis is based on an 'early' cohort of individuals who made an enquiry about claiming incapacity benefits shortly after the launch of the pilots. In the future, information will be available on individuals who made their enquiry about claiming incapacity benefits longer after the pilots began, by when any initial difficulties in their operation might have been ironed out. Future analysis will also consider longer-term outcomes.

The analysis is based on responses to telephone surveys with individuals who made an enquiry to their local Jobcentre Plus about claiming incapacity benefits, before or after the pilots started and in either an area where the pilots are running or one of a set of specifically chosen comparison areas. The rest of the report is structured as follows. Chapter 2 provides a description of the data used in the analysis: Section 2.1 provides details of potential outcomes of interest (employment, earnings, receipt of incapacity benefits and a self-reported indicator of whether health affects individuals' activities) and how they vary between different groups of individuals who were, and who were not, subject to the policy being piloted, while Section 2.2 provides a description of the background characteristics of these individuals. In Chapter 3 we outline the approach we take to estimating the causal effect of the pilots on the various outcomes of interest. This is mainly a difference-in-differences approach (Section 3.1), but with propensity score matching used as a robustness check (Section 3.2). The results are presented in Chapter 4 (see Section 4.1 for the estimated impact on employment outcomes, Section 4.2 for the estimated impact on earnings, Section 4.4 for receipt of incapacity benefits, and Section 4.3 for the estimated impact on whether individuals' report that their health affects their everyday activities). In Chapter 5 we examine whether the estimated impact of the Pathways to Work pilots varies by certain individual characteristics – specifically age and sex (in Section 5.1) and the number and nature of the individual's reported health problem(s) (in Section 5.2). Chapter 6 concludes.

2 Data description

The data used in this analysis are from telephone interviews conducted by the National Centre for Social Research with a sample of individuals who had made an enquiry to their local Jobcentre Plus about claiming incapacity benefits. Four groups of individuals were interviewed: those who flowed onto incapacity benefits in the pilot areas **before** the pilots were operational;[5] those who flowed onto incapacity benefits in the pilot areas **after** the pilots were operational; those who flowed onto incapacity benefits in one of the comparison areas **before** the pilots were operational in the pilot areas; and those who flowed onto incapacity benefits in one of the comparison areas **after** the pilots were operational in the pilot areas. Individuals were interviewed by telephone shortly after their enquiry about claiming incapacity benefits to measure baseline characteristics, the interview including a range of questions aimed at replicating the Screening Tool that would be administered at the initial Work Focused Interview (WFI) in the Pathways to Work pilot areas. All individuals were then recontacted for a second interview several months later in order to collect information on outcomes of interest. We refer to the groups in both the pilot and comparison areas who flowed onto incapacity benefits before the pilots became operational as the 'pre-policy cohort' and to those who flowed on after the pilots became operational as the 'early policy cohort', to distinguish them from individuals who will form part of future analysis and who flowed onto incapacity benefit once the pilots had been operational for a longer time.

For each pilot area a similar comparison area was carefully selected. This was done by choosing areas where Jobcentre Plus had also been introduced[6], that were contiguous to the pilot areas, and that were similar in terms of the economic and

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[5] Although the sampling frame is those who made an enquiry about claiming incapacity benefits rather than those actually making a claim, we refer to them for brevity as 'flowing on'.

[6] Jobcentre Plus is a combined office that, as well as dealing with employment services, now deals with benefit claims. This was initially introduced in 56 areas in October 2001 and gradually extended across Great Britain, becoming nationwide in 2006. For more details see Department for Work and Pensions (2005).

social characteristics in the 2001 Census. Detailed information on the selection of comparison areas and information on response rates and survey methodology can be found in Hales *et al.* (forthcoming).

Box 2.1 shows the timing of the first and second telephone surveys with those in the pre-policy and early policy cohorts in both the pilot and the comparison areas. Where possible, sampling and subsequent interviewing in each comparison area took place at the same time as in the pilot area to which it was matched, and the comparison areas are, therefore, split into October 2003 and April 2004 areas according to whether the pilot areas to which they were matched were October 2003 or April 2004 pilot areas. There are two important things to note about the timing of the sampling and the surveying:

- First, the second telephone interviews with those in the early policy sample were carried out about nine months after the enquiry about claiming incapacity benefits had been made, whereas those in the pre-policy sample were interviewed after twelve months. While ideally the same time should have elapsed, the decision was made to collect the early policy data sooner so that the findings would be available sooner. Furthermore, collecting the information from those in the pre-policy samples earlier would have meant that the outcomes of these individuals would be less comparable to the information that is to be collected from a later cohort of individuals.
- Second, those observed in the early policy samples made enquiries about claiming incapacity benefits between April 2004 and June 2004. This means for those in the early policy sample in the October 2003 pilot areas, the policy will already have been running for around seven months, which may have allowed some initial problems to be eliminated. In contrast, those in the early policy sample in the April 2004 pilot areas were among the first claimants of incapacity benefits to be exposed to the policy in those areas.

Box 2.1 Timing of sampling and surveying relative to implementation of pilots

October 2003 areas

1. Pre-policy sample

September 2003 to October 2003. Pre-policy sample in both the pilot and the comparison areas made an enquiry about claiming incapacity benefits.

October 2003 to January 2004. Background information collected on those in the pre-policy sample from the pilot areas only, due to delays in receiving sample from the Department for Work and Pensions (DWP).

March 2004 to June 2004. Background information collected on those in the pre-policy sample from the comparison areas.

October 2004 to January 2005. Second wave interviews conducted with those in the pre-policy sample from both the pilot and the comparison areas.

2. Early policy sample

April 2004 to June 2004. Early policy sample in both the pilot and the comparison areas made an enquiry about claiming incapacity benefits.

June 2004 to October 2004. Background information collected on those in the early policy sample from both the pilot and the comparison areas.

December 2004 to March 2005. Second wave interviews conducted with those in the early policy sample from both the pilot and the comparison areas.

April 2004 areas

1. Pre-policy sample

January 2004 to March 2004. Pre-policy sample in both the pilot and the comparison areas made an enquiry about claiming incapacity benefits.

March 2004 to June 2004. Background information collected on those in the pre-policy sample from both the pilot and the comparison areas.

January 2005 to March 2005. Second wave interviews conducted with those in the pre-policy sample from both the pilot and the comparison areas.

2. Early policy sample

April 2004 to June 2004. Early policy sample in both the pilot and the comparison areas made an enquiry about claiming incapacity benefits.

June 2004 to October 2004. Background information collected on those in the early policy sample from both the pilot and the comparison areas.

December 2004 to March 2005. Second wave interviews conducted with those in the early policy sample from both the pilot and the comparison areas.

At the mean, around 10½ months (317.1 days) had elapsed from an individual first making an enquiry about claiming incapacity benefits until their second interview. An implication of the design of the evaluation described already is that this will vary between those observed before the policy was implemented and those observed after the policy was implemented. Measures of the distribution of days elapsed for each of these groups, split by whether the individual is from a pilot or a comparison area is shown in Table 2.1. At the mean, individuals observed before the policy was implemented were contacted about a year after they made their enquiry about claiming incapacity benefits (mean = 367.2 days), whereas among those observed after the policy was implemented, the average time elapsed is just over nine months (mean = 280.3 days). There is little difference, on average, within these groups between those in the pilot areas and those in the comparison areas (361.8 days compared to 379.2 days and 282.7 days compared to 276.7 days respectively). There is also little difference between these two groups at other parts of the distribution shown in Table 2.1 (25^{th}, 50^{th} and 75^{th} percentile) and the standard deviation is also similar. However, since the time elapsed is likely to be an important determinant of the outcomes of interest (such as whether the individual has been able to move into work) differences in this characteristic will need to be carefully controlled for.

The lower panels of Table 2.1 present the figures separately for those in the October 2003 and those in the April 2004 pilot areas and their respective comparison areas. As for the overall sample, the interviews that took place after the policy was implemented in the pilot areas tended to occur sooner after the individual's enquiry about claiming incapacity benefits than the interviews that took place before the policy was implemented in the pilot areas. However, as before, there is little difference in the time since enquiry about claiming incapacity benefits between the interviews with those in the pilot areas and those in the comparison areas. While there is a difference between the October 2003 and April 2004 areas for the pre-policy cohort, importantly the same is true across both pilot and comparison areas

Table 2.1 Distribution of time (in days) between enquiry about claiming incapacity benefits and second wave interview by area type, time period and cohort

	Pilot		Comparison		All		All
	Pre-policy	Early policy	Pre-policy	Early policy	Pre-policy	Early policy	
All areas							
Mean	361.8	282.7	379.2	276.7	367.2	280.3	317.1
25th percentile	340	269	351	262	342	267	277
50th percentile (median)	353	284	383	276	359	282	303
75th percentile	381	298	397	289	390	295	352
Standard deviation	33.5	21.3	34.0	19.1	34.6	20.7	51.0
Sample size	*2,300*	*2,690*	*1,027*	*1,844*	*3,327*	*4,534*	*7,861*
October 2003 areas							
Mean	400.4	284.7	397.3	281.5	398.8	283.7	333.1
25th percentile	383	270	382.5	269	383	270	283
50th percentile (median)	392	286	393	283	392	285	306
75th percentile	404	299	403	298	403	299	389
Standard deviation	30.8	20.4	26.2	20.6	28.5	20.5	61.9
Sample size	*635*	*1,226*	*676*	*519*	*1,311*	*1,745*	*3,056*
April 2004 areas							
Mean	347.1	281.1	344.4	274.9	346.6	278.1	306.9
25th percentile	335	267	334	261	335	262	274
50th percentile (median)	346	283	343	274	345	279	301
75th percentile	355	296	353	287	355	292	342
Standard deviation	20.2	21.9	14.9	18.1	19.4	20.4	39.3
Sample size	*1,665*	*1,464*	*351*	*1,325*	*2,016*	*2,789*	*4,805*

Note: Unweighted.

2.1 Outcome measures

2.1.1 Employment

Just under one in three (30.3%) respondents stated that they had done any paid work in the week prior to the second telephone interview (which, as discussed already, took place on average around 10½ months after they made an enquiry about claiming incapacity benefits). Table 2.2 shows how this varies by whether the respondent resides in a pilot area or a comparison area and whether they made their enquiry about claiming incapacity benefits before or after the Pathways to Work pilots were implemented. Encouragingly, 31.9% of respondents observed in the pilot areas after the policy was implemented, report that they have done some paid work in the week prior to interview, compared to 25.4% of respondents in the comparison areas in the same time period. This 6.5 percentage point difference is statistically significantly different from zero at conventional levels (t-stat = 4.7). Rather than being due to the policy, this difference could, in principle, be due to differences in the characteristics of individuals in each of the areas, or due to differences in the characteristics of the areas themselves. However, also encouragingly, among respondents observed before the policy was implemented the percentage reporting that they engaged in paid work in the last week was **lower** in the pilot areas (30.3%) than in the comparison areas (34.6%). (This 4.3 percentage point difference is also statistically significantly different from zero at conventional levels, t-stat = 2.5[7]).

This gives a raw difference-in-differences estimate of the impact of the Pathways to Work pilots of +10.7 percentage points (i.e. 6.5+4.3; numbers do not sum because of rounding). This estimate has a standard error of 2.2 percentage points and is, therefore, statistically different from zero at conventional levels.[8] However, this makes the assumption that the change in relative employment rates can be attributed to the policy. It should be noted that, in the comparison areas, the percentage of respondents reporting being in paid work in the last week is much higher among those observed in the pre-policy period (34.6%) than among those observed in the post-policy period (25.4%). The apparently large effect of the policy seems to be driven not by a large rise in employment in the pilot areas, but rather by a large fall in employment in the comparison areas not being replicated in the pilot areas. However, as was shown in Table 2.1, it is also the case that the second telephone interviews in the post-policy period were conducted much sooner after the individual had made their enquiry about claiming incapacity benefits, which will have given those individuals less time to move into employment.

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[7] While this might suggest that the pilot and the control areas were not particularly well matched, this difference is smaller in magnitude and not statistically different from zero at conventional levels once we control for other observed characteristics. See Table 4.1 for more details.

[8] See column 1 of Table 4.1.

Table 2.2 Percentage reporting being in paid work in the last week at second wave interview, by area and time period

	Pilot		Comparison		All	
	Mean	Sample size	Mean	Sample size	Mean	Sample size
All	31.1	5,162	28.7	2,873	30.3	8,035
Of which						
All pre-policy	30.3	2,471	34.6	1,029	31.6	3,500
All early policy	31.9	2,691	25.4	1,844	29.3	4,535
October 2003 pre-policy	30.9	644	38.4	677	34.7	1,321
October 2003 early policy	30.8	1,226	23.9	519	28.7	1,745
April 2004 pre-policy	30.1	1,827	27.3	352	29.6	2,179
April 2004 early policy	32.8	1,465	26.0	1,325	29.6	2,790

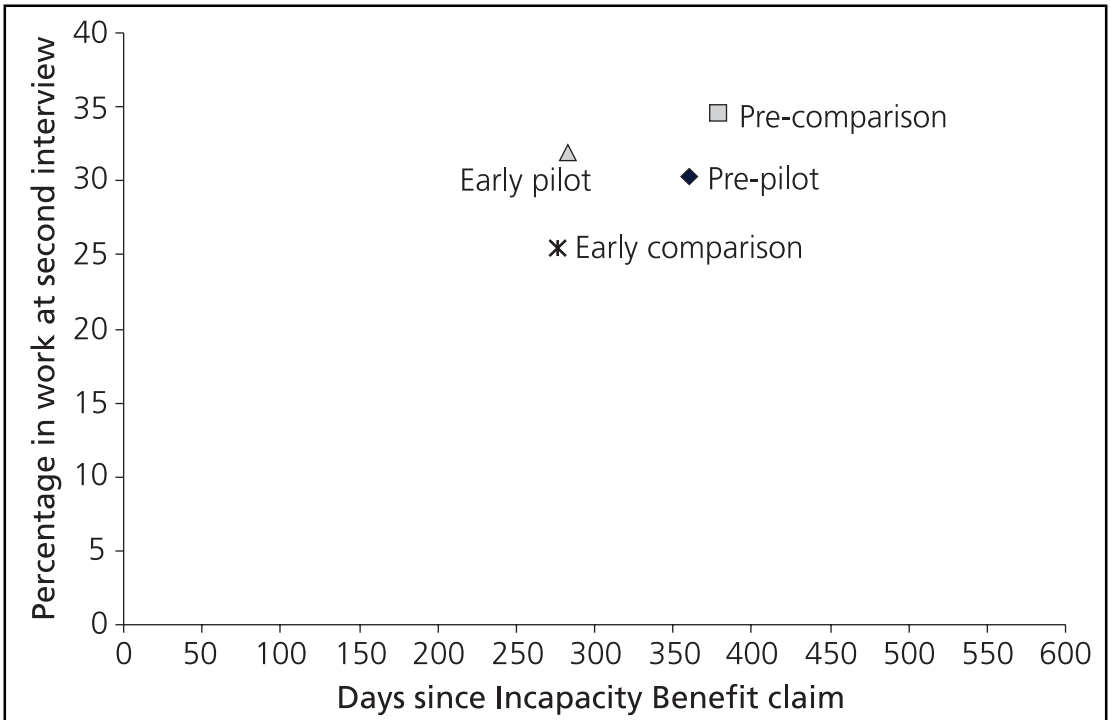
Note: Unweighted.

Figure 2.1 shows the percentage reporting that they were in paid work in the last week across each of the four main groups of interest (the same data as presented in Table 2.2) but plotted by the average (mean) number of days since they had made their enquiry about claiming incapacity benefits. Comparing those observed in the comparison areas after the policy was implemented (early comparison) with those observed in the comparison areas before the policy was implemented (pre-comparison) shows that a higher proportion of respondents did some paid work in the last week among the pre-policy cohort than among the early policy cohort. This indeed suggests that the later the interviews were conducted, the greater the likelihood that respondents would report undertaking paid work in the last week.[9] Despite this, Figure 2.1 shows that, on average, a **higher** percentage of those observed in the pilot area after the policy was implemented (early pilot) report doing some paid work in the last week than among those observed in the same areas before the policy was implemented (pre-policy) despite the fact that, on average, the interviews with the latter group were conducted later.

Rather than necessarily being due to the impact of Pathways to Work pilots it is important to bear in mind that the raw 10.7 percentage point estimate could be due to changes in other factors, such as a changing composition of individuals in the pilot and comparison areas. In Section 3.1 we outline the (linear regression) difference-in-differences methodology employed to take into account any changes in the observed characteristics of individuals over time.

[9] A probit with the likelihood of reporting being in paid work as the dependent variable and days since enquiry about claiming incapacity benefits as the only independent variable run across all the individuals in our pre-policy data (both pilot and comparison areas) shows that, on average, being interviewed 100 days later is associated with an 8.6 percentage point greater likelihood of reporting being in paid work in the last week. (95% confidence interval from 4.1 percentage points to 13.1 percentage points).

Figure 2.1 Average percentage reporting being in paid work in the last week at second wave interview, by average time since making enquiry about claiming incapacity benefits, by area and time period



Note: Unweighted.

The bottom part of Table 2.2 provides a breakdown by whether the respondent is from one of the October 2003 areas or from one of the April 2004 areas. Among those observed in the October 2003 pilot areas after the policy was implemented, 30.8% report being in paid work in the last week compared to 23.9% of those in the comparison areas. A similar pattern is observed for the April 2004 areas (32.8% compared to 26.0%). One difference, however, is among those observed **before** the policy was implemented. Those in the October 2003 pilot areas were less likely to report being in paid-work in the last week than those in the relevant comparison areas (30.9% compared to 38.4%). In contrast those in the April 2004 pilot areas were more likely to report being in paid-work in the last week than those in the relevant comparison areas (30.1% compared to 27.3%).

An alternative employment outcome is whether the respondent reports doing any paid work since they made an enquiry about claiming incapacity benefits (which includes work done in the last week). Table 2.3 presents summary statistics on this outcome and, perhaps unsurprisingly, shows a very similar pattern to that shown in Table 2.2. After the policy was implemented a higher percentage of respondents in both the October 2003 and the April 2004 pilot areas report having done any paid work than in the relevant comparison areas. Again, there is relatively stronger evidence of this being related to the actual policy in the October 2003 areas, where before the policy was implemented those in the pilot areas were less likely to report having done any paid work than those in the relevant comparison areas.

Table 2.3 Percentage reporting doing any paid work since making enquiry about claiming incapacity benefits at second wave interview, by area and time period

	Pilot		Comparison		All	
	Mean	Sample size	Mean	Sample size	Mean	Sample size
All	41.4	5,162	39.5	2,873	40.7	8,035
Of which						
All pre-policy	40.5	2,471	46.3	1,029	42.2	3,500
All early policy	42.2	2,691	35.7	1,844	39.6	4,535
October 2003 pre-policy	40.7	644	50.7	677	45.8	1,321
October 2003 early policy	41.2	1,226	35.5	519	39.5	1,745
April 2004 pre-policy	40.4	1,827	37.8	352	40.0	2,179
April 2004 early policy	43.1	1,465	35.8	1,325	39.6	2,790

Note: Unweighted.

2.1.2 Earnings

Respondents to the telephone survey who have been in paid work (either full- or part-time) are also asked for an estimate of their net pay.[10] Table 2.4 provides a description of how this varies across the different areas. Note that those who have not done any paid work in the last week are included in the table but with zero earnings.[11] This is important since, if Pathways to Work were successful in getting relatively low wage recipients of incapacity benefits back into work, then the policy might actually reduce average earnings among those in employment. Under this scenario, across all individuals (with those out of work counted as having zero earnings) there would still be a rise in average earnings. Our measure of average earnings captures a combination of the employment rate and the average earnings of those in work. Among those respondents observed in the pilot areas after the policy was implemented, average monthly net pay was £244. This is £49 higher than the average earnings among those observed at the same time in the comparison areas (£195), and again this difference is statistically significantly different from zero at conventional levels (t-stat = 4.0).

[10] The precise question asked is *'Last time you were paid, how much take-home pay did you receive, that is after all deductions for tax, national insurance, pension contributions and so on, but including overtime, bonus, commission or tips?'*. Respondents should not, therefore, be including any receipt of benefits (including, crucially, the Return to Work Credit (RTWC)) in their estimate.

[11] In addition, those who report being in paid work but who did not state their earnings have been given the average (mean) level of earnings observed across individuals in paid work contemporaneously in the same area.

Among the 23.3% of individuals in the pilot areas after the policy was implemented who report non-zero earnings, the average was £764. Among the 18.3% of individuals in the comparison areas after the policy was implemented in the pilot areas who report non-zero earnings, the average was £767. This suggests that the higher average earnings observed across all individuals in the pilot areas is due to a higher proportion of those individuals being in paid work, rather than higher earnings among those who are in paid work.[12]

Taking those observed after the policy was implemented, both those in the October 2003 pilot areas and those in the April 2004 pilot areas are found, on average, to have higher earnings than those in the relevant comparison areas at the same time. However, before the policy was implemented those in the April 2004 pilot areas are found to have higher earnings, on average, than those in the relevant comparison areas, while those in the October 2003 pilot areas are found to have lower earnings, on average, than those in the relevant comparison areas. This is consistent with the patterns for employment rates that were shown in Tables 2.2 and 2.3.

Table 2.4 Reported (net) earnings (£) in last month at second wave interview, by area and time period

	Pilot		Comparison		All	
	Mean	Sample size	Mean	Sample size	Mean	Sample size
All	238	5,162	222	2,873	232	8,035
Of which						
All pre-policy	232	2,471	270	1,029	243	3,500
All early policy	244	2,691	195	1,844	224	4,535
October 2003 pre-policy	252	644	312	677	283	1,321
October 2003 early policy	237	1,226	179	519	220	1,745
April 2004 pre-policy	226	1,827	187	352	219	2,179
April 2004 early policy	250	1,465	201	1,325	227	2,790

Note: Unweighted. Note that those who have not done any paid work in the last week are included in the table but with zero earnings, and those who report being in paid work but who did not state their earnings have been given the average (mean) level of earnings observed among those in paid work contemporaneously in their area.

[12] Although we do not know if some individuals include the RTWC in their estimate of net pay, this evidence suggests that the RTWC has not been included. However, this finding is also consistent with a situation in which the average earnings of those returning to work after being exposed to the policy (the early policy cohort in the pilot areas) are lower than for those not exposed to the policy but some are including RTWC in their reported net pay.

2.1.3 Receipt of incapacity benefits

Administrative records held by the DWP show that in the areas where the Pathways to Work pilots have been implemented (in October 2003 and April 2004) the six month off-flow rate from incapacity benefits was around 8 percentage points higher than was previously the case, and than in other areas nationally.[13] Respondents to the second wave telephone survey were asked whether they are in receipt of Incapacity Benefit (IB) or Income Support (IS) with a disability premium (or both). Table 2.5 provides a description of how the percentage reporting that they are still in receipt of one of these incapacity benefits varies across the different areas. Among those observed after the policy was implemented, there is a lower proportion reporting that they are still in receipt of incapacity benefits (49.4%) than among those in the comparison areas (54.3%). This 4.9 percentage point difference is statistically different from zero at conventional levels of statistical significance (t-stat = 3.2). Among respondents observed before the policy was implemented the percentage reporting that they were still in receipt of incapacity benefits was **higher** in the pilot areas (48.7%) than in the comparison areas (43.5%). (This 5.2 percentage point difference is also statistically significantly different from zero at conventional levels, t-stat = 2.8).

Table 2.5 Percentage reporting that they are still in receipt of incapacity benefits at second wave interview, by area and time period

	Pilot		Comparison		All	
	Mean	Sample size	Mean	Sample size	Mean	Sample size
All	49.1	5,162	50.4	2,873	49.6	8,035
Of which						
All pre-policy	48.7	2,471	43.5	1,029	47.2	3,500
All early policy	49.4	2,691	54.3	1,844	51.4	4,535
October 2003 pre-policy	46.6	644	40.5	677	43.5	1,321
October 2003 early policy	49.7	1,226	54.7	519	51.2	1,745
April 2004 pre-policy	49.5	1,827	49.4	352	49.5	2,179
April 2004 early policy	49.1	1,465	54.1	1,325	51.5	2,790

Note: Unweighted.

The lower part of Table 2.5 shows that after the policy was implemented, a lower percentage of respondents in both the October 2003 and the April 2004 pilot areas report being in receipt of incapacity benefits than in the relevant comparison areas. As was the case with the employment outcomes, there is relatively stronger evidence of this being related to the actual policy in the October 2003 areas, where before the policy was implemented those in the pilot areas were more likely to report being in receipt of incapacity benefits than those in the relevant comparison areas.

[13] See Figure 3.1, page 9, of Blyth (2006).

2.1.4 Health affecting everyday activities

The final outcome that we consider in this empirical analysis relates to individuals' health. While one might, *a priori*, expect the Pathways to Work pilots to lead to increases in the percentage of individuals in paid employment (and therefore, also to increase the measure of earnings set out already) any impact on health could be more difficult to predict. The pilots could, in principle, lead to an improvement in individuals' health either directly through elements of the policy (in particular, the Choices package) or through individuals moving into paid employment and that having a beneficial impact on their health. Alternatively, the pilots could, in principle, lead to deterioration in individuals' health. Again, this could either be a direct result of the new activities (for example, through any greater perceived pressure on recipients of incapacity benefits to find paid work) or potentially through individuals moving into employment and that being bad for their health.

Clearly this is a very complicated issue, and it will be explored in greater depth in various later stages of the evaluation. Here we focus on one set of questions that relate to one aspect of an individual's health: the extent to which they report that their health limits their daily activities. This measure of health could be improved either through actual improvements in health or alternatively through a reduction in the extent to which a given level of health leads to difficulties in daily activities. In addition, it is a self-assessed, subjective measure. It is possible that individuals who are not in work might be more likely to report that a given level of poor health limits their daily activities in some way – for example, for reasons of self-esteem. To the extent to which this is true, then an increase in the percentage of individuals in work might lead to a reduction in the percentage **reporting** that their health limits their daily activities in some way even without any reduction in the percentage of individuals whose health is actually affecting their everyday activities. Alternatively, the opposite could be true: some individuals might report that moving into work leads to their health limiting their everyday activities to a greater extent, reflecting the greater challenge that their everyday activities now pose.

As shown in Table 2.6, at the time of the second telephone survey the majority (88.2%) of respondents report that their health, in some way, affects their everyday activities. Among those observed after the policy was implemented, there is a slightly lower proportion reporting that their health affects their everyday activities in the pilot areas (88.5%) than among those in the comparison areas (90.0%). This difference is not different from zero at conventional levels of statistical significance (t-stat = 1.5). Among individuals observed before the policy was implemented those in the pilot areas were, on average, found to be slightly **more** likely to report that their health limited their everyday activities in some way than those in the comparison areas (87.7% compared to 85.0%, with this 2.7 percentage point difference being statistically significantly difference from zero at conventional levels, t-stat = 2.1).

Among those observed after the policy was implemented, in the October 2003 pilot areas there is a lower percentage reporting that their health limited their everyday

activities than among those in the relevant comparison areas (88.7% compared to 90.8%). In contrast, among those observed before the policy was implemented, those in the October 2003 pilot areas were, on average, found to be slightly more likely to report that their health limited their everyday activities in some way (88.7% compared to 82.6%). A slightly different pattern is found among those residing in the April 2004 pilot areas, where a lower percentage of individuals are found to report that their health limits their everyday activities than among those in the relevant comparison areas, both among those observed before and among those observed after the Pathways to Work pilots were implemented.

Table 2.6 Percentage reporting that health affects their everyday activities at second wave interview, by area and time period

	Pilot		Comparison		All	
	Mean	Sample size	Mean	Sample size	Mean	Sample size
All	88.1	5,162	88.2	2,873	88.2	8,035
Of which						
All pre-policy	87.7	2,471	85.0	1,029	86.9	3,500
All early policy	88.5	2,691	90.0	1,844	89.1	4,535
October 2003 pre-policy	88.7	644	82.6	677	85.5	1,321
October 2003 early policy	88.7	1,226	90.8	519	89.3	1,745
April 2004 pre-policy	87.4	1,827	89.8	352	87.7	2,179
April 2004 early policy	88.3	1,465	89.7	1,325	89.0	2,790

Note: Unweighted.

2.2 Background characteristics

As mentioned in Section 2.1, any difference in the outcomes of interest between those subject to the policy and those not subject to the policy could potentially be due to differences in the background characteristics of those in the two groups. The responses to the first telephone survey provide a range of information on individuals that can be reasonably assumed not to be affected by the reforms.[14] A summary of the non-health characteristics of respondents are set out in Table 2.7. Again, these are presented separately for the four key groups of interest. Comparing those

[14] One concern might be that the presence of the Pathways to Work pilots affects individuals' incentives to apply for Incapacity Benefit. This could affect the composition of our sample and therefore, could bias the estimates of the impact of the policy. However, our sample is taken from individuals who made an enquiry about claiming incapacity benefits, which would mitigate this problem as long as the policy only affects who applies for incapacity benefits and not who makes an enquiry about it. In Section 4.1 we present analysis of the impact of the policy on those who report actually receiving incapacity benefits.

respondents observed in the pilot areas after the policy was implemented (pilot, early policy) to those observed at a similar time in the comparison areas (comparison, early policy) reveals that there are some differences in average characteristics. Those in the pilot areas are slightly more likely to be white, less likely to be male and more likely to had have a partner at work at the time of the first wave survey. There is little difference in terms of either their years of schooling or their educational qualifications.

The first telephone interview also contains a range of questions relating to an individual's health. In particular, respondents are asked whether they have particular health problems. In our analysis we take into account the top two problems that have been identified by the respondent. Table 2.8 sets out the percentage of respondents who refer to each of the specific problems that they are asked about, again split by the four key groups of interest. Those observed in the pilot areas after the policy was implemented (pilot, early policy) on average report very similar problems to those observed at the same time in the comparison areas (comparison, early policy). For example, 20.5% of those in the pilot areas observed after the policy was implemented, report that mental illness is one of their top two health problems compared to 21.8% among those observed at a similar time in the comparison areas.

Table 2.7 Individual (non-health) background characteristics at first wave interview by area and time period

	Pilot		Comparison		All		All
	Pre-policy	Early policy	Pre-policy	Early policy	Pre-policy	Early policy	
Age (mean)	42.2	43.1	43.0	44.0	42.4	43.5	43.0
Male	55.4%	50.9%	53.1%	54.7%	54.7%	52.5%	53.4%
Female	44.6%	49.1%	46.9%	45.3%	45.3%	47.5%	46.6%
Activity before incapacity benefits enquiry							
On Statutory Sick Pay (SSP)	28.1%	34.2%	30.9%	32.6%	28.9%	33.5%	31.5%
In work	48.8%	58.2%	53.0%	57.3%	50.1%	57.9%	54.5%
Whether in work/ on SSP unknown	8.8%	4.1%	8.7%	4.8%	8.8%	4.4%	6.3%
Ever worked before enquiry	96.4%	96.0%	97.6%	95.8%	96.7%	95.9%	96.3%

Continued

Table 2.7 Continued

	Pilot		Comparison		All		All
	Pre-policy	Early policy	Pre-policy	Early policy	Pre-policy	Early policy	
Household (HH) characteristics							
Lives alone	21.4%	20.7%	19.0%	22.3%	20.7%	21.4%	21.1%
Living with partner	50.2%	52.3%	53.3%	49.8%	51.1%	51.3%	51.2%
Lives with parents	15.9%	14.7%	17.2%	14.7%	16.3%	14.7%	15.4%
Lives with siblings	7.0%	6.6%	8.8%	6.2%	7.5%	6.4%	6.9%
Lives with adult children	17.5%	20.1%	17.1%	18.2%	17.4%	19.3%	18.5%
Lives with other people	6.2%	5.7%	5.2%	5.4%	5.9%	5.6%	5.7%
Who lives with missing	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%
Children in HH	26.7%	23.9%	27.7%	23.9%	27.0%	23.9%	25.3%
No. of children in HH (mean)	0.5	0.4	0.4	0.4	0.5	0.4	0.4
Partner in work at first wave	29.4%	32.3%	35.0%	28.1%	31.1%	30.6%	30.8%
Education							
Left school before 15	2.5%	2.9%	3.0%	3.1%	2.7%	3.0%	2.9%
Left school at 15 or 16	73.5%	72.5%	70.9%	69.6%	72.7%	71.3%	71.9%
Left school at 17 or 18	15.5%	14.5%	15.8%	16.5%	15.6%	15.3%	15.4%
Left school after 18	8.2%	9.7%	10.1%	10.3%	8.8%	10.0%	9.4%
Has degree	13.1%	15.4%	14.6%	16.1%	13.5%	15.7%	14.7%
Has A levels	12.1%	13.5%	14.9%	13.5%	12.9%	13.5%	13.2%
Has O levels or GCSEs	39.3%	39.9%	43.1%	36.7%	40.4%	38.6%	39.4%
Has other qualifications	36.0%	39.7%	34.3%	39.7%	35.5%	39.7%	37.9%
Has no qualifications	30.7%	27.1%	28.4%	29.7%	30.0%	28.2%	29.0%
Has vocational qualification	46.1%	51.8%	47.5%	48.7%	46.5%	50.5%	48.8%
Has academic qualification	52.6%	53.4%	56.2%	52.2%	53.6%	52.9%	53.2%
Ethnicity							
White	94.8%	96.7%	94.8%	94.5%	94.8%	95.8%	95.4%
Black	0.4%	0.6%	0.4%	0.5%	0.4%	0.5%	0.5%
Asian	2.8%	1.6%	2.8%	3.9%	2.8%	2.5%	2.6%
Other ethnicity	1.3%	0.8%	1.6%	0.8%	1.4%	0.8%	1.1%
Sample size	*2,471*	*2,691*	*1,029*	*1,844*	*5,162*	*2,873*	*8,035*

Note: Unweighted.

Table 2.8 Individuals' reported health problems at first wave interview by area and time period (percentage saying they have the condition)

	Pilot		Comparison		All		All
	Pre-policy	Early policy	Pre-policy	Early policy	Pre-policy	Early policy	
Problem with arms/hands	18.9%	18.7%	15.3%	17.2%	17.9%	18.1%	18.0%
Problem with legs/feet	28.0%	27.4%	27.1%	28.2%	27.8%	27.7%	27.7%
Problem with neck/back	20.8%	19.4%	18.8%	20.3%	20.2%	19.8%	20.0%
Difficulty with sight	1.9%	1.5%	1.6%	1.6%	1.8%	1.5%	1.7%
Difficulty with hearing	0.6%	0.5%	0.8%	0.6%	0.6%	0.6%	0.6%
Has speech impediment	0.1%	0.5%	0.5%	0.4%	0.2%	0.5%	0.4%
Has skin condition/allergy	0.7%	0.7%	0.8%	0.7%	0.7%	0.7%	0.7%
Has chest/ breathing problem	6.6%	6.7%	8.2%	6.6%	7.1%	6.6%	6.8%
Has heart/ blood problem	5.9%	6.5%	5.9%	6.5%	5.9%	6.5%	6.2%
Has stomach/ kidney problem	4.4%	4.9%	5.2%	4.5%	4.6%	4.7%	4.7%
Has diabetes	1.5%	1.5%	2.1%	1.5%	1.7%	1.5%	1.6%
Has mental illness	20.2%	20.5%	19.3%	21.8%	19.9%	21.1%	20.6%
Has epilepsy	1.5%	1.1%	1.0%	1.3%	1.3%	1.2%	1.2%
Has learning difficulties	0.1%	0.2%	0.2%	0.2%	0.1%	0.2%	0.2%
Other progressive problem	0.8%	2.0%	1.1%	1.4%	0.9%	1.7%	1.4%
Has other health problem	3.0%	3.7%	4.0%	3.6%	3.3%	3.6%	3.5%
Sample size	*2,471*	*2,691*	*1,029*	*1,844*	*5,162*	*2,873*	*8,035*

Note: Unweighted.

Appendix A, Tables A.1 and A.2 provide details of the background characteristics of those in the October 2003 areas, split by whether they are in a pilot area or a comparison area and by whether they were observed before or after the Pathways to Work pilots were implemented in the pilot areas. Tables A.3 and A.3 show the equivalent figures for the April 2004 areas.

3 Methodology

Estimating the causal impact of the Pathways to Work pilots on the outcomes of interest requires an assessment of what would have occurred in the absence of the reform. Since this counterfactual cannot be observed directly it needs to be estimated, which can only be done by making certain assumptions. In particular, it might be important to take into account any differences (observed or unobserved) in the composition of our sample, across pilot and comparison areas and over time, which could otherwise lead to a spurious correlation between participation in the pilots and our outcome measures.

The main methodology that we use to identify the impact of Pathways to Work is a difference-in-differences approach. This takes into account the background characteristics summarised in Tables 2.7 and 2.8, and also attempts to subtract out the effect of pre-policy differences in our outcome measures between pilot and comparison areas, thus allowing for any differences in unobserved characteristics that remain constant over time. We implement this approach within a linear regression framework. As a robustness check we also use a propensity score matching approach. This makes fewer assumptions than the linear regression, difference-in-differences approach in controlling for differences in observed characteristics, but in this specific case it is not able to control for any differences in terms of the impact of unobserved characteristics. Here we provide a brief discussion of the two methodologies used. For more details see, for example, Blundell and Costa Dias (2000).

3.1 Difference-in-differences

The 'difference-in-differences' methodology involves comparing the change in outcomes of interest (such as subsequent employment) among individuals in the pilot areas with the change among individuals in the comparison areas. The advantage of this approach is that it 'differences out' any time-constant effect of factors that may be correlated with both the outcome of interest and whether the individual is in the treatment group.[15] This is the case even if any such factors are

[15] In this case the treatment group is made up of individuals in the pilot areas, after the policy has been implemented.

unobserved: as long as any effect that they have on the outcomes that we are interested in does not change over time, this methodology subtracts them out. Not doing this would be potentially problematic as it could lead to biased estimates of the impact of the policy on the relevant outcome of interest.

As the samples in both the pilot and comparison areas are not a panel over time, but contain different individuals for the pre-policy and post-policy data, the assumption that any unobservables have no different impact over time relies on the impact of unobservables' not being cohort specific in a way that differs systematically between the pilot and comparison areas.

'Difference-in-differences' therefore allows us to control for factors that we do not observe (as long as their impact is constant over time), but we can also control for changes over time in factors that we do observe: in this case, the composition of our samples in terms of the observed background characteristics of the individuals who have made an enquiry about claiming incapacity benefits. The model can be written as follows:[16]

$$Y_i = \gamma X_i + \delta POST_i + \lambda PILOT_i + \beta POST_i * PILOT_i + \varepsilon_i \qquad (1)$$

where Y_i denotes the outcome of interest (for example employment outcomes) for individual i and X_i denotes observed individual characteristics. $PILOT_i$ is a dummy variable[17] indicating whether the individual's enquiry about claiming incapacity benefits was made in a Pathways to Work pilot area or in one of the comparison areas, and $POST_i$ is a dummy variable indicating whether the enquiry about claiming incapacity benefits was made before or after the Pathways to Work pilots were actually implemented (regardless of whether the individual lived in one of the seven pilot areas or in one of the comparison areas). ε_i is an error term.

The term of particular interest is $POST_i * PILOT_i$ which is a dummy variable taking the value 1 for those observed in one of the seven Pathways to Work pilot areas after the policy was introduced, and 0 otherwise. Hence, β is the main coefficient of interest. This measures the effect of being subject to the Pathways to Work pilot in a period in which the policy was in effect, controlling for all other observed factors. In addition it is net of any effect of being observed in the period after the policy was implemented that is constant across pilot and comparison areas (δ) and any effect of being in a pilot area that is constant over time (λ). Hence, it captures shifts in the

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[16] This equation is estimated by Ordinary Least Squares regression. This method of implementing the difference-in-differences approach is based on the Wald estimator and has been described and used in a number of papers including Ashenfelter (1978) and Heckman and Robb (1985).

[17] A dummy variable is a variable which takes the value 0 or 1. In this case, PILOT=1 if the individual is in a Pathways to Work pilot area; PILOT=0 otherwise. In the broadest specification we include separate dummy variables for each of the areas that we observe in our data.

outcome measure among those in the Pathways to Work pilot areas vis-à-vis those in the comparison areas that occur after the policy is introduced. However, this can be interpreted as the causal impact of the intervention only under two assumptions: first, as discussed already, that the effect of unobserved characteristics on the outcomes of interest does not vary differentially between pilot and comparison areas over time; second, that the characteristics included in our regressions that are correlated with $\mathrm{POST}_i{*}\mathrm{PILOT}_i$ have a linear effect on the outcomes of interest as assumed in equation 1.

3.2 Propensity score matching

The second methodology used is propensity score matching. This reweights the data so that the weighted distribution of observed characteristics is the same for those individuals who made an enquiry abut claiming incapacity benefits in the Pathways to Work pilot areas after the pilots were implemented as for those individuals who made an enquiry in the comparison areas in the same time period. The matching approach is less restrictive than the (linear regression-based) difference-in-differences approach in the assumptions that it makes about how the various **observed** characteristics affect the outcomes of interest. This is because matching only compares the outcomes of individuals who are similar in terms of their **observed** characteristics when yielding results. Under the assumption that we take into account all characteristics which could affect the outcomes of interest that vary between these two groups, any remaining difference in outcomes can be attributed to the policy.[18] However, the assumption that unobserved characteristics that affect the outcome of interest do not vary between groups is a strong one. In contrast, the difference-in-differences approach, while making more restrictive assumptions about the impact of the **observed** characteristics on the outcomes of interest, is able to take into account any time-constant impact of differences in **unobserved** characteristics.

We estimate a probit model with whether or not the individual is in a pilot area as the dependent variable and all of the observed background characteristics contained in Tables 2.7 and 2.8 as regressors. This is done separately for those in the pre-policy period and those in the post-policy period. Results from these two probits are given in Tables B.1 and B.2 respectively. Then, for each individual, the estimated coefficients are used to estimate the probability that they reside in one of the Pathways to Work pilot areas. This probability is used as a propensity score. We then compare the outcomes of individuals who made an enquiry about claiming incapacity benefits in Pathways to Work pilot areas with a weighted set of

[18] For more details see, for example, Heckman, Ichimura and Todd (1997).

individuals who made an enquiry about claiming incapacity benefits in the comparison areas but who have a similar estimated propensity score.[19]

While, in principle, it is possible to carry out a difference-in-differences propensity score matching approach, it was not possible in this case. This is because, as shown in Table 2.1, there is little overlap (common support) in terms of the days since the enquiry about claiming incapacity benefits was made at the time of the second wave interview between those in the pre-policy cohort and those in the early policy cohort. One possibility would be to subtract any difference observed between the matched samples of those observed in the pilot and the comparison areas before the policy was implemented from that observed after it was implemented. However, it is important to note that these are different groups (as they have not been matched to each other) and that this would require the additional assumption that any pre-policy differences were constant among the two (non-matched) groups. Therefore, rather than explicitly make this assumption we prefer to simply use the evidence from the pre-policy period as an informal test of the identifying assumption that we have been able to take into account all characteristics that might differ between individuals in the two areas that could be correlated with the outcomes of interest.

The balancing of the sample through matching can be seen graphically in Figures 3.1 and 3.2. The distributions of the estimated propensity score for individuals who made an enquiry about claiming incapacity benefits after the Pathways to Work pilots were operational, are shown separately for the pilot areas and the comparison areas in Figure 3.1. The propensity scores of those in the pilot areas are, on average, higher than those in the comparison areas: that is true by construction, since the propensity score is measuring how similar people's characteristics are to the average characteristics of those in the pilot areas. There is significant overlap between the estimated propensity scores of those in the pilot areas and those in the comparison areas – had there not been, the background characteristics of individuals flowing onto incapacity benefits in the pilot areas would be substantially different from those flowing onto incapacity benefits in the comparison areas and, unless these characteristics were thought to be unrelated to the outcomes of interest, it would not be possible to make any valid comparisons between the two groups.

The distributions of propensity scores once we have carried out the kernel-based matching are shown in Figure 3.2. Those who made an enquiry about claiming incapacity benefits in the pilot areas but for whom no suitable match could be found, are now excluded from the sample (which applies to 23 out of 2,689 observations or just under 1% of individuals flowing onto incapacity benefits in the

[19] We are able to match on just one single propensity score rather than separately on all characteristics using a theorem by Rosenbaum and Rubin (1983). Kernel-based matching is used with an Epanechnikov kernel and a bandwidth of 0.005, i.e. outcomes of individuals in the treatment areas are compared to individuals in the comparison areas whose propensity score is within 0.5 percentage points, with a higher weight given to those with closer propensity score.

pilot areas). Those who made an enquiry about claiming incapacity benefits in the comparison areas are weighted so that the distribution of their background characteristics is brought into line with the distribution of background characteristics of those who made an enquiry about claiming incapacity benefits in the pilot areas. Hence the two distributions are virtually identical, and under the assumption that we have controlled for all characteristics that vary between the two groups and affect the outcomes of interest, we can ascribe any differences in the outcomes between the two (suitably weighted) groups to the policy. Making this comparison still allows for the possibility that there may be unobserved characteristics that affect the outcomes of interest – as long as these are not correlated with whether an individual resides in a pilot area or a comparison area.

Figure 3.1 Distribution of estimated propensity scores by whether or not an individual is in one of the Pathways to Work pilot areas, all those observed *after* the Pathways to Work pilots were implemented

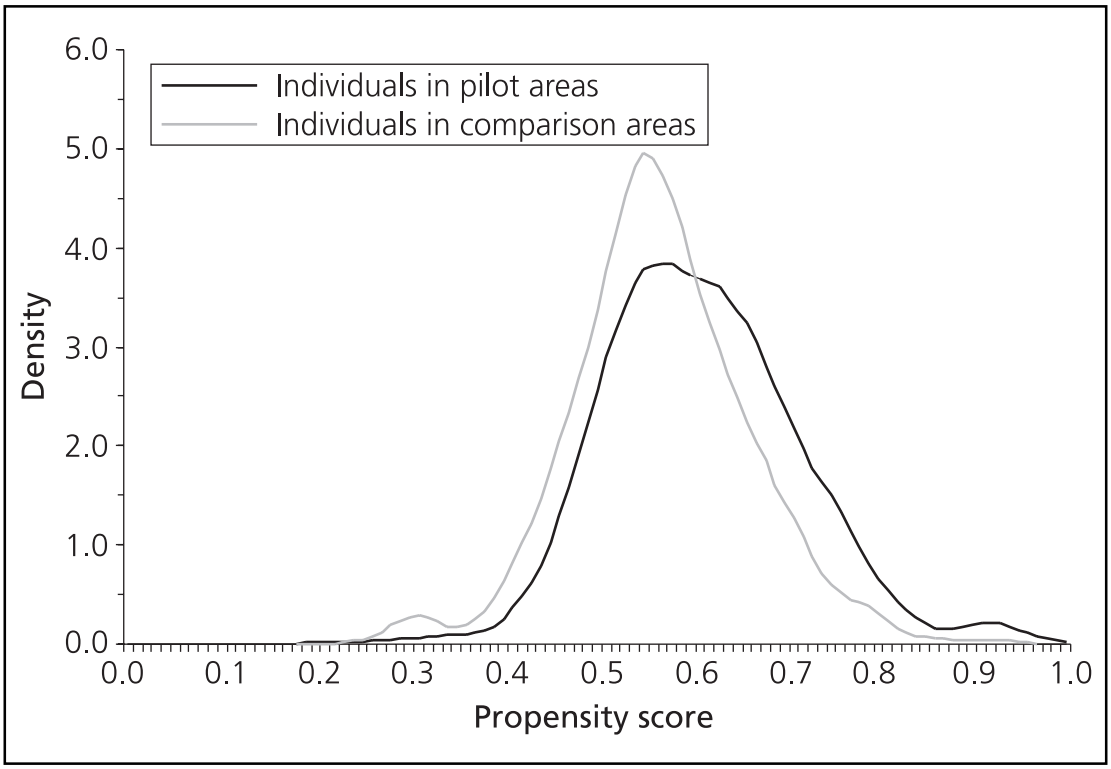
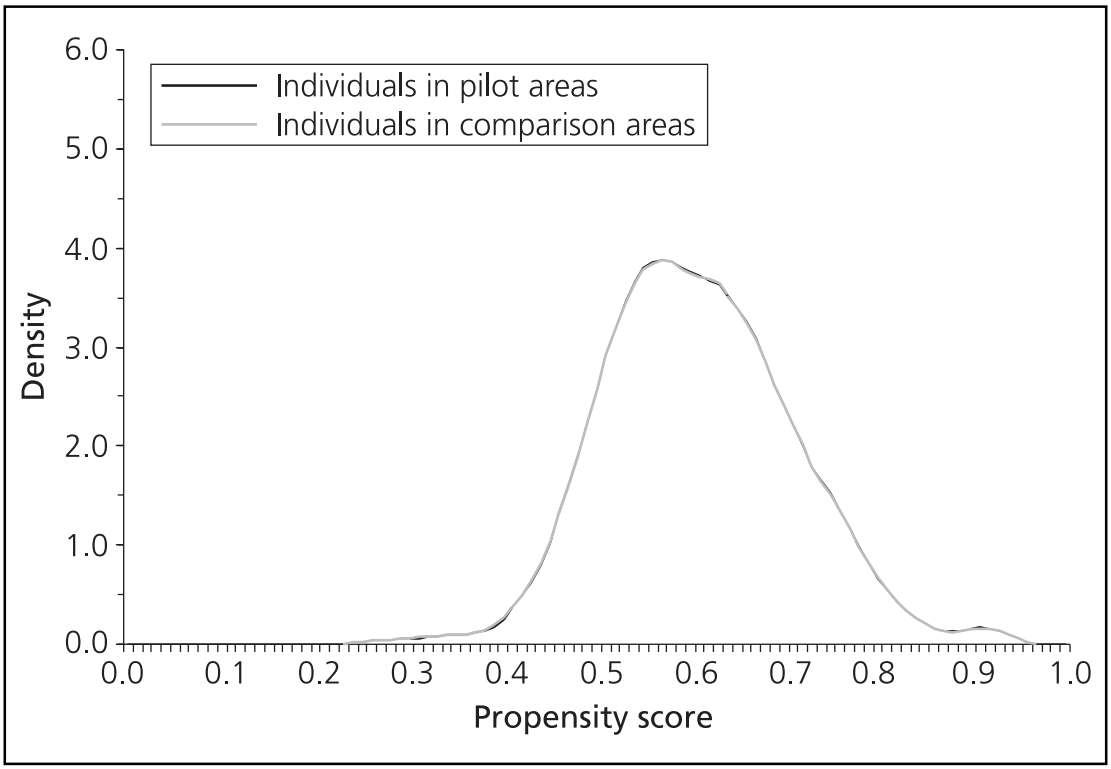


Figure 3.2 Distribution of estimated propensity scores by whether or not an individual is in one of the Pathways to Work pilot areas, all those observed *after* the Pathways to Work pilots were implemented (reweighted matched sample only)



In addition we have information on individuals who made an enquiry about claiming incapacity benefits in the pilot and the comparison areas in the period before the Pathways to Work pilots were implemented. Therefore, we also carry out matching between those who made an enquiry about claiming incapacity benefits in the Pathways to Work pilot areas before the policy was implemented and those who made an enquiry in the comparison areas in the same period. Results from this probit are given in Table B.2, and the distributions of propensity scores before and after matching are shown in Figures 3.3 and 3.4 respectively. (No match was found for 19 out of the 2,298 individuals (just under 1%) who made an enquiry about claiming incapacity benefits in the pilot areas before the Pathways to Work pilots were implemented).

We then calculate the difference in the outcomes of interest between those in the pilot areas before the policy was implemented and the matched controls in the same period. If no difference is found, this would support the assumption that any difference in outcomes of interest observed between those in the pilot areas and their matched controls **after** the policy was implemented can be ascribed to the policy.

However, if a difference is found, this is slightly more problematic. As discussed above, one possibility would be to assume that any pre-existing difference is time

invariant and to subtract it. However, it should be noted that this would be a strong assumption as we have not matched the characteristics of those observed before the policy was implemented with those who were observed after the policy was implemented. Should these groups differ, this (untestable) assumption will be less likely to hold. We, therefore, use it as a robustness check to the (linear regression) difference-in-differences approach, rather than as a methodology that can be used on its own.

Figure 3.3 Distribution of estimated propensity scores by whether or not an individual is in one of the Pathways to Work pilot areas, all those observed *before* the Pathways to Work pilots were implemented

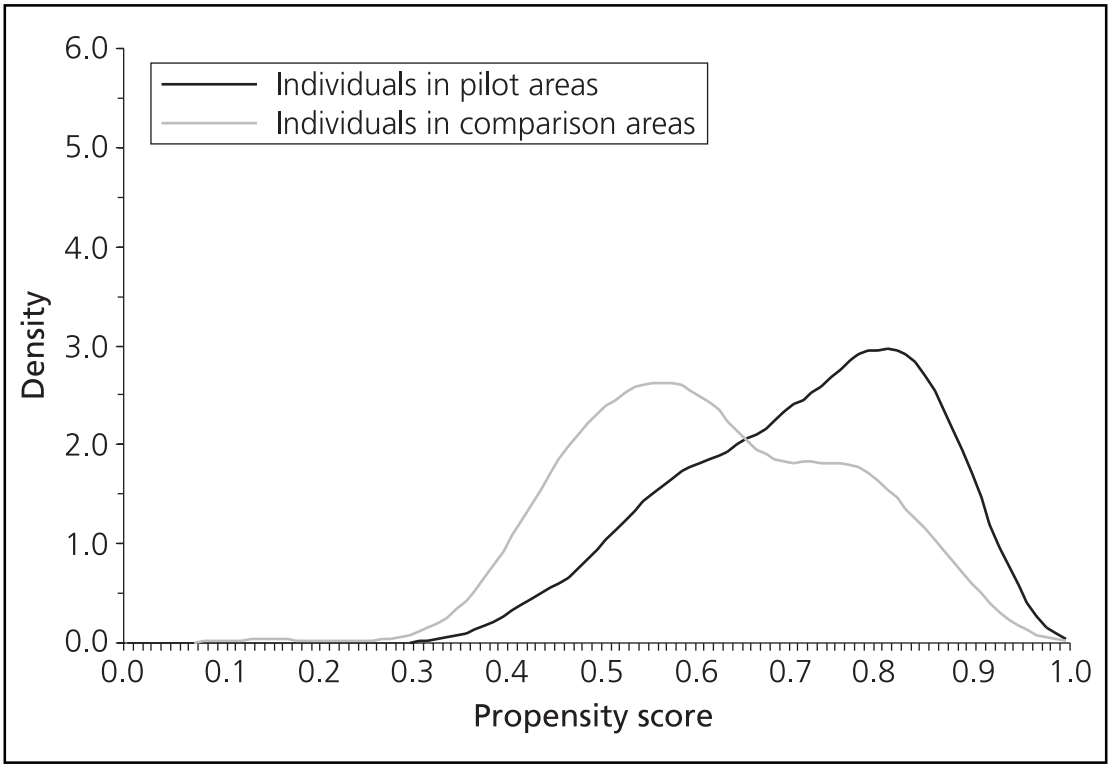
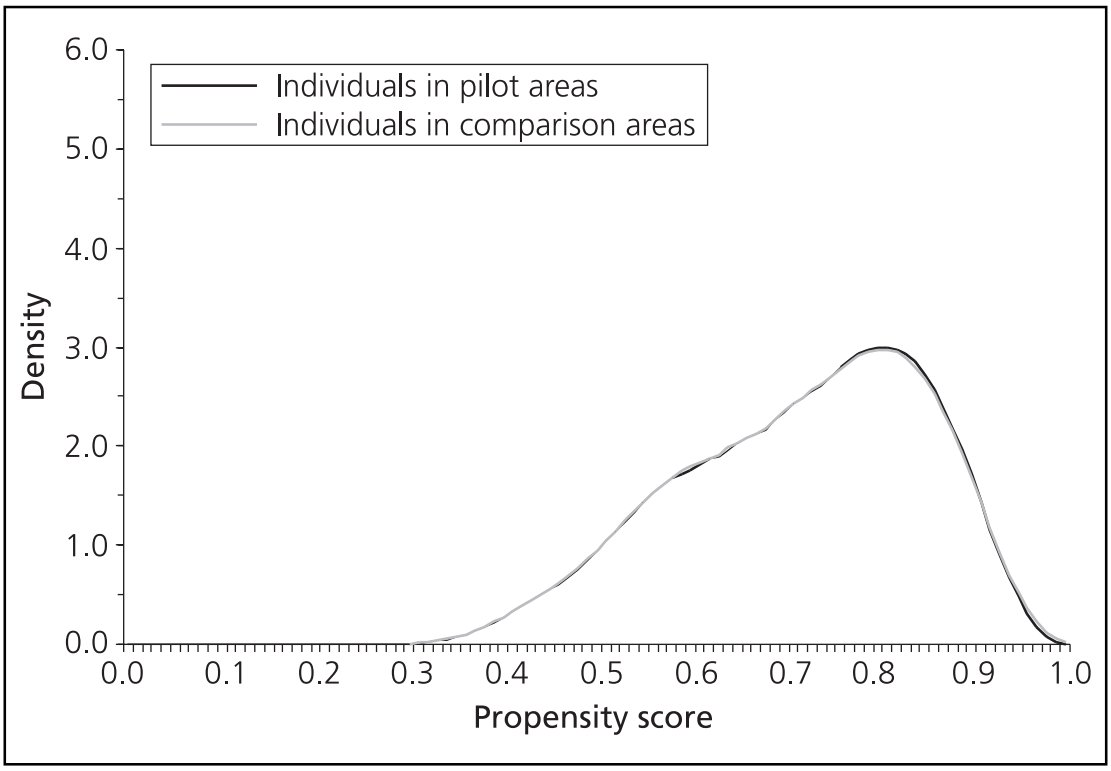


Figure 3.4 Distribution of estimated propensity scores by whether or not an individual is in one of the Pathways to Work pilot areas, all those observed *before* the Pathways to Work pilots were implemented (reweighted matched sample only)



4 Results

This chapter presents the results using both the difference-in-differences and the propensity score matching approaches set out already. Section 4.1 provides analysis of the early impact of the Pathways to Work pilots on employment outcomes, Section 4.2 examines earnings, Section 4.3 examines receipt of incapacity benefits, and section 4.4 examines one (self-reported) measure of whether individuals' health affects their everyday activities.

4.1 Employment

The results from the difference-in-differences methodology on the early impact of the Pathways to Work pilots on the likelihood of being in paid work in the last week are presented in Table 4.1. The first column shows that when no individual controls are included, the estimated impact of the policy is to increase the percentage in paid work at the time of the second telephone interview by 10.7 percentage points. This is exactly the figure derived by simply looking at the employment rates among the four groups in Table 2.2 (i.e. (31.9–25.4)–(30.3–34.6) = +10.7). The second column shows that once the time elapsed since the individual made their initial enquiry about claiming incapacity benefits is controlled for[20], the estimated impact of the policy on the percentage in paid work in the last week falls, but is still an increase of 8.8 percentage points. The third column includes controls for all of the individual characteristics presented in Tables 2.7 and 2.8, while the fourth column also includes controls for the broad area of residence of the individual. This most comprehensive model suggests that the early impact of the Pathways to Work policy is to increase the percentage of individuals doing paid work in the last week at the time of the second telephone interview (which is on average around 10½ months

[20] Both linear and quadratic terms of days since enquiry about claiming incapacity benefits are included.

after the individual made the initial enquiry about claiming incapacity benefits[21]) by 9.4 percentage points. To place this in context, as shown in Table 2.2, just under one-third (31.9%) of those in the pilot areas in the period after the pilots had been implemented, reported that they had been in paid work in the previous week. The estimated impact of the Pathways to Work pilots of +9.4 percentage points suggests that in the absence of these pilots the employment rate in the last week would have been just 22.5% (i.e. 31.9–9.4).

The other coefficients (and their associated standard errors) show that once we control for other observed characteristics and the impact of the policy itself, there is no statistically significant difference between the outcomes observed among those in the pilot areas and those observed in the comparison areas, or between those observed before the policy was implemented and those observed after the policy was implemented.

One possibility is that the estimated impact of the policy varies over the range of time elapsed from the individual making their enquiry about claiming incapacity benefits to the second telephone interviews (238 to 357 days[22]). This can be tested by including in the model interactions between time since enquiry and whether or not the individual has been exposed to the policy. However, we find no statistically significant evidence that the impact of the policy over this period varies with the time since the enquiry.[23]

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[21] The average number of days elapsed amongst all individuals within the data is approximately 10½ months, but remember that among the early pilot cohort, the average time elapsed was around nine months, and in the pre-pilot cohort around 12 months (see Table 2.1). The estimated impact of the policy is assumed to be the same at all numbers of observed days between enquiry to first interview: as discussed in the text, we are not able to reject this hypothesis

[22] This is the range for those observed in both the pilot and the comparison areas after the policy was implemented.

[23] Interactions between being in a pilot area after the policy was implemented and both days since enquiry about claiming incapacity benefits and days since enquiry about claiming incapacity benefits squared were included in the model. The coefficients on these terms were not different from zero at conventional levels of statistical significance ($F(2, 7{,}893) = 0.30$, p-value = 0.74). Given the lack of evidence of a differential impact of the policy over time within our sample, we describe the estimated impacts of the policy as being at around 10½ months, since this is the mean number of days that elapsed after the individual made an enquiry about claiming incapacity benefits.

Table 4.1 Difference-in-differences estimates of the early impact on the percentage reporting being in paid work in the last week, all who made enquiry about claiming incapacity benefits

	No additional controls	Controls for time since claim enquiry	Plus controls for personal characteristics	Plus controls for broad area of residence
Post * Pilot	10.74***	8.84***	7.24***	9.44***
	(2.19)	(2.25)	(2.11)	(2.26)
Pilot	–4.29**	–3.03*	–2.36	n/a
	(1.70)	(1.75)	(1.64)	
Post	–9.16***	0.22	–1.70	–2.29
	(1.78)	(2.76)	(2.58)	(2.73)
Sample size	*8,035*	*7,861*	*7,861*	*7,861*
Adjusted R^2	0.4%	0.6%	13.8%	14.9%

Note: Unweighted. Standard errors in parentheses. *** denotes that the coefficient is statistically different from zero at the 1% level; ** at the 5% level and * at the 10% level.

The analysis presented in Table 4.1 is based on our whole sample of individuals who made an enquiry about claiming incapacity benefits. Some of these individuals do not report subsequently applying for incapacity benefits and some report that their claim was not successful. Looking at the impact of the policy across all individuals who made an enquiry about claiming incapacity benefits is attractive as it takes into account the fact that the policy might change the incentives that individuals have to apply for incapacity benefits (for example, individuals might be more likely to apply if they are aware of the new condition management programmes and the return to work credit). However, as the policy may not affect the likelihood of individuals receiving incapacity benefits, it is also interesting to assess the impact of the policy over just those who made a successful application for incapacity benefits. This is because examining the impact on just recipients might help us to estimate the impact of the Pathways to Work pilots more precisely as we are likely to be comparing the eventual outcomes between individuals who are more similar. Of the 8,035 individuals in our data (which, as described in Chapter 2, is a sample of those who made an enquiry about claiming incapacity benefits), 77.1% (6,197) report having actually received incapacity benefits.

Table 4.2 presents the difference-in-differences estimates of the impact of the Pathways to Work pilots on whether or not the respondent has done any paid work in the last week, estimated just across those who report having received incapacity benefits. Estimates from the same four specifications used in Table 4.1 are reported. Taking the fourth column (which includes the broadest set of controls that we use) the impact of the Pathways to Work pilots are estimated to increase the chances of being in paid work in the last week by 9.0 percentage points (by around 10½ months after an enquiry about claiming incapacity benefits has been made). This compares to 9.4 percentage points for the likelihood of being in paid work in the last week (see column 4 of Table 4.1).

Table 4.2 Difference-in-differences estimates of the early impact on the percentage reporting being in paid work in the last week, those with approved incapacity benefit claim only

	No additional controls	Controls for time since claim enquiry	Plus controls for personal characteristics	Plus controls for broad area of residence
Post * Pilot	9.70***	8.56***	6.98***	9.00***
	(2.43)	(2.48)	(2.35)	(2.50)
Pilot	–1.60	–1.06	–0.69	n/a
	(1.91)	(1.96)	(1.85)	
Post	–8.30***	–0.33	–1.86	–2.65
	(1.99)	(3.00)	(2.85)	(3.00)
Sample size	*6,197*	*6,064*	*6,064*	*6,064*
Adjusted R^2	0.5%	0.7%	13.0%	13.5%

Note: Unweighted. Standard errors in parentheses. *** denotes that the coefficient is statistically different from zero at the 1% level; ** for the 5% level and * for the 10% level.

This suggests that the results are very robust to whether we consider all of those who made an enquiry about claiming incapacity benefits or just those who actually received incapacity benefits.[24]

As described in Chapter 1, in three of the pilot areas the Pathways to Work pilots began in October 2003, whereas in the other four pilot areas the pilots began operating from April 2004. Table 4.3 presents the estimated impact of the policy on the percentage reporting that they were in paid in employment in the last week, split by the date at which the policy began operating. The estimates suggest that, if anything, the policy had a larger impact in the areas where the policy began in October 2003. For example, taking again the results presented in the fourth column, this suggests that the October 2003 pilots increased the percentage of respondents reporting that they were in paid work in the last week by 12.8 percentage points. In the April 2004 areas the estimated impact is smaller at 6.1 percentage points (which is statistically significantly different from zero at the 10% level, but not at the 5% level). However, it should be noted that the standard errors on these two estimates (3.3 percentage points and 3.2 percentage points) imply that the 95% confidence intervals within which these two estimates lie overlap. Therefore, we cannot reject (at conventional levels of statistical significance) the hypothesis that the two estimates are the same. One possibility is that the impact of the policy is bigger in the

[24] Analysis was also carried out looking at the 7,637 individuals who report having applied for incapacity benefits (i.e. the 6,197 individuals who report that their claim was successful (and are included in Table 4.2) and a further 1,440 individuals who report that their claim was not successful). Qualitatively, the results were the same as in Tables 4.1 and 4.2 and therefore, are not reported here. These are available from the authors on request.

October 2003 pilot areas simply because the schemes had been operational for longer in those areas, which could have helped eliminate any teething problems. This is because the Pathways to Work pilots began operating at different times but (as described in Box 2.1) the individuals sampled for this analysis moved onto incapacity benefits, and were interviewed, at similar times – therefore, the pilots had been operating longer for one part of our sample than the other.

Table 4.3 Difference-in-differences estimates of the early impact on the percentage reporting being in paid work in the last week, all who made enquiry about claiming incapacity benefits, by cohort

	No additional controls	Controls for time since claim enquiry	Plus controls for personal characteristics	Plus controls for broad area of residence
October 2003				
Post * Pilot	14.36***	14.43***	12.29***	12.78***
	(3.51)	(3.52)	(3.34)	(3.34)
Pilot	–7.50***	–7.90***	–6.08**	n/a
	(2.54)	(2.55)	(2.43)	
Post	–14.51***	–4.96	–7.06	–7.25
	(2.69)	(5.06)	(4.78)	(4.78)
Sample size	*3,066*	*3,056*	*3,056*	*3,056*
Adjusted R^2	0.9%	1.0%	13.5%	13.9%
April 2004				
Post * Pilot	3.96	3.49	3.28	6.05*
	(3.17)	(3.20)	(2.99)	(3.23)
Pilot	2.83	2.58	1.45	n/a
	(2.65)	(2.68)	(2.51)	
Post	–1.23	6.39*	3.56	1.33
	(2.73)	(3.58)	(3.36)	(3.54)
Sample size	*4,969*	*4,805*	*4,805*	*4,805*
Adjusted R^2	0.3%	0.5%	14.1%	14.4%

Note: Unweighted. Standard errors in parentheses. *** denotes that the coefficient is statistically different from zero at the 1% level; ** for the 5% level and * for the 10% level.

In addition to looking at whether the respondent has done any paid work in the last week, we also look at whether they have been in paid work at any point since making their enquiry about claiming incapacity benefits. Table 4.4 presents the results, which are very similar to those found for the percentages in paid work in the last week (shown in Table 4.1). The Pathways to Work pilots are estimated to increase the chances of having been in paid work at any point since the enquiry by 9.3 percentage points around 10½ months after an enquiry about claiming incapacity benefits has been made. This estimated impact suggests that in the

absence of these pilots, the chances of being in paid work at any point would have been just 32.9% (i.e. the 42.2% reported in Table 2.3 minus the estimated effect of 9.3 percentage points). This estimated impact of +9.3 percentage points is also very similar to the +9.4 percentage points found for the likelihood of being in paid work in the last week (see column 4 of Table 4.1).

Table 4.4 Difference-in-differences estimates of the early impact on the percentage reporting being in paid work since making enquiry about claiming incapacity benefits, all who made incapacity benefit claim enquiry

	No additional controls	Controls for time since claim enquiry	Plus controls for personal characteristics	Plus controls for broad area of residence
Post * Pilot	12.28***	9.89***	7.72***	9.32***
	(2.35)	(2.41)	(2.23)	(2.39)
Pilot	–5.75***	–4.17**	–3.09*	n/a
	(1.82)	(1.88)	(1.73)	
Post	–10.58***	0.55	–1.19	–1.39
	(1.91)	(2.95)	(2.73)	(2.88)
Sample size	*8,035*	*7,861*	*7,861*	*7,861*
Adjusted R^2	0.4%	0.7%	16.0%	16.3%

Note: Unweighted. Standard errors in parentheses. *** denotes that the coefficient is statistically different from zero at the 1% level; ** for the 5% level and * for the 10% level.

Table 4.5 breaks this estimated impact down by the time at which the pilots began operating. Taking again the results presented in the fourth column, this suggests that the October 2003 pilots increased the percentage of respondents reporting that they had been in paid work at any point since making an enquiry about claiming incapacity benefits by 12.8 percentage points. In the April 2004 areas the estimated impact is again smaller at 6.3 percentage points (which is statistically significantly different from zero at the 10% level, but not at the 5% level). These estimated impacts are very similar to the 12.8 percentage points and 6.1 percentage points that were respectively found when looking at the impact of the October 2003 and the April 2004 pilots on the chances of being in paid work in the last week that were reported in column 4 of Table 4.3.

Table 4.5 Difference-in-differences estimates of the early impact on the percentage reporting being in paid work since making enquiry about claiming incapacity benefits, all who made an enquiry, by cohort

	No additional controls	Controls for time since claim enquiry	Plus controls for personal characteristics	Plus controls for broad area of residence
October 2003				
Post * Pilot	15.72***	15.54***	12.49***	12.84*
	(3.74)	(3.74)	(3.49)	(3.49)
Pilot	–9.98***	–10.34***	–8.08***	n/a
	(2.71)	(2.72)	(2.54)	
Post	–15.21***	–1.01	–2.75	–2.98
	(2.87)	(5.38)	(4.99)	(5.00)
Sample size	*3,066*	*3,056*	*3,056*	*3,056*
Adjusted R^2	0.9%	1.2%	16.7%	17.0%
April 2004				
Post * Pilot	4.63	3.93	3.71	6.26*
	(3.40)	(3.43)	(3.18)	(3.43)
Pilot	2.66	2.64	1.57	n/a
	(2.85)	(2.87)	(2.67)	
Post	–2.01	6.17	3.27	1.03
	(2.93)	(3.84)	(3.57)	(3.77)
Sample size	*4,969*	*4,805*	*4,805*	*4,805*
Adjusted R^2	0.3%	0.5%	15.6%	15.9%

Note: Unweighted. Standard errors in parentheses. *** denotes that the coefficient is statistically different from zero at the 1% level; ** for the 5% level and * for the 10% level.

Estimates of the impact of the Pathways to Work pilots on the two employment outcomes described above using propensity score matching techniques are presented as a robustness check in Table 4.6. Looking first at the impact averaged across all areas, 31.9% of respondents had done some paid work in the last week in the pilot areas after the policy had been introduced, compared to 26.3% among their matched controls at the same time. This difference of +5.6 percentage points is statistically significantly different from zero at conventional levels, although smaller in magnitude than the +9.4 percentage points estimated using a difference-in-differences approach (Table 4.1). Under the assumption that we have controlled for all observed characteristics that both correlate with this outcome and vary between the individuals in the pilot and comparison areas, this can be interpreted as the causal impact of the Pathways to Work pilots on the likelihood of being in paid work in the last week.

Looking at those observed before the policy was implemented we find that those in the pilot areas were, if anything, **less** likely than their matched controls to be in paid employment in the last week. This is encouraging as it provides supporting evidence that the matching-based estimate of +5.6 percentage points for the period after the Pathways to Work pilots were implemented is not biased upwards. Indeed, if one was prepared the make the strong assumption that the difference among those observed before the policy was implemented (–1.7 percentage points) would also have applied to the (non-matched[25]) individuals after the policy was implemented, this would give an estimated impact of the policy of +7.3 percentage points (+5.6–(–1.7)). This is still slightly smaller in magnitude than the +9.4 percentage points estimated impact on the same outcome using the (linear regression) difference-in-differences approach (see Table 4.1).

The top panel of Table 4.6 also presents separate estimates for the impact of the October 2003 and the April 2004 pilot areas.[26] Looking at those observed after the Pathways to Work pilots were implemented, this gives an estimated impact on the percentage doing any paid work in the last week of +7.3 percentage points for the October 2003 areas and +5.6 percentage points for the April 2004 pilot areas (both estimates statistically significantly different from zero at conventional levels). Again, there is no evidence from those observed before the reform was implemented that the estimates are biased upwards. Making the strong assumption that the difference among those observed before the policy was implemented would also have applied to the (non-matched) individuals after the policy was implemented, would give very similar estimates to the (linear regression) difference-in-differences approach for the October 2003 areas (+12.3 percentage points compared to the +12.8 percentage points shown in Table 4.5) and smaller estimates for the April 2004 areas (+3.3 percentage points compared to +6.3 percentage points).

The bottom panel of Table 4.6 presents the propensity score matching estimates of the impact of the policy on the percentage of respondents in work at any point since their enquiry about claiming incapacity benefits. As was found with the (linear regression) difference-in-differences approach, the estimates are very similar to those found when examining whether or not the respondent was in paid work in the last week.

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[25] As explained in Section 3.2, ideally we would like to match those observed after the pilots were implemented to those observed before the pilots were implemented. This would allow a 'difference-in-differences matching approach'. However, this is not possible due to a lack of overlap (common support) between these groups in terms of the timing of interviews.

[26] Estimates for the impact disaggregated by the October 2003 and April 2004 pilot areas are calculated by estimating the propensity score separately for these two groups. The estimated coefficients from these two probits, and the distribution of propensity scores before and after matching, are available from the authors on request.

Table 4.6 Estimates of the early impact on employment outcomes using propensity score matching

	Early post-policy implementation	Before policy implementation
Percentage reporting employment in last week		
All areas		
Pilot areas	31.9%	30.5%
Matched controls	26.3%	32.2%
Difference	+5.6ppt*** (1.4ppt)	–1.7ppt (2.0ppt)
October 2003 pilots only		
Pilot areas	31.2%	30.8%
Matched controls	23.9%	35.9%
Difference	+7.3ppt*** (2.4ppt)	–5.0ppt (3.3ppt)
April 2004 pilots only		
Pilot areas	32.9%	30.2%
Matched controls	27.2%	28.0%
Difference	+5.6ppt*** (2.0ppt)	+2.3ppt (3.3ppt)
Percentage reporting employment since enquiry about claiming incapacity benefits		
All areas		
Pilot areas	42.3%	40.9%
Matched controls	37.4%	44.4%
Difference	+4.8ppt*** (1.5ppt)	–3.4ppt (2.2ppt)
October 2003 pilots only		
Pilot areas	41.8%	40.7%
Matched controls	35.1%	47.8%
Difference	+6.7ppt*** (2.8ppt)	–7.0ppt** (3.5ppt)
April 2004 pilots only		
Pilot areas	43.3%	41.0%
Matched controls	36.6%	39.4%
Difference	+6.7ppt*** (2.1ppt)	+1.5ppt (3.6ppt)

Note: Unweighted. Kernel-based matching is used with an Epanechnikov kernel and a bandwidth of 0.005, i.e. outcomes of individuals in the treatment areas are compared to individuals in the comparison areas whose propensity score is within 0.5 percentage points, with a higher weight given to those with closer propensity score. Standard errors shown in parentheses and estimated by bootstrapping with 1,000 repetitions.

4.2 Earnings

Early estimates of the impact of the pilots on the amount of net earned income[27] in the last month, using a difference-in-differences approach, are presented in Table 4.7. As described in Section 2.1, this measure of earnings is equal to zero for all of those who were not in employment in the last month. The first column suggests that the pilots led to an increase in average earned monthly income of £85.99 (and this estimate is statistically significantly different from zero at conventional levels). Once other controls are included (in particular individual characteristics) this estimated impact falls, but is still statistically significantly different from zero at conventional levels. The fourth column, which includes the broadest set of controls that we use, shows that the Pathways to Work pilots are estimated to increase monthly earnings by £71.73. To place this in context, as shown in Table 2.4, mean earnings among those in the pilot areas in the period after the pilots had been implemented was £244. The estimated impact of the Pathways to Work pilots of an increase of £72 suggests that in the absence of these pilots, the average level of earnings would have been £172 (i.e. £244–£72).

Table 4.7 Difference-in-differences estimates of the early impact on reported net earnings in last month (£) at second wave interview, all who made an enquiry about claiming incapacity benefits

	No additional controls	Controls for time since claim enquiry	Plus controls for personal characteristics	Plus controls for broad area of residence
Post * Pilot	85.99***	67.50***	56.97***	71.73***
	(19.40)	(19.92)	(18.67)	(20.05)
Pilot	–37.24**	–24.35	–19.49	n/a
	(15.04)	(15.51)	(14.53)	
Post	–74.71***	13.65	–1.50	–11.33
	(15.78)	(24.37)	(22.86)	(24.18)
Sample size	*8,035*	*7,861*	*7,861*	*7,861*
Adjusted R^2	0.3%	0.6%	13.6%	13.8%

Note: Unweighted. Standard errors in parentheses. *** denotes that the coefficient is statistically different from zero at the 1% level; ** for the 5% level and * for the 10% level. Those reporting not being in work in the last week have their earnings set to zero while those in work who do not report earnings are set to missing.

[27] The precise question asked is '*Last time you were paid, how much take-home pay did you receive, that is after all deductions for tax, national insurance, pension contributions and so on, but including overtime, bonus, commission or tips?'*.

Table 4.8 presents estimates of this impact broken down separately for the October 2003 and the April 2004 pilot areas. Taking again the results presented in the fourth column this suggests that the October 2003 pilots increased monthly earnings by £108.87, and this point estimate is statistically significantly different from zero at conventional levels. In contrast in the April 2004 areas the estimated point estimate is much smaller (£28.37) and is not statistically significantly different from zero at conventional levels.

Table 4.8 Difference-in-differences estimates of the early impact on reported (net) earnings in last month (£) at second wave interview, all who made an enquiry about claiming incapacity benefits, by cohort

	No additional controls	Controls for time since claim enquiry	Plus controls for personal characteristics	Plus controls for broad area of residence
October 2003				
Post * Pilot	118.22***	119.99***	103.44***	108.87***
	(31.92)	(32.06)	(30.47)	(30.47)
Pilot	–60.75***	–63.26***	–47.75**	n/a
	(23.13)	(23.27)	(22.21)	
Post	–133.11***	–104.19**	–118.38***	–122.65***
	(24.51)	(46.07)	(43.63)	(43.67)
Sample size	*3,066*	*3,056*	*3,056*	*3,056*
Adjusted R^2	0.9%	0.9%	13.0%	13.4%
April 2004				
Post * Pilot	10.25	6.21	10.51	28.37
	(27.45)	(27.67)	(25.91)	(28.02)
Pilot	38.18*	34.71	21.37	n/a
	(23.00)	(23.21)	(21.74)	
Post	–13.62	93.23***	66.64**	51.13*
	(23.70)	(30.99)	(29.07)	(30.74)
Sample size	*4,969*	*4,805*	*4,805*	*4,805*
Adjusted R^2	0.2%	0.5%	14.0%	14.0%

Note: Unweighted. Standard errors in parentheses. *** denotes that the coefficient is statistically different from zero at the 1% level; ** for the 5% level and * for the 10% level. Those reporting not being in work in the last week have their earnings set to zero while those in work who do not report earnings are set to missing.

Alternative estimates of the impact of the Pathways to Work pilots on earnings, using propensity score matching techniques, are presented in Table 4.9. Average earnings among those in the pilot areas (for whom a match could be found) are £244.16, compared to £214.06 among their matched controls. This would suggest that the policy, if anything, increased earnings by £30.10 a month (but with a large standard error of £13.89). Carrying out the same analysis before the policy was

implemented suggests that those in the pilot areas earned £5.88 less than their matched counterparts in the comparison areas. Making the strong assumption that the difference among those observed before the policy was implemented would also have applied to the (non-matched) individuals after the policy was implemented would give an estimate of +£35.98 (i.e. £30.10–(–£5.88)). This is smaller than the (linear regression) difference-in-differences estimate of £71.73 (Table 4.7).

Table 4.9 also presents separate estimates for the impact of the October 2003 and the April 2004 pilot areas. As was the case with the difference-in-differences approach, this reveals stronger evidence of the Pathways to Work pilots having a positive impact on earnings in the October 2003 than in the April 2004 pilot areas.

Table 4.9 Estimates of the early impact on reported earnings in last month at second wave interview using propensity score matching

	Early post-policy implementation	Before policy implementation
All areas		
Pilot areas	£244.16	£233.38
Matched controls	£214.06	£239.26
Difference	+£30.10***	–£5.88
	(13.89)	(17.19)
October 2003 pilots only		
Pilot areas	£239.25	£251.28
Matched controls	£180.12	£289.74
Difference	+£59.13***	–£38.46
	(22.67)	(29.73)
April 2004 pilots only		
Pilot areas	£248.51	£223.98
Matched controls	£220.53	£194.46
Difference	+£27.98	+£29.52
	(20.87)	(26.19)

Note: Unweighted. Kernel-based matching is used with an Epanechnikov kernel and a bandwidth of 0.005, i.e. outcomes of individuals in the treatment areas are compared to individuals in the comparison areas whose propensity score is within 0.5 percentage points, with a higher weight given to those with closer propensity score. Those reporting not being in work in the last week have their earnings set to zero while those in work who do not report earnings are set to missing. Standard errors shown in parentheses and estimated by bootstrapping with 1,000 repetitions.

4.3 Receipt of incapacity benefits

The results from the difference-in-differences methodology on the early impact of the Pathways to Work pilots on the likelihood of still being in receipt of incapacity benefits are presented in Table 4.10. When the broadest set of controls are included

the Pathways to Work pilots are estimated to reduce the chances of still being in receipt of incapacity benefits by 8.2 percentage points around 10½ months after an enquiry about claiming incapacity benefits has been made (column 4). This estimated impact suggests that in the absence of these pilots, the chances of still being in receipt of incapacity benefits would have been 57.6% (i.e. the 49.4% reported in Table 2.3 minus the estimated effect of –8.2 percentage points). The estimated reduction of 8.2 percentage points is of a very similar magnitude to the 8 percentage point increase in the six month off-flow rate from incapacity benefits observed in the administrative data from the pilot areas.[28] But note that it takes, 10½ months, not six months, to achieve this off-flow.

Table 4.10 Difference-in-differences estimates of the early impact on the percentage reporting no longer being in receipt of incapacity benefits, all who made an enquiry about claiming incapacity benefits

	No additional controls	Controls for time since claim enquiry	Plus controls for personal characteristics	Plus controls for broad area of residence
Post * Pilot	–10.09***	–7.35***	–7.26***	–8.19***
	(2.39)	(2.45)	(2.33)	(2.51)
Pilot	5.19***	3.55*	3.56**	n/a
	(1.85)	(1.91)	(1.82)	
Post	10.75***	–4.54	–1.82	–1.44
	(1.94)	(3.00)	(2.86)	(3.02)
Sample size	*8,035*	*7,861*	*7,861*	*7,861*
Adjusted R^2	0.4%	0.9%	11.0%	11.0%

Note: Unweighted. Standard errors in parentheses. *** denotes that the coefficient is statistically different from zero at the 1% level; ** for the 5% level and * for the 10% level.

Table 4.11 breaks this estimated impact down by the time at which the pilots began operating. Taking again the results presented in the fourth column, this suggests that the October 2003 pilots reduced the percentage of respondents reporting that they were still in receipt of incapacity benefits by 11.4 percentage points. In the April 2004 areas the estimated impact is smaller at 5.4 percentage points, and is not different from zero at conventional levels of statistical significance. These estimated impacts are both similar to the 12.8 percentage points and 6.1 percentage points that were respectively found when looking at the impact of the October 2003 and the April 2004 pilots on the chances of being in paid work in the last week that were reported in column 4 of Table 4.3.

[28] See Figure 3.1, page 9, of Blyth (2006).

Table 4.11 Difference-in-differences estimates of the early impact on the percentage reporting no longer being in receipt of incapacity benefits, all who made an enquiry about claiming incapacity benefits, by cohort

	No additional controls	Controls for time since claim enquiry	Plus controls for personal characteristics	Plus controls for broad area of residence
October 2003				
Post * Pilot	–11.16***	–11.22***	–11.23***	–11.44***
	(3.78)	(3.79)	(3.65)	(3.66)
Pilot	6.11**	6.61**	6.84***	n/a
	(2.74)	(2.75)	(2.66)	
Post	14.25***	1.09	3.23	3.42
	(2.90)	(5.45)	(5.23)	(5.25)
Sample size	*3,066*	*3,056*	*3,056*	*3,056*
Adjusted R^2	0.8%	1.0%	10.7%	10.6%
April 2004				
Post * Pilot	–5.01	–4.34	–4.23	–5.39
	(3.47)	(3.49)	(3.32)	(3.58)
Pilot	0.05	0.73	0.87	n/a
	(2.91)	(2.93)	(2.78)	
Post	4.68	–9.49*	–7.31	–5.54
	(3.00)	(3.91)	(3.72)	(3.93)
Sample size	*4,969*	*4,805*	*4,805*	*4,805*
Adjusted R^2	0.1%	0.7%	11.9%	12.0%

Note: Unweighted. Standard errors in parentheses. *** denotes that the coefficient is statistically different from zero at the 1% level; ** for the 5% level and * for the 10% level.

Alternative estimates of the impact of the Pathways to Work pilots on receipt of incapacity benefits, using propensity score matching techniques, are presented in Table 4.12. Looking first at the impact averaged across all areas, 49.5% of respondents reported being in receipt of incapacity benefits after the policy had been introduced compared to 55.2% among their matched controls at the same time. This difference of –5.8 percentage points is statistically significantly different from zero at conventional levels. Carrying out the same analysis before the policy was implemented suggests that those in the pilot areas were 4.2 percentage points **more** likely to be in receipt of incapacity benefits. Making the strong assumption that the difference among those observed before the policy was implemented would also have applied to the (non-matched) individuals after the policy was implemented would give an estimate of –10.0 percentage points. While this is larger than the (linear regression) difference-in-differences estimate of –8.2 percentage points (Table 4.10), the relative imprecision of these estimates means that they are not statistically significantly different from each other at conventional levels.

Table 4.12 also presents separate estimates for the impact of the October 2003 and the April 2004 pilot areas. As was the case with the difference-in-differences approach, this reveals stronger evidence of the Pathways to Work pilots having a positive impact on earnings in the October 2003 than in the April 2004 pilot areas.

Table 4.12 Estimates of the early impact on percentage reporting no longer being in receipt of incapacity benefits at second wave interview, using propensity score matching

	Early post-policy implementation	Before policy implementation
All areas		
Pilot areas	49.5%	49.1%
Matched controls	55.2%	44.9%
Difference	–5.8ppt*** (1.6ppt)	+4.2ppt (2.3ppt)
October 2003 pilots only		
Pilot areas	49.5%	46.3%
Matched controls	56.3%	40.7%
Difference	–6.8ppt*** (2.9ppt)	+5.6ppt (3.4ppt)
April 2004 pilots only		
Pilot areas	49.7%	50.3%
Matched controls	54.6%	49.5%
Difference	–4.9ppt*** (2.1ppt)	+0.8ppt (3.5ppt)

Note: Unweighted. Kernel-based matching is used with an Epanechnikov kernel and a bandwidth of 0.005, i.e. outcomes of individuals in the treatment areas are compared to individuals in the comparison areas whose propensity score is within 0.5 percentage points, with a higher weight given to those with closer propensity score. Those reporting not being in work in the last week have their earnings set to zero while those in work who do not report earnings are set to missing. Standard errors shown in parentheses and estimated by bootstrapping with 1,000 repetitions.

4.4 Health affecting everyday activities

The difference-in-differences estimates of the early impact of the Pathways to Work pilots on the percentage of respondents reporting that (in at least one of a number of ways) their health limits their daily activities are shown in Table 4.13. Taking the fourth column (which includes the broadest set of controls that we use), the Pathways to Work pilots are estimated to reduce the chances of respondents reporting that health limits their daily activities by 2.9 percentage points around 10½ months after an enquiry about claiming incapacity benefits has been made (and this coefficient is different from zero at conventional levels of statistical significance). However, it is still the case that the large majority of individuals in the pilot areas after the policies were implemented report that an aspect of their health affects their everyday activities (88.5% in Table 2.6).

Table 4.13 Difference-in-differences estimates of the early impact on the percentage reporting that health affects their everyday activities at second wave interview, all who made an enquiry about claiming incapacity benefits

	No additional controls	Controls for time since claim enquiry	Plus controls for personal characteristics	Plus controls for broad area of residence
Post * Pilot	–4.11***	–3.20**	–2.45*	–2.87**
	(1.55)	(1.59)	(1.30)	(1.40)
Pilot	2.66**	2.04	1.52	n/a
	(1.20)	(1.24)	(1.01)	
Post	4.93***	1.07	2.30	2.85
	(1.26)	(1.95)	(1.59)	(1.68)
Sample size	*8,035*	*7,861*	*7,861*	*7,861*
Adjusted R^2	0.2%	0.2%	34.1%	34.2%

Note: Unweighted. Standard errors in parentheses. *** denotes that the coefficient is statistically different from zero at the 1% level; ** for the 5% level and * for the 10% level.

Table 4.14 presents estimates of this impact broken down separately for the October 2003 and the April 2004 pilot areas. Taking again the results presented in the fourth column, this suggests that the October 2003 pilots reduced the percentage of respondents reporting that their health limited their everyday activities by 6.1 percentage points. In the April 2004 areas the policy is, if anything, associated with a very slightly increased likelihood of respondents' reporting that their health limited their everyday activities, with the estimated coefficient of 0.6 percentage points, not statistically significantly different from zero at conventional levels.

Table 4.14 Difference-in-differences estimates of the early impact on the percentage reporting that health affects their everyday activities at second wave interview, all who made an enquiry about claiming incapacity benefits, by cohort

	No additional controls	Controls for time since claim enquiry	Plus controls for personal characteristics	Plus controls for broad area of residence
October 2003				
Post * Pilot	–8.10***	–7.98***	–6.20***	–6.05***
	(2.49)	(2.50)	(2.05)	(2.05)
Pilot	6.09***	6.17***	4.61***	n/a
	(1.80)	(1.81)	(1.49)	
Post	8.18***	2.78	4.61	4.56
	(1.91)	(3.59)	(2.93)	(2.94)
Sample size	*3,066*	*3,056*	*3,056*	*3,056*
Adjusted R^2	0.7%	0.7%	35.1%	35.0%
April 2004				
Post * Pilot	1.08	1.57	1.73	0.63
	(2.22)	(2.25)	(1.85)	(2.00)
Pilot	–2.42	–2.63	–2.40	n/a
	(1.86)	(1.89)	(1.55)	
Post	–0.11	–2.75	–1.13	0.19
	(1.92)	(2.52)	(2.07)	(2.19)
Sample size	*4,969*	*4,805*	*4,805*	*4,805*
Adjusted R^2	0.0%	0.0%	33.4%	33.5%

Note: Unweighted. Standard errors in parentheses. *** denotes that the coefficient is statistically different from zero at the 1% level; ** for the 5% level and * for the 10% level.

Alternative estimates of the impact of the Pathways to Work pilots on the percentage of respondents reporting that their health, in some way, limits their everyday activities using propensity score matching techniques are presented in Table 4.15. Among those in the pilot areas (for whom a match could be found) 88.5% of respondents report that their health limits their daily activities, compared with 88.9% among their matched controls. This would suggest that the policy had, if anything, reduced the percentage reporting that their health limited their daily activities in some way by 0.5 percentage points (but with a standard error of 0.9 percentage points). Before the policy was implemented, those in the pilot areas were as likely to state that their health limited their daily activities as their matched controls. An estimate of 0.5 percentage points is slightly smaller than the 2.9 percentage point difference that was estimated using a (linear regression) difference-in-differences approach (see Table 4.13).

Table 4.15 Estimates of the early impact on the percentage reporting that health affects their everyday activities at second wave interview using propensity score matching

	Early post-policy implementation	Before policy implementation
All areas		
Pilot areas	88.5%	87.5%
Matched controls	88.9%	87.5%
Difference	–0.5ppt (0.9ppt)	+0.0ppt (1.3ppt)
October 2003 pilots only		
Pilot areas	88.6%	88.3%
Matched controls	90.3%	83.5%
Difference	–1.7ppt (1.7ppt)	+4.8ppt*** (2.1ppt)
April 2004 pilots only		
Pilot areas	88.5%	86.8%
Matched controls	87.9%	89.6%
Difference	+0.7ppt (1.3ppt)	–2.7ppt (2.0ppt)

Note: Unweighted. Kernel based matching is used with an Epanechnikov kernel and a bandwidth of 0.005 – i.e. outcomes of individuals in the treatment areas are compared to individuals in the comparison areas whose propensity score is within 0.5 percentage points, with a higher weight given to those with closer propensity score. Standard errors shown in parentheses and estimated by bootstrapping with 1,000 repetitions.

Table 4.15 also presents separate estimates for the impact of the October 2003 and the April 2004 pilot areas. As was the case with the difference-in-differences approach, this reveals stronger evidence of the Pathways to Work pilots leading to a reduction in the percentage who report that their health limits their daily activities in some way in the October 2003 than in the April 2004 pilot areas.

5 Subgroup analysis

This chapter presents estimates of the impact of the Pathways to Work pilots on different subgroups of the population. These are all estimated using the difference-in-differences methodology (as set out in Section 3.1), with the broadest set of controls included, but with the analysis computed separately for each subgroup of interest. In some cases, due to the reduced sample sizes involved, the estimates are particularly imprecise, but they can still provide some indication of on whom the policy might be having greater or smaller effects. Section 5.1 presents estimates of the impact of the policy split by both age and sex, while Section 5.2 presents disaggregation by self-reported measures of health in the first telephone interview.

5.1 Analysis by age and sex

Analysis of the impact of the Pathways to Work pilots on each of the five outcomes of interest that we consider, split by age and sex, are shown in Table 5.1. The first panel presents the overall estimated impacts (i.e. the same that were presented in Tables 4.1, 4.4, 4.7, 4.10 and 4.13). The next panel presents the results by sex. There is no statistically significant evidence that the estimated impacts differ by sex, although, if anything, the pilots seem to have a bigger impact on moving women off incapacity benefits than men. The next panel splits the sample by whether or not individuals are aged over 45.[29] This shows that the policy has a much larger impact on moving those aged over 45 off incapacity benefits than it does for those aged 45 or under – indeed, there is little evidence that the policy has any effect at all in moving those aged 45 or under off incapacity benefits. Despite this, there is no statistically significant evidence of any variation in the estimated impacts on the likelihood of being in paid work (either in the last week or since the first wave interview).

[29] This age split was chosen purely on the basis that it approximately splits the sample in half and, therefore, is the most efficient use of the sample in terms of the standard errors of the estimates.

Table 5.1 Difference-in-differences estimates of the impact of Pathways to Work pilots, split by age and sex

	Paid work last week (1)	Paid work since last interview (2)	Monthly earnings (3)	Receiving incapacity benefits (4)	Health affects activities (5)
All	9.44***	9.32***	71.73***	–8.19***	–2.87**
	(2.26)	(2.39)	(20.05)	(2.51)	(1.40)
	n=7,861	n=7,861	n=7,861	n=7,861	n=7,861
By sex					
Men	8.86***	11.02***	74.83**	–5.30	–3.11
	(3.11)	(3.27)	(30.75)	(3.44)	(1.95)
	n=4,199	n=4,199	n=3,639	n=4,199	n=4,199
Women	9.65***	6.60*	61.62**	–10.45***	–2.95
	(3.30)	(3.50)	(24.44)	(3.69)	(2.01)
	n=3,662	n=3,662	n=3,662	n=3,662	n=3,662
By age					
Age 45 or under	8.69***	7.07**	64.08**	–0.90	–1.10
	(3.21)	(3.33)	(28.84)	(3.44)	(2.12)
	n=4,048	n=4,048	n=4,048	n=4,048	n=4,048
Age over 45	9.76***	11.93***	79.51***	–15.98***	–4.72***
	(3.22)	(3.46)	(27.87)	(3.68)	(1.78)
	n=3,813	n=3,813	n=3,813	n=3,813	n=3,813
By age and sex					
Men aged ≤45	5.28	6.75	47.96	3.67	–2.82
	(4.46)	(4.60)	(44.46)	(4.76)	(2.97)
	n=2,153	n=2,153	n=2,153	n=2,153	n=2,153
Women aged ≤45	11.12***	5.92	64.88*	–4.36	0.08
	(4.65)	(4.87)	(35.51)	(5.07)	(3.10)
	n=1,895	n=1,895	n=1,895	n=1,895	n=1,895
Men aged >45	12.81***	16.42***	108.82**	–14.66***	–4.31*
	(4.41)	(4.72)	(42.89)	(5.01)	(2.54)
	n=2,046	n=2,046	n=2,046	n=2,046	n=2,046
Women aged >45	7.02	6.47	53.80	–16.99***	–5.51**
	(4.76)	(5.14)	(33.81)	(5.44)	(2.50)
	n=1,767	n=1,767	n=1,767	n=1,767	n=1,767

Note: By splitting the sample into different subgroups we are implicitly controlling for a richer set of covariates (for example, interacting sex with all the other observed characteristics). As a result the estimated impact for a particular group may lie outside the range of estimates for each subgroup. Unweighted. Standard errors in parentheses. *** denotes that the coefficient is statistically different from zero at the 1% level; ** at the 5% level and * at the 10% level.

The last panel of Table 5.1 presents the estimated impacts split by both age and sex. This shows that, if anything, the impact of the policy on whether or not the individual was in paid work in the last week is greater for men aged over 45 and women aged

45 or under, than it is for younger men or older women. However, these differences are not statistically significant. In terms of moving individuals off incapacity benefits, the estimated impact of the policy on those aged over 45 is large for both men and women.

5.2 Analysis by number and nature of the individuals' reported health problem(s)

We are also able to split the estimated impacts of the policy by the individuals' responses to the health questions in the first telephone survey. This is shown in Table 5.2. The second panel of this table shows the estimated impact of the pilots on each of the outcomes of interest that we consider, split by whether the respondent reported zero, one or two or more health problems. In terms of both labour market outcomes and receipt of incapacity benefits, the estimated impact of the pilots is larger for those who reported two or more health problems than it is for those who reported that they had no or one health problem. One possible explanation for this is that those who are deemed to be relatively likely to move into work (who might, on average, be relatively less unhealthy) are screened out of the policy.

As there is particular policy interest in those who have mental health problems (see, for example, Layard (2005)), and it is plausible that they might be affected differently by the policy, Table 5.2 also presents the estimated impact of the pilots for those who report (only) one health problem in the first telephone survey split by whether or not that reported health problem is mental illness. This shows that the estimated impact of the policy on the outcomes of interest for those who report having a mental illness (as a single health condition) is never statistically different from zero at conventional levels. Among those who report one health problem that is **not** mental illness, the estimated impact on both employment and earnings are larger than they are for those whose reported problem is mental illness, and are also significantly different from zero at conventional levels.

Table 5.2 Difference-in-differences estimates of the impact of Pathways to Work pilots, split by health at time of first interview

	Paid work last week (1)	Paid work since last interview (2)	Monthly earnings (3)	Receiving incapacity benefits (4)	Health affects activities (5)
All	9.44***	9.32***	71.73***	–8.19***	–2.87**
	(2.26)	(2.39)	(20.05)	(2.51)	(1.40)
	n=7,861	n=7,861	n=7,861	n=7,861	n=7,861
By number of health problems					
None	6.83	2.63	43.83	–7.23	–8.29
	(5.81)	(5.35)	(53.76)	(5.12)	(6.06)
	n=1,459	n=1,459	n=1,459	n=1,459	n=1,459
One problem	7.12***	8.31***	57.86**	–3.94	–0.20
	(3.28)	(3.54)	(28.92)	(3.74)	(1.05)
	n=3,759	n=3,759	n=3,759	n=3,759	n=3,759
Two or more problems	13.14***	12.42***	101.73***	–13.38***	0.07
	(3.70)	(4.14)	(31.53)	(4.46)	(0.68)
	n=2,643	n=2,643	n=2,643	n=2,643	n=2,643
One health problem					
Mental illness	0.15	6.39	–0.56	–3.95	1.91
	(5.08)	(5.57)	(45.53)	(6.03)	(1.57)
	n=1,412	n=1,412	n=1,412	n=1,412	n=1,412
Not mental illness	12.01***	10.45**	97.85***	–3.64	–1.27
	(4.32)	(4.60)	(37.65)	(4.82)	(1.39)
	n=2,347	n=2,347	n=2,347	n=2,347	n=2,347

Note: By splitting the sample into different subgroups we are implicitly controlling for a richer set of covariates (for example, interacting number of reported health problems with all the other observed characteristics). As a result, the estimated impact for a particular group may lie outside the range of estimates for each subgroup. Unweighted. Standard errors in parentheses. *** denotes that the coefficient is statistically different from zero at the 1% level; ** at the 5% level and * at the 10% level.

A final breakdown of the estimated impacts is shown in Table 5.3. This again only takes those who report having one health problem in the first telephone survey and splits by both age and whether or not that reported health problem is mental illness. As the sample sizes in many of these cases are relatively small, the estimates are typically less precise. In terms of paid work in the last week, the largest estimated impact of the pilots is for those who are aged 45 or under who do not report having mental illness (+15.4 percentage points). In terms of moving individuals off incapacity benefits, the largest estimated impact is for those who are aged over 45 who **do** report having mental illness (–26.4 percentage points).

Table 5.3 Difference-in-differences estimates of the impact of Pathways to Work pilots on those reporting one health problem, split by whether or not this is mental illness and age

	Paid work last week (1)	Paid work since last interview (2)	Monthly earnings (3)	Receiving incapacity benefits (4)	Health affects activities (5)
All	9.44***	9.32***	71.73***	–8.19***	–2.87**
	(2.26)	(2.39)	(20.05)	(2.51)	(1.40)
	n=7,861	n=7,861	n=7,861	n=7,861	n=7,861
Those reporting one health problem:					
Metal illness problem					
Aged 45 or under	0.18	5.08	–13.71	7.26	3.20
	(6.27)	(6.87)	(58.77)	(7.37)	(2.06)
	n=923	n=923	n=923	n=923	n=923
Aged over 45	–1.91	6.92	25.30	–26.41**	–2.16
	(9.18)	(9.99)	(74.77)	(10.79)	(2.51)
	n=489	n=489	n=489	n=489	n=489
Not mental illness problem					
Aged 45 or under	15.40**	11.61	115.11**	1.16	–1.24
	(6.27)	(6.56)	(55.77)	(6.74)	(2.39)
	n=1,133	n=1,133	n=1,133	n=1,133	n=1,133
Aged over 45	8.50	9.50	83.08	–7.91	–1.50
	(6.13)	(6.65)	(51.71)	(7.02)	(1.46)
	n=1,214	n=1,214	n=1,214	n=1,214	n=1,214

Note: By splitting the sample into different subgroups we are implicitly controlling for a richer set of covariates (for example, interacting whether the individual reports a mental health problem with all the other observed characteristics). As a result, the estimated impact for a particular group may lie outside the range of estimates for each subgroup. Unweighted. Standard errors in parentheses. *** denotes that the coefficient is statistically different from zero at the 1% level; ** at the 5% level and * at the 10% level.

6 Conclusions

The Incapacity Benefit Pathways to Work pilots were implemented by the Department for Work and Pensions (DWP) in three Jobcentre Plus districts in October 2003 and a further four Jobcentre Plus districts in April 2004. These pilots provide greater support (financial and non-financial) to, and impose greater obligations on, new claimants of incapacity benefits, with the objective of moving individuals from incapacity benefits into paid work.

This report presents early quantitative evidence of the impact of the pilots on the subsequent employment, earnings and receipt of incapacity benefits of a sample of individuals who made an initial enquiry about claiming incapacity benefits. A potential indicator of the extent to which an individual's health limits their daily activities is also considered. These are investigated using survey data from individuals in each of the seven pilot areas and from individuals in comparison areas, both before and after the policy was implemented in the pilot areas. A (linear regression) difference-in-differences approach is used to investigate the average impact of the package of policies on the outcomes of interest. Propensity score matching is also used as a robustness check on the results.

The early evidence on employment outcomes is encouraging. At the time of our second telephone interview, which is about 10½ months after the individual made an enquiry about claiming incapacity benefits, the difference-in-differences methodology suggests that the policy has increased the percentage working in the last week by 9.4 percentage points (Table 4.1) from a base of just 22.5%. In addition, the percentage working at any point since making their enquiry is estimated to have been increased by 9.3 percentage points (Table 4.4) from a base of 32.9%. The estimates from the propensity score matching technique are in line with these (see Table 4.6).

The estimated impact of the Pathways to Work pilots on earnings across all individuals is also positive, although the central estimate of an increase in net monthly earnings of £72 (from a base of £172) is imprecisely estimated (Table 4.7), and the positive estimate from propensity score matching is not statistically significantly different from zero (Table 4.9).

In terms of receipt of incapacity benefits, the estimated impact of the pilots is to reduce this by 8.2 percentage points (Table 4.10) from a base of 57.6%. The 8.2 percentage point estimated effect is very similar to the increase in the off-flow rate seen in administrative records six months after the pilots were implemented. But note that it takes around 10½ months, not six months, to achieve this off-flow.

In addition, we find some evidence that the pilots have reduced the percentage of individuals reporting that their health (in some dimension) limits their everyday activities, although the difference-in-differences estimate of this impact is relatively small (a reduction of 2.9 percentage points as shown in Table 4.13) from a large base of 91.4%.

In all of these cases the point estimates for the impact of the Pathways to Work pilots on the outcomes of interest are bigger in the October 2003 areas than in the April 2004 areas, although in some cases the estimated impacts are not statistically significantly different from each other at conventional levels.

Disaggregated, the estimated impact of the policy by age and sex suggests that, if anything, the policy has a larger impact on moving both men and women aged over 45 off incapacity benefits than it does for men or women who are aged 45 or under (Table 5.1). There is also some evidence that the impact of the policy on whether or not the individual was in paid work in the last week is greater for men aged over 45 and women aged 45 or under, than it is for younger men or older women.

In terms of the estimated impact of the pilots on receipt of incapacity benefits and whether or not an individual was in paid work in the last week, the evidence suggests that the policy has a larger impact on those who report having two or more specific health problems than it does on individuals who report a single, or no, specific health problems (Table 5.2). There is also some evidence that the estimated impact of the policy varies by the nature of an individual's reported health condition. In particular, there is evidence that the policy has a large impact on moving those who report having one health problem that is not mental illness into paid work, but there is no statistically significant evidence that the policy has any impact those who report having one health problem that is mental illness (Table 5.2). This is an important policy issue that warrants further investigation in later stages of the evaluation.

While the evidence suggests that there is both a large impact on moving individuals off benefit and a large impact on moving individuals into paid work (at a little over 8 and 9 percentage points respectively) there is also some evidence that these are **not** the same individuals. Specifically, we find evidence that the policy is effective at getting those aged 45 and under into work but not at getting them off incapacity benefits, and conversely there is some evidence that the policy is effective at getting women aged over 45 off incapacity benefits but not at getting them into paid work. Again, this warrants further investigation in later stages of the evaluation.

These findings are preliminary, and while they suggest positive and statistically significant impacts of the policy, especially on employment outcomes, they do not give a complete picture of the effectiveness of the policy for a number of reasons:

- Our findings currently examine the impact of Pathways to Work on a cohort of individuals who were exposed to the policy relatively soon after the pilots had been implemented. Our later work will use information on individuals who made their enquiry about claiming incapacity benefits longer after the pilots had been implemented, by when any initial difficulties in their operation might have been eliminated.
- Our findings so far are not informative about the longer-term outcomes of the policy, since they cover only the first year after an enquiry about claiming incapacity benefits has been made. For example, given that the Return to Work Credit (RTWC) is payable only for the first year of employment, it will be interesting to see how far the estimated impact on employment persists once this £40 a week employment subsidy is no longer available.
- This research only considers the impact of the Pathways to Work package as a whole: it does not shed light on whether any particular component or components of the package are primarily responsible for the overall impact. Later work will attempt to unpick the relative importance of different components of the policy on the outcomes of interest.
- The launch of the pilots, if anticipated, could have affected the timing of individuals' initial enquiry about claiming incapacity benefit. In particular, individuals could have made their enquiry earlier in order to avoid being mandated onto the Pathways to Work pilots. Conversely, some might have delayed their claim in order to qualify for the pilots, if they did not realise that those not mandated onto the pilots were allowed to participate voluntarily. Any such 'contamination' could bias the results if these individuals react to the policy differently. This problem will be reduced in later analysis as the preferred cohort should not be affected by this, although the pre-policy sample could remain 'contaminated'.
- Our findings so far cover just the first seven Pathways to Work areas, and cannot tell us how generalisable these effects are to other parts of the country. The later stages of the evaluation will assess this directly, by estimating the impact of the policy in the next waves of pilot areas (i.e. those where the policy will be rolled out starting in October 2005, April 2006 or October 2006), and indirectly, by simulating (under assumptions) what the effect of the policy would be in areas where Pathways to Work has not yet been implemented.
- Our findings so far also assess the impact of Pathways to Work just on new claimants of incapacity benefits (the 'flow'). However, Pathways is now being rolled out to a large number of existing claimants (the 'stock'). Further evaluation work will assess how the policy affects the outcomes of individuals from the 'stock', who will have been on incapacity benefits for up to eight years at the time when they are mandated onto the Pathways to Work programme.

- Our findings only tell us about the effect of the policy on the claimants themselves, but there might potentially be 'spillover' effects on other people. Later quantitative evaluation reports will consider whether the policy entails significant substitution effects (e.g. if new jobs obtained by claimants of incapacity benefits as a result of the policy are achieved at the expense of other individuals who now cannot find paid work), or if there are significant general equilibrium effects of the policy (e.g. if the increased supply of workers, perhaps in particular sectors, results in a lowering of the equilibrium wage in those sectors).
- To evaluate the merits of Pathways to Work it is necessary not only to estimate its effects but also to weigh any benefits against the substantial costs of the programme. Subsequent stages of the evaluation will progress further towards this by presenting a cost-benefit analysis that compares the quantifiable benefits of the policy to the identifiable financial costs.

Appendix A
Tables showing individual characteristics at first wave interview by area and time period

Table A.1 Individual (non-health) background characteristics at first wave interview, by area and time period, October 2003 areas only

	Pilot		Comparison		All		All
	Pre-policy	Early policy	Pre-policy	Early policy	Pre-policy	Early policy	
Age (mean)	42.1	42.7	43.9	43.5	43.0	43.0	43.0
Male	55.9%	49.6%	53.3%	54.5%	54.6%	51.1%	52.6%
Female	44.1%	50.4%	46.7%	45.5%	45.4%	48.9%	47.4%
Activity before incapacity benefit enquiry							
On Statutory Sick Pay	24.4%	34.7%	35.3%	32.9%	30.0%	34.2%	32.4%
In work	44.9%	58.6%	57.8%	57.6%	51.5%	58.3%	55.4%
Activity unknown	20.2%	4.2%	11.4%	4.2%	15.7%	4.2%	9.1%
Partner in work at first wave	30.6%	32.5%	39.4%	30.4%	35.1%	31.9%	33.3%
Ever worked before	96.7%	95.1%	97.3%	96.0%	97.0%	95.4%	96.1%

Continued

Table A.1 Continued

	Pilot		Comparison		All		All
	Pre-policy	Early policy	Pre-policy	Early policy	Pre-policy	Early policy	
Household (HH) characteristics							
Lives alone	30.6%	32.5%	39.4%	30.4%	35.1%	31.9%	33.3%
Living with partner	96.7%	95.1%	97.3%	96.0%	97.0%	95.4%	96.1%
Lives with parents	18.3%	20.2%	15.2%	20.0%	16.7%	20.2%	18.7%
Lives with siblings	53.6%	51.6%	58.9%	51.4%	56.3%	51.6%	53.6%
Lives with adult children	19.4%	15.3%	16.2%	14.8%	17.8%	15.2%	16.3%
Lives with other people	8.5%	7.0%	8.1%	6.6%	8.3%	6.9%	7.5%
Who lives with missing	17.1%	18.9%	18.6%	19.1%	17.9%	19.0%	18.5%
Children in HH (mean)	5.9%	5.1%	5.3%	5.4%	5.6%	5.2%	5.4%
No. of children in HH	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%
Education							
Left school before 15	25.2%	25.4%	26.9%	25.0%	26.0%	25.3%	25.6%
Left school at 15 or 16	40.4%	43.1%	42.1%	41.4%	41.3%	42.6%	42.0%
Left school at 17 or 18	2.8%	2.9%	2.8%	2.7%	2.8%	2.8%	2.8%
Left school after 18	73.4%	73.0%	70.9%	73.0%	72.1%	73.0%	72.6%
Has degree	15.2%	15.1%	16.1%	16.6%	15.7%	15.5%	15.6%
Has A levels	8.1%	8.7%	10.0%	7.7%	9.1%	8.4%	8.7%
Has O levels or GCSEs	14.9%	15.0%	15.4%	13.7%	15.1%	14.6%	14.8%
Has other qualifications	11.0%	12.9%	15.2%	11.4%	13.2%	12.4%	12.8%
Has no qualifications	33.4%	38.0%	41.8%	39.1%	37.7%	38.3%	38.1%
Has vocational qualifications	33.7%	38.9%	35.5%	39.7%	34.6%	39.1%	37.2%
Has academic qualification	35.1%	28.1%	28.8%	30.8%	31.9%	28.9%	30.2%
Ethnicity							
White	41.3%	51.3%	48.7%	48.4%	45.1%	50.4%	48.1%
Black	48.6%	51.6%	54.5%	52.6%	51.6%	51.9%	51.8%
Asian	96.7%	97.6%	96.0%	96.1%	96.4%	97.2%	96.8%
Other ethnicity	0.3%	0.6%	0.4%	0.2%	0.4%	0.5%	0.4%
Sample size	*644*	*1,226*	*677*	*519*	*1,321*	*1,745*	*3,066*

Note: Unweighted.

Table A.2 Individual health characteristics at first wave interview by area and time period (percentage saying they have the condition), October 2003 areas only

	Pilot		Comparison		All		All
	Pre-policy	Early policy	Pre-policy	Early policy	Pre-policy	Early policy	
Problem with arms/hands	20.2%	19.0%	16.0%	14.6%	18.0%	17.7%	17.8%
Problem with legs/feet	25.3%	27.0%	26.3%	27.9%	25.8%	27.3%	26.6%
Problem with neck/back	21.1%	19.2%	16.5%	23.1%	18.8%	20.4%	19.7%
Difficulty with sight	1.2%	1.9%	1.9%	1.0%	1.6%	1.6%	1.6%
Difficulty with hearing	0.6%	0.7%	0.4%	1.0%	0.5%	0.8%	0.7%
Has speech impediment	0.0%	0.6%	0.6%	1.0%	0.3%	0.7%	0.5%
Has skin condition/ allergy	0.6%	0.8%	0.9%	1.2%	0.8%	0.9%	0.8%
Has chest/ breathing problem	6.7%	7.3%	8.3%	7.9%	7.5%	7.4%	7.5%
Has heart/ blood problem	5.4%	6.2%	6.6%	6.2%	6.1%	6.2%	6.1%
Has stomach/ kidney problem	4.3%	4.6%	5.6%	4.4%	5.0%	4.6%	4.8%
Has diabetes	1.9%	1.3%	2.5%	1.7%	2.2%	1.4%	1.8%
Has mental illness	21.4%	21.9%	18.0%	20.8%	19.7%	21.5%	20.7%
Has epilepsy	1.4%	0.9%	0.9%	2.3%	1.1%	1.3%	1.2%
Has learning difficulties	0.3%	0.4%	0.1%	0.2%	0.2%	0.3%	0.3%
Other progressive problem	0.9%	1.5%	0.6%	0.8%	0.8%	1.3%	1.1%
Has other health problem	2.2%	3.6%	3.8%	3.5%	3.0%	3.6%	3.3%
Sample size	*644*	*1,226*	*677*	*519*	*1,321*	*1,745*	*3,066*

Note: Unweighted.

Table A.3 Individual (non-health) background characteristics at first wave interview by area and time period, April 2004 areas only

	Pilot		Comparison		All		All
	Pre-policy	Early policy	Pre-policy	Early policy	Pre-policy	Early policy	
Age (mean)	42.2	43.4	41.2	44.1	42.0	43.8	43.0
Male	55.2%	52.0%	52.6%	54.8%	54.7%	53.3%	54.0%
Female	44.8%	48.0%	47.4%	45.2%	45.3%	46.7%	46.0%
Activity before inc. ben. enquiry							
On Statutory Sick Pay	29.4%	33.7%	22.4%	32.5%	28.3%	33.1%	31.0%
In work	50.2%	57.9%	43.8%	57.2%	49.2%	57.6%	53.9%
Activity unknown	4.8%	4.1%	3.7%	5.0%	4.6%	4.5%	4.5%
Partner in work at first wave	29.0%	32.1%	26.4%	27.2%	28.6%	29.8%	29.3%
Ever worked before	96.2%	96.8%	98.0%	95.7%	96.5%	96.3%	96.4%
Household (HH) characteristics							
Lives alone	29.0%	32.1%	26.4%	27.2%	28.6%	29.8%	29.3%
Living with partner	96.2%	96.8%	98.0%	95.7%	96.5%	96.3%	96.4%
Lives with parents	22.5%	21.2%	26.1%	23.2%	23.1%	22.2%	22.6%
Lives with siblings	49.0%	52.9%	42.3%	49.1%	47.9%	51.1%	49.7%
Lives with adult children	14.7%	14.2%	19.0%	14.6%	15.4%	14.4%	14.8%
Lives with other people	6.5%	6.2%	10.2%	6.0%	7.1%	6.1%	6.5%
Who lives with missing	17.7%	21.1%	14.2%	17.8%	17.1%	19.5%	18.5%
Children in HH (mean)	6.3%	6.2%	5.1%	5.4%	6.1%	5.8%	6.0%
Number of children in HH	0.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%

Continued

Table A.3 Continued

	Pilot		Comparison		All		All
	Pre-policy	Early policy	Pre-policy	Early policy	Pre-policy	Early policy	
Education							
Left school before 15	27.3%	22.7%	29.3%	23.4%	27.6%	23.0%	25.0%
Left school at 15 or 16	48.8%	40.9%	50.3%	40.8%	49.0%	40.9%	44.4%
Left school at 17 or 18	2.5%	2.9%	3.4%	3.3%	2.6%	3.1%	2.9%
Left school after 18	73.5%	72.0%	71.0%	68.2%	73.1%	70.2%	71.5%
Has degree	15.6%	14.1%	15.3%	16.5%	15.6%	15.2%	15.4%
Has A levels	8.3%	10.6%	10.2%	11.3%	8.6%	10.9%	9.9%
Has O levels or GCSEs	12.5%	15.7%	13.1%	17.0%	12.6%	16.3%	14.7%
Has other qualifications	12.4%	13.9%	14.2%	14.3%	12.7%	14.1%	13.5%
Has no qualifications	41.4%	41.4%	45.5%	35.8%	42.0%	38.7%	40.2%
Has vocational qualifications	36.8%	40.3%	32.1%	39.7%	36.1%	40.0%	38.3%
Has academic qualification	29.2%	26.3%	27.6%	29.3%	28.9%	27.7%	28.3%
Ethnicity							
White	47.7%	52.2%	45.2%	48.8%	47.3%	50.6%	49.1%
Black	54.0%	54.8%	59.4%	52.0%	54.8%	53.5%	54.1%
Asian	94.1%	95.8%	92.6%	93.8%	93.9%	94.9%	94.4%
Other ethnicity	0.4%	0.5%	0.3%	0.6%	0.4%	0.6%	0.5%
Sample size	*1,827*	*1,465*	*352*	*1,325*	*2,179*	*2,790*	*4,969*

Note: Unweighted.

Table A.4 Individual health characteristics at first wave interview, by area and time period (percentage saying they have the condition), April 2004 areas only

	Pilot		Comparison		All		All
	Pre-policy	Early policy	Pre-policy	Early policy	Pre-policy	Early policy	
Problem with arms/hands	18.5%	18.5%	13.9%	18.2%	17.8%	18.4%	18.1%
Problem with legs/feet	29.0%	27.7%	28.7%	28.3%	29.0%	28.0%	28.4%
Problem with neck/back	20.6%	19.5%	23.0%	19.2%	21.0%	19.4%	20.1%
Difficulty with sight	2.1%	1.2%	0.9%	1.9%	1.9%	1.5%	1.7%
Difficulty with hearing	0.5%	0.3%	1.4%	0.5%	0.7%	0.4%	0.5%
Has speech impediment	0.2%	0.4%	0.3%	0.2%	0.2%	0.3%	0.3%
Has skin condition/ allergy	0.7%	0.5%	0.6%	0.5%	0.7%	0.5%	0.6%
Has chest/ breathing problem	6.6%	6.1%	8.0%	6.1%	6.8%	6.1%	6.4%
Has heart/ blood problem	6.1%	6.8%	4.5%	6.6%	5.9%	6.7%	6.3%
Has stomach/ kidney problem	4.4%	5.1%	4.3%	4.5%	4.4%	4.8%	4.6%
Has diabetes	1.3%	1.6%	1.4%	1.4%	1.3%	1.5%	1.4%
Has mental illness	19.8%	19.5%	21.9%	22.2%	20.1%	20.8%	20.5%
Has epilepsy	1.5%	1.3%	1.1%	0.9%	1.4%	1.1%	1.2%
Has learning difficulties	0.1%	0.1%	0.3%	0.2%	0.1%	0.1%	0.1%
Other progressive problem	0.7%	2.3%	2.0%	1.7%	0.9%	2.0%	1.5%
Has other health problem	3.3%	3.8%	4.3%	3.6%	3.4%	3.7%	3.6%
Sample size	*1,827*	*1,465*	*352*	*1,325*	*2,179*	*2,790*	*4,969*

Note: Unweighted.

Appendix B
Tables showing estimation of propensity score (probit model) among those who made an enquiry about claiming incapacity benefits

Table B.1 Estimation of propensity score (probit model) among those who made an enquiry about claiming incapacity benefits in the pilot and comparison areas after the Pathways to Work pilots were implemented (dependent variable = 1 if live in a pilot area and 0 if live in a comparison area)

	Co–efficient	Marginal effect[a]	Standard error on marginal effect
Days since claim enquiry	–9.517	–3.682	0.825
Days since claim enquiry squared	1.865	0.721	0.148
On SSP before claim enquiry	0.046	0.018	0.020
In work before claim enquiry	–0.035	–0.014	0.020
Unknown activity before enquiry	–0.150	–0.059	0.039
Male	–0.117	–0.045	0.016
Children in household	–0.145	–0.056	0.035
Number of children in HH	0.040	0.016	0.017
Partner in work	0.051	0.020	0.022
Living with partner	0.158	0.061	0.028
Lives alone	0.087	0.033	0.029
Lives with parents	0.064	0.024	0.032

Continued

Table B.1 Continued

	Co–efficient	Marginal effect[a]	Standard error on marginal effect
Lives with siblings	0.096	0.037	0.036
Lives with adult children	0.079	0.030	0.021
Lives with other people	0.107	0.041	0.034
Ever worked	0.014	0.006	0.040
Age	0.022	0.008	0.005
Age squared	0.000	0.000	0.000
Left school before 15	0.073	0.028	0.119
Left school at 15 or 16	0.076	0.030	0.116
Left school at 17 or 18	–0.070	–0.027	0.118
Left school after 18	0.058	0.022	0.117
Has degree	–0.128	–0.050	0.029
Has A levels	–0.066	–0.026	0.025
Has O levels or GCSEs	–0.048	–0.018	0.024
Has other qualifications	–0.209	–0.081	0.026
Has no qualifications	–0.085	–0.033	0.031
Has vocational qualification	0.223	0.086	0.030
Has academic qualification	0.011	0.004	0.028
Has problem with arms/hands	0.082	0.031	0.021
Has problem with legs/feet	–0.037	–0.014	0.019
Has problem with neck/back	–0.029	–0.011	0.021
Has difficulty with sight	–0.051	–0.020	0.061
Has difficulty with hearing	–0.056	–0.022	0.101
Has speech impediment	–0.016	–0.006	0.112
Has skin condition/allergy	–0.055	–0.022	0.091
Has chest or breathing problem	0.010	0.004	0.032
Has heart/blood problem	0.090	0.034	0.033
Has stomach/kidney problem	0.027	0.010	0.036
Has diabetes	0.060	0.023	0.061
Has mental illness	–0.067	–0.026	0.022
Has epilepsy	–0.115	–0.045	0.070
Has learning difficulties	0.155	0.059	0.151
Has other progressive problem	0.240	0.090	0.055
Has other health problem	–0.064	–0.025	0.041
White	–0.110	–0.042	0.112
Black	–0.128	–0.050	0.160
Asian	–0.702	–0.274	0.118
Other ethnicity	–0.124	–0.049	0.146
Constant	12.008	n/a	n/a

Note: See Table 2.5 and Table 2.6 for descriptive information on the background characteristics. Number of observations = 4,533. Omitted categories: those living in Essex, male, not in work before enquiry about claiming incapacity benefits, not living with children, never worked, missing information on education and ethnicity. [a] Marginal effect is evaluated at the mean of the continuous independent variables and at the value 0 for the discrete (0/1) variables.

Table B.2 Estimation of propensity score (probit model) among those who made an enquiry about claiming incapacity benefits in the pilot and comparison areas before the Pathways to Work pilots were implemented (dependent variable = 1 if live in a pilot area and 0 if live in a comparison area)

	Co–efficient	Marginal effect[a]	Standard error on marginal effect
Days since claim enquiry	–7.927	–2.726	0.304
Days since claim enquiry squared	0.895	0.308	0.039
On SSP before claim enquiry	0.001	0.000	0.024
In work before claim enquiry	–0.008	–0.003	0.022
Unknown activity before enquiry	0.270	0.087	0.027
Male	0.068	0.023	0.017
Children in household	–0.174	–0.061	0.040
Number of children in HH	0.029	0.010	0.020
Partner in work	–0.168	–0.059	0.025
Living with partner	0.119	0.041	0.031
Lives alone	–0.020	–0.007	0.034
Lives with parents	–0.039	–0.014	0.036
Lives with siblings	–0.184	–0.066	0.040
Lives with adult children	0.038	0.013	0.023
Lives with other people	0.091	0.030	0.037
Ever worked	–0.176	–0.058	0.047
Age	0.022	0.008	0.005
Age squared	0.000	0.000	0.000
Left school before 15	–0.845	–0.324	0.236
Left school at 15 or 16	–0.687	–0.212	0.163
Left school at 17 or 18	–0.661	–0.247	0.235
Left school after 18	–0.790	–0.300	0.236
Has degree	0.069	0.023	0.031
Has A levels	–0.117	–0.041	0.029
Has O levels or GCSEs	–0.123	–0.043	0.028
Has other qualifications	0.172	0.058	0.028
Has no qualifications	0.031	0.011	0.034
Has vocational qualification	–0.080	–0.027	0.032
Has academic qualification	–0.036	–0.012	0.032
Has problem with arms/hands	0.202	0.067	0.022
Has problem with legs/feet	–0.047	–0.016	0.022
Has problem with neck/back	0.075	0.026	0.022
Has difficulty with sight	0.099	0.033	0.062
Has difficulty with hearing	–0.304	–0.112	0.114
Has speech impediment	–0.931	–0.357	0.202
Has skin condition/allergy	0.079	0.027	0.095
Has chest or breathing problem	–0.172	–0.061	0.036

Continued

Table B.2 Continued

	Co–efficient	Marginal effect[a]	Standard error on marginal effect
Has heart/blood problem	0.135	0.045	0.035
Has stomach/kidney problem	–0.055	–0.019	0.040
Has diabetes	–0.225	–0.081	0.069
Has mental illness	0.028	0.010	0.024
Has epilepsy	0.215	0.069	0.067
Has learning difficulties	–0.458	–0.172	0.233
Has other progressive problem	–0.226	–0.082	0.095
Has other health problem	–0.151	–0.054	0.048
White	–0.110	–0.037	0.113
Black	–0.179	–0.064	0.192
Asian	–0.303	–0.111	0.146
Other ethnicity	–0.231	–0.084	0.152
Constant	18.255	n/a	n/a

Note: See Table 2.5 and Table 2.6 for descriptive information on the background characteristics. Number of observations = 3,325. Omitted categories: those living in Essex, male, not in work before enquiry about claiming incapacity benefits, not living with children, never worked, missing information on education and ethnicity. [a] Marginal effect is evaluated at the mean of the continuous independent variables and at the value 0 for the discrete (0/1) variables.

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